

2010 Strategic Plan Update

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Prepared for:



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I. Introduction & Project Objectives

1. Introduction

The Tampa Port Authority's (referred to as TPA in this report) strategic plan was last updated in late 2007 and ultimately delivered in early 2008. Since that time, the United States and the world entered an economic recession, which caused:

- Economic contraction and a decline in overall U.S. Real GDP during 2008 and 2009 for the first time since the early 1990s
- Rising U.S. (10%) and Florida (12%) unemployment
- A mortgage crisis that led to rapidly declining housing values and a significant increase in foreclosures, which have dramatically increased the U.S. housing inventory and negatively affected the U.S. home construction industry
- A depreciation of the dollar relative to other world currencies, including the Yuan and the Euro
- A slowing of waterborne trade in general and international waterborne trade in particular across U.S. ports in general and Florida Ports and the Port of Tampa (referred to as the Port or the Port of Tampa in this report) in particular

The net result of these changes has been a significant decline in the Port's and the TPA's cargo lines of business since 2007. From 2007 to 2010, cargo tonnage through the overall Port declined by a compound annual rate of -6.4% while cargo at TPA owned facilities fell at an average compound annual rate of -1.2%. The breakbulk and dry bulk cargo industries were hit the hardest, falling by compound annual rates of -15.6% and -9.1% respectively between 2007 and 2010.

2. Project Objectives

Recognizing the structural changes evolving within the U.S. and Florida economies and the global shipping industry, the TPA retained Norbridge, Inc. (NBI) to:

- Review the existing economic situation in the U.S. in general and in the State of Florida in particular and how it has affected Florida ports' and the Port of Tampa's cargo tonnages
- Selectively update the 2007 market and opportunity assessments to determine what has fundamentally changed in the TPA's container, breakbulk general cargo (specifically iron and steel products, lumber and vehicles), dry bulk (specifically aggregate and cement) and petroleum products lines of business
- Determine what, if any, updates are required to the 2007 strategic recommendations
- Determine what, if any, updates are required to the 2007 capital investment recommendations

The Authority requested that NBI's approach to fulfilling these objectives include maximizing:

- The work Martin Associates (subcontractor to the NBI Team) completed on the Florida DOT Trade Flows Study, particularly as it relates to the Authority's container line of business;

- NBI's and Martin Associates' expertise by focusing on microeconomic factors that drive the TPA's throughput; and
- The use of the TPA's extensive information on distribution center inventory and ongoing developments in surrounding counties.

This report summarizes the NBI/Martin Associates selective update of the 2007 Strategic and Master Plans. The report is based on numerous analysis, research, interviews, and working sessions including:

- Interviews with TPA's senior managers and engineering staff
- Macroeconomic analyses based on available information from the U.S. Census Bureau, the U.S. Bureau of Economic Activity, the Florida Bureau of Economic Research, the International Monetary Fund, the World Bank, and various other macroeconomic metric reporting agencies
- Market assessments of selected commodities based on Port-level and TPA-level summary cargo reports, other Florida Port reported throughputs as established in websites, annual reports, and master plans, PIERS data, AAPA-reported data, International Trade Commission Data, NAFTA Trans Border data, and various other sources of waterborne and landside cargo transportation information
- Interviews with selected TPA breakbulk customers
- Three working session updates at the TPA headquarters to discuss project status, findings-to-date, study issues, and obtain TPA input

This report sequentially addresses the NBI Team's findings in the following areas:

- Review of the current economic situation in the U.S. and Florida
- Update to selected commodity market analyses including alternative forecast scenario ranges
- Recommended updates to the 2007 Strategic Recommendations
- Recommended updates to the 2007 Capital Investments

II. Review of Existing Situation

This section provides an overview of the significant macroeconomic changes that have occurred since the completion of the 2007 Strategic and Master Plans. Specifically, it assesses the effects of the recent economic recession on the U.S. and Florida economies as well as on activity at Florida ports in general and the Port of Tampa specifically.

1. *The Recession's Effects on the U.S. & Florida Economies*

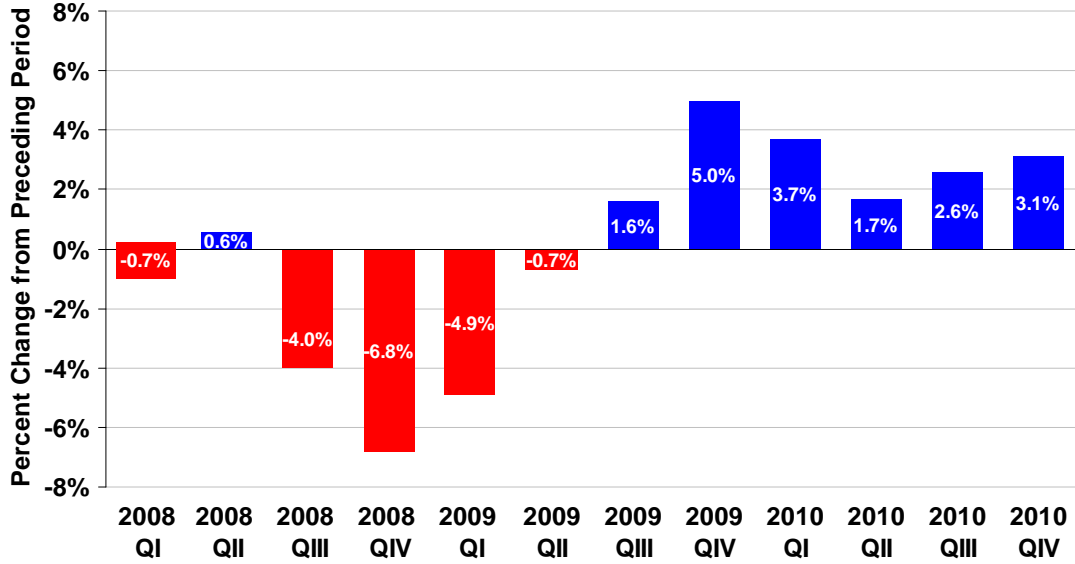
Macroeconomic growth/decline in the market area served by a port is a major driver of its cargo throughput. The 2008-2009 economic recession had a significant, negative effect on U.S. Gross Domestic Product (GDP), i.e. the most salient measure of U.S. economic activity. U.S. GDP decreased in 2008 for the first time since the early 1990s. As shown in Exhibit II-1-1, U.S. GDP fell during three quarters of 2008 and during the first two quarters of 2009 prior to rebounding in the second half of 2009 and 2010. The slowdown in economic activity was reflected in both the increase in the unemployment rate (Exhibit II-1-2) and correspondingly, the decrease in U.S. household net worth (Exhibit II-1-3).

The 2008-2009 recession was the result of a series of cascading factors that included:

- The collapse of the subprime mortgage industry which in turn caused the 2007 housing market bubble to burst
- The resulting decline in the value of homes depressed household wealth and eliminated the major source of consumer discretionary spending, i.e. home equity loans.
- The erosion of discretionary spending resulted in falling business profits, reduction in production and layoffs
- Increased layoffs exacerbated the reduction in consumer spending and thus worsened the recession, particularly for housing-related sectors such as construction, home improvement, and home entertainment.

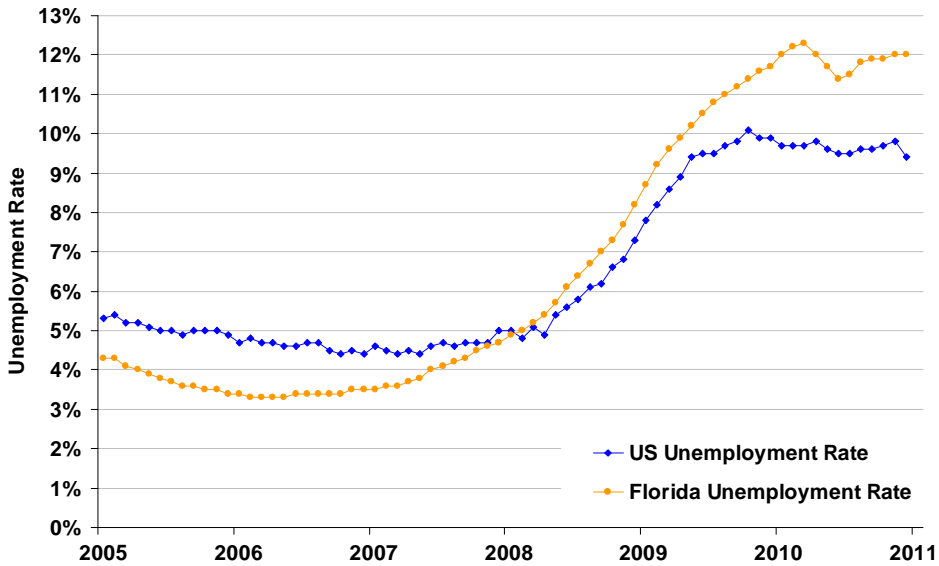
In an economy where 71 percent of GDP is attributable to consumer spending, the cumulative effect of a substantial reduction in household wealth, rapidly rising unemployment, falling production and the elimination of most discretionary spending triggered the worst economic recession since the Great Depression. The recession was particularly severe in those states whose economic base is largely dependent upon discretionary consumer spending and housing.

Exhibit II-1-1
U.S. GDP Percent Change from Preceding Period



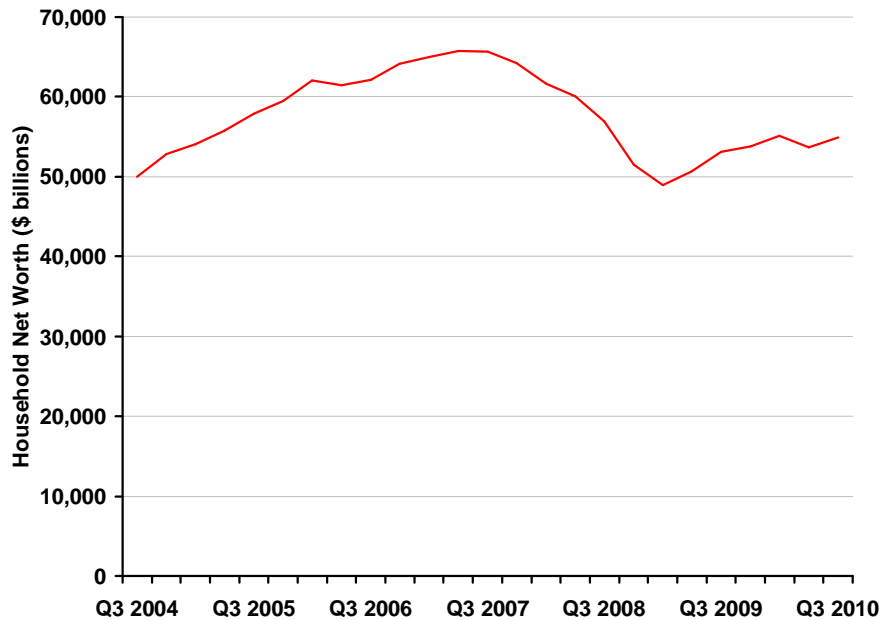
Note: Seasonally adjusted at annual rates
Source: U.S. BEA

Exhibit II-1-2
U.S. and Florida Unemployment
2005-2011



Source: US Census Bureau

Exhibit II-1-3
U.S. Household Net Worth
Q32004-Q32010

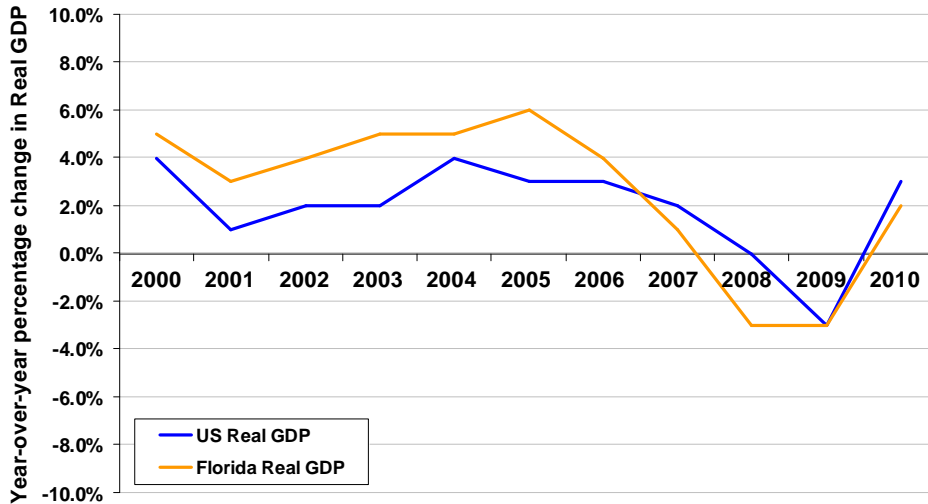


Source: US Federal Reserve

The recession had particularly significant, negative effects on the Florida economy. Prior to the recession, Florida's economy had out-performed the U.S economy, with Florida GDP growing faster than the United States overall. However, Florida GDP not only fell faster at the recession's outset, but has also been slower to recover (see exhibit II-1-4).

The economic recession also had particularly negative effects on unemployment in the state of Florida. From 2007 to 2010, unemployment more than doubled from under 5% to nearly 10% in the United States. However, at the outset of 2011, Florida unemployment stood at 12%, more than 2% higher than the national average (see Exhibit II-1-2).

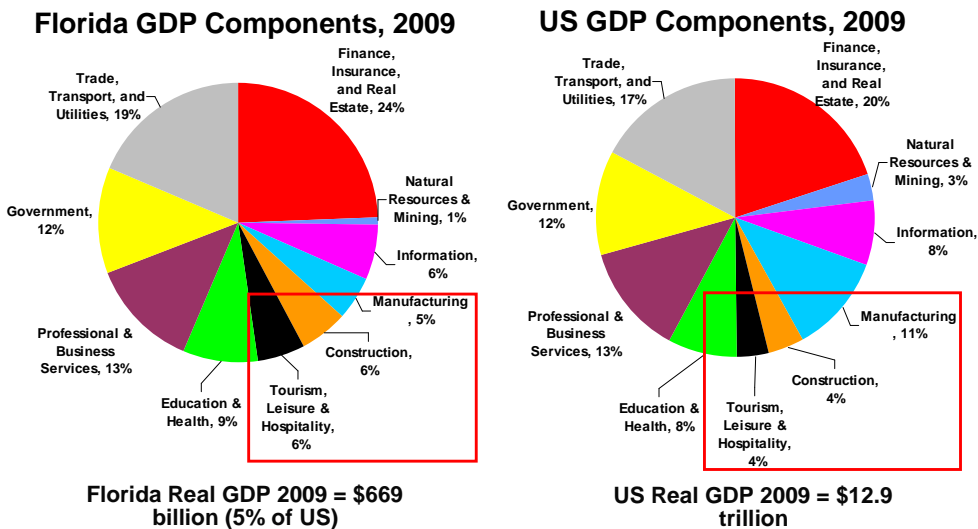
Exhibit II-1-4
Florida and U.S. Real GDP Change from Previous Year
2000-2010



Source: US Census Bureau

Florida's higher dependency on consumer expenditures (tourism, leisure & hospitality, construction and to a secondary degree, finance, insurance, & real estate and trade transport & utilities) is a likely cause for its economic performance relative to the U.S. (see exhibit II-1-5).

Exhibit II-1-5
US and Florida Gross Domestic Product (GDP) Components, 2009

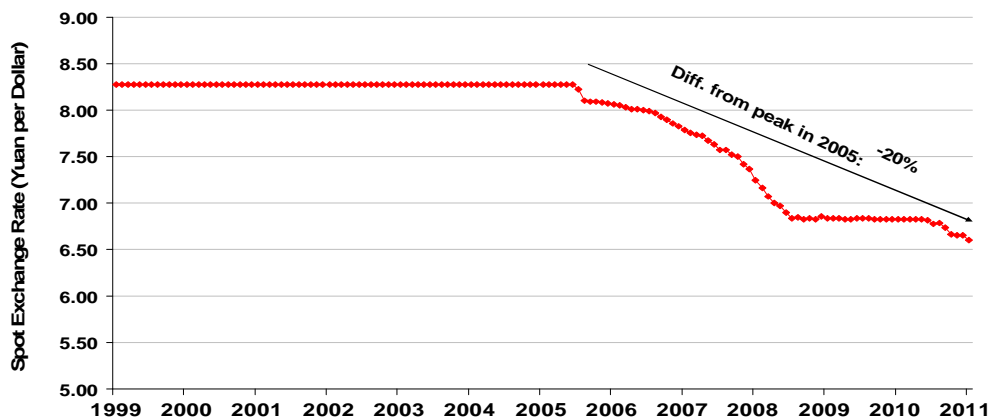


Note: Real GDP chained to 2005 dollars
Source: U.S. Bureau of Economic Analysis' Survey

The erosion of the U.S. Dollar's value relative to other currencies has also negatively affected the U.S. and Florida economies. The economic recession resulted in an unprecedented relaxation in U.S. monetary policy, driving US interest rates to near zero. The simultaneous increase in the money supply (effectively printing money to improve liquidity) exacerbated the depreciative effects of low interest rates and led to a significant decline in the value of the dollar vs. other major currencies. The net effect has been a significant depreciation of the dollar and a further erosion of U.S. consumer purchasing power which further reduced the demand for imports.

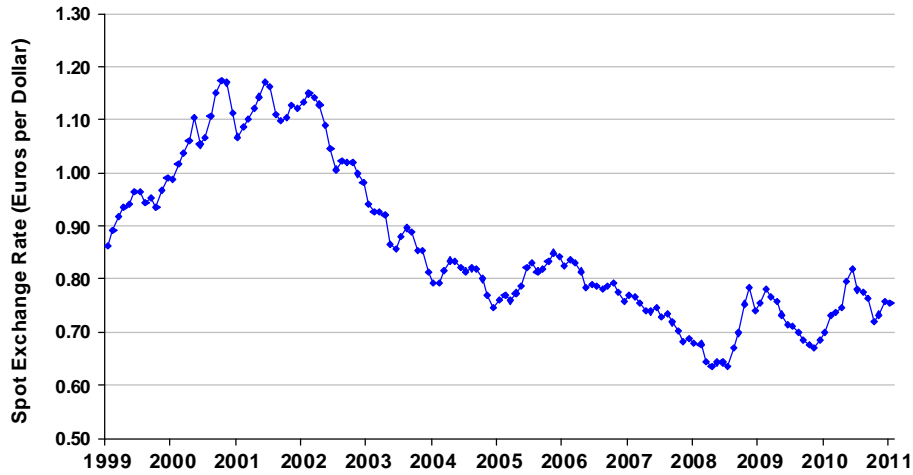
The U.S. dollar has depreciated approximately 20% against the Chinese Yuan since 2005 (see Exhibit II-1-6), which has significantly decreased U.S. purchasing power for imported Chinese goods. The value of the U.S. Dollar has also depreciated relative to other currencies, including the Euro. As shown in Exhibit II-1-7, the value of the U.S. dollar in relation to the Euro has been much more volatile, but the general trend of depreciation persists. The depreciation of U.S. currency relative to other countries has made imports relatively more expensive vs. domestic products, which in turn resulted in a substantial decline in US imports of containerized and breakbulk consumer goods.

**Exhibit II-1-6
U.S. Dollar vs. Chinese Yuan Exchange Rate, 1999-2010**



Source: US Federal Reserve

Exhibit II-1-7
U.S. Dollar vs. Euro Exchange Rate, 1999-2010

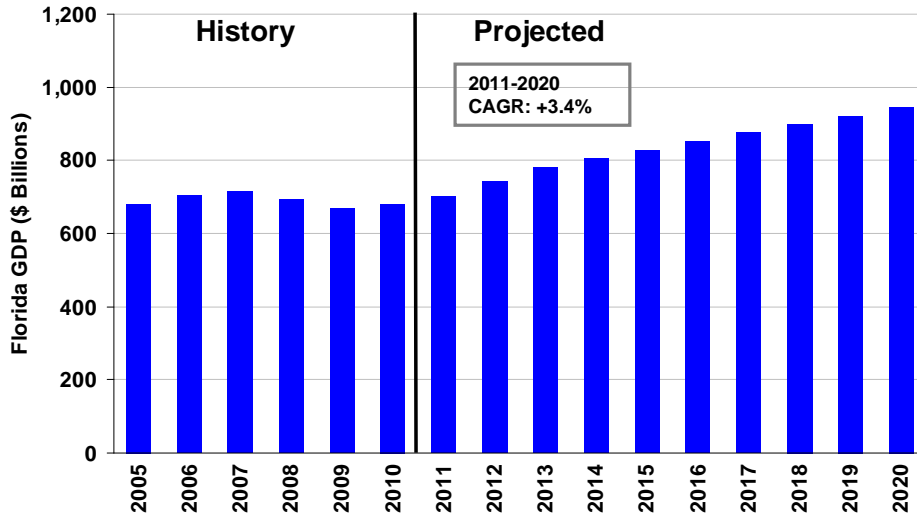


Source: US Federal Reserve

Norbridge utilized a variety of projections from the Florida Office of Economic and Demographic Research's Florida Long Run Estimating Conference (LREC) in its analysis of the Florida economy and its projected recovery as well as in the individual market analyses presented in Chapter IV of this report. The LREC is a conference held annually with representatives from the Governor's office, the State House and Senate, and the Bureau of Economic and Demographic Research. The purpose of the LREC is to develop forward looking projections on economic (GDP, employment, per capita income, etc.), construction (residential, private, public, etc.) and other economic indicators. The forecasts are developed using a set of proprietary in-house economic models and information sourced from the Florida DOT, IHS Global Insight, the Census Bureau, and building permit databases. Economic analysis is provided by economists and demographers from the Governor's office and the Bureau of Economic and Demographic Research.

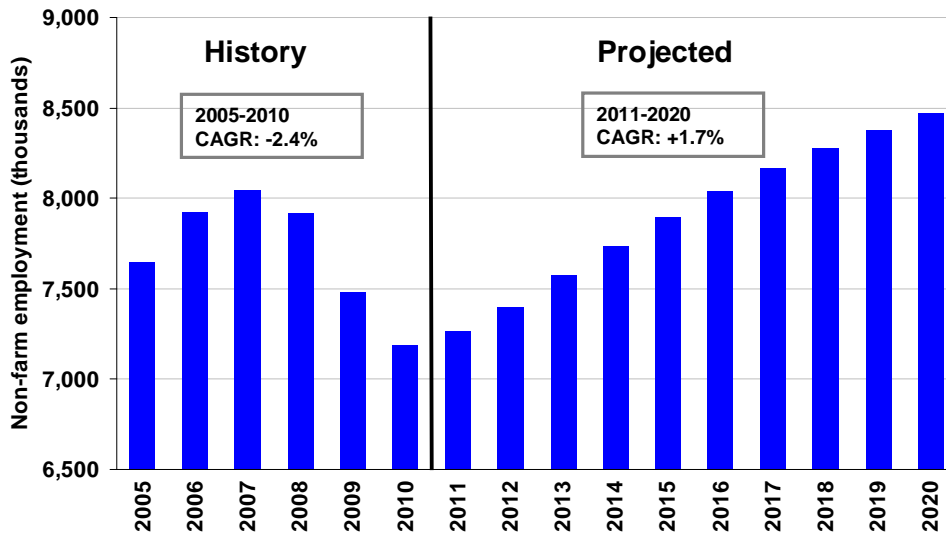
Although the recession was especially hard on the Florida economy, job and overall market recovery is expected in the short to mid-term (2-5 years). After declining by 2% in 2009, Florida GDP is expected to rebound to 2007 levels by 2012 (see exhibit II-1-8) and is projected to experience healthy 3.4% average annual growth between 2011 and 2020. Moreover, jobs in Florida are projected to increase at an average annual growth rate of 1.7% between 2011 and 2020. However, although modest growth is expected, employment levels are not projected to reach 2007 historical highs until 2016 (see exhibit II-1-9).

**Exhibit II-1-8
Historical and Projected Florida GDP**



*Note: Chained 2005 dollars
Source: Florida Economic Estimating Conference*

**Exhibit II-1-9
Historical and Projected Florida Non-Farm
Employment**

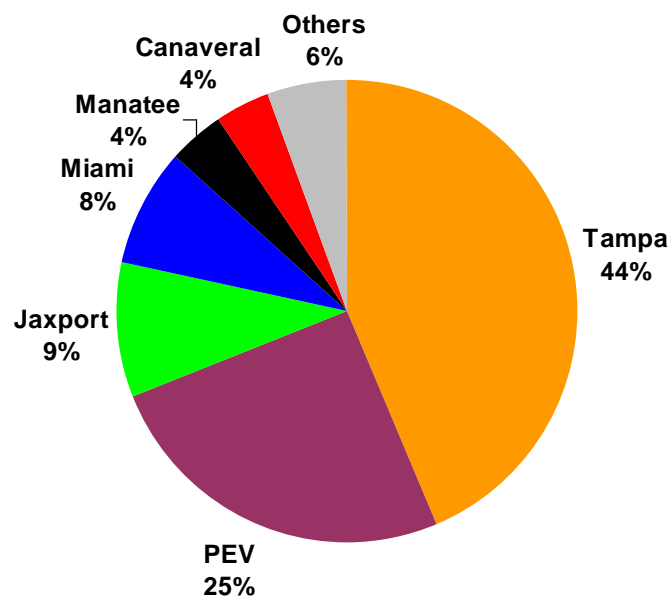


Source: Florida Economic Estimating Conference

2. Florida Ports and The Port of Tampa

Four ports dominate the Florida Ports system in terms of throughput volumes and assets: the Port of Tampa, Port Everglades, the Port of Jacksonville (Jaxport), and the Port of Miami, which collectively handled an estimated 86% of waterborne traffic in the state of Florida in 2010 (see Exhibit II-2-1). The cargo bases of these major Florida ports are primarily dependent upon consumer spending, construction and tourism for growth. Consequently, like the Florida economy the collective throughput of these ports was significantly affected by the recession.

Exhibit II-2-1
Major Florida Ports Tonnages
FY2010

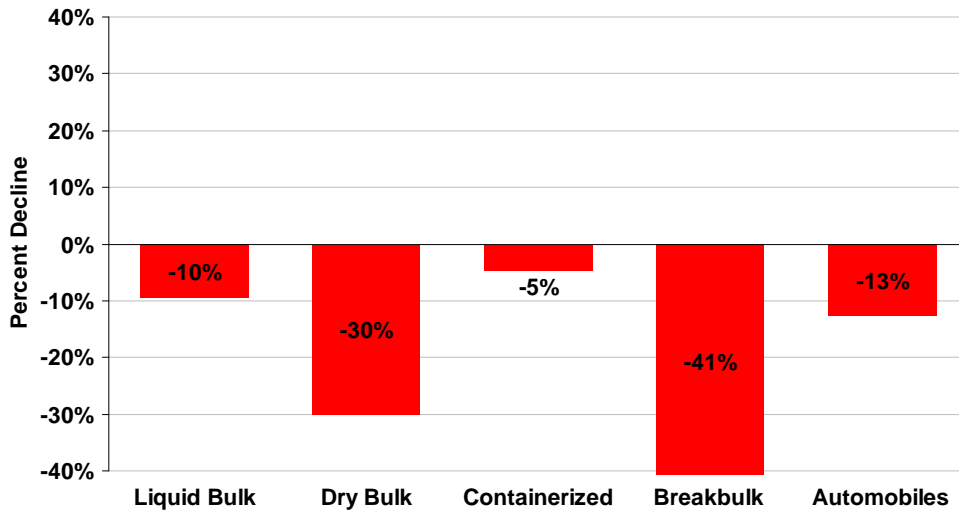


Note: "Others" formed from 2009 data

Source: Florida DOT Seaport Plan; Norbridge analysis

The major Florida ports' breakbulk and drybulk traffic experienced significant declines between 2007 and 2010, followed by automobile traffic (see Exhibit II-2-2). These declines reflect the declines in construction, manufacturing activity and automobile purchases within the United States and Florida during the economic recession. These trends are discussed in greater depth within the Market Assessment section of this report.

Exhibit II-2-2
Florida Ports Cargo Tonnage Decline as Percent of Total Traffic by Cargo Type
FY2007-FY2010

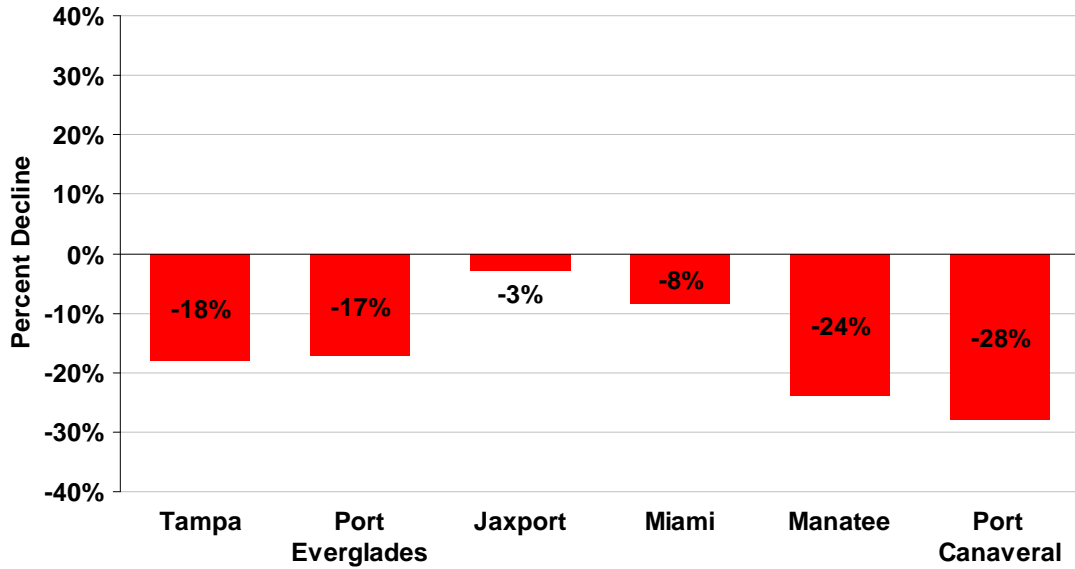


Note: Includes Ports of Tampa, Jacksonville, Everglades, Canaveral, Miami, and Manatee
Note: Cargo types arranged left to right by size of the market segment
Source: Port websites and annual reports; Norbridge Analysis

The Ports of Manatee and Canaveral experienced the greatest proportional declines in cargo tonnage between FY2007 and FY2010 (see Exhibit II-2-3) while the two largest Florida ports—the Port of Tampa and Port Everglades—registered the greatest overall losses in cargo tonnage. The Port of Jacksonville’s cargo volumes were the least affected by the economic recession with the cargo tonnages declining by only 3% between 2007 and 2010.

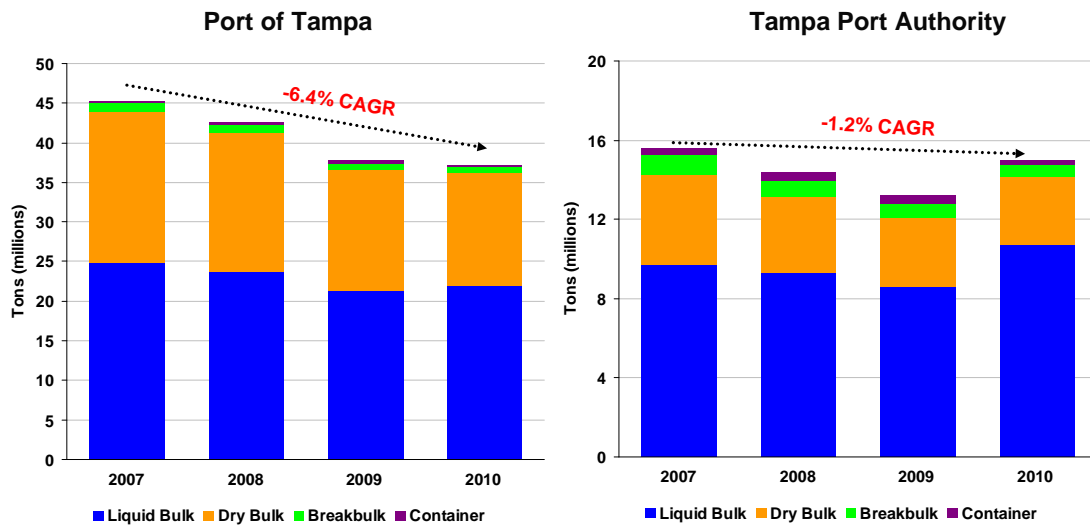
The Port of Tampa comprises both public marine terminals and private marine terminals. The former are owned by the TPA and leased to operators; the latter are owned and operated by private companies. Between 2007 and 2010, cargo tonnage at TPA-owned facilities declined by 3.6%, while tonnage handled at private facilities declined by nearly 26%. The smaller decrease in TPA facility traffic is largely attributable to the recovery experienced by TPA facilities in 2010 relative to privately-owned terminals. Specifically, as shown in Exhibit II-2-4 this smaller decline at TPA facilities between 2007 and 2010 is largely due to a rebound in petroleum products and smaller declines in dry bulk during the period (see exhibit II-2-4).

**Exhibit II-2-3
Major Florida Ports Cargo Tonnage Decline as Percent of Total Traffic
FY2007-FY2010**



*Note: Ports arranged left to right by total tons handled in 2010
Source: Port websites and annual reports; Norbridge Analysis*

**Exhibit II-2-4
Port of Tampa and Tampa Port Authority Traffic
2007-2010**



Source: Tampa Port Authority Cargo Summaries

III. Competitive Assessment

This section provides a summary assessment of the Port's competitive positioning versus its major Florida port competitors. Specifically, it highlights what, if any, material changes have occurred to the Port's competitive positioning since the 2007 Strategic Plan was completed.

The competitive assessment provides the basis for determining the competitive reach of the Port which in turn defines to a significant degree the Port's future market growth potential. NBI's competitive assessment sequentially addresses the following topics:

- Overview of Cargo Transported by Florida Ports in FY2010
- Vessel Access
- Competitive Hinterland
- Assessment of Competitor Ports' Capital Investment Programs

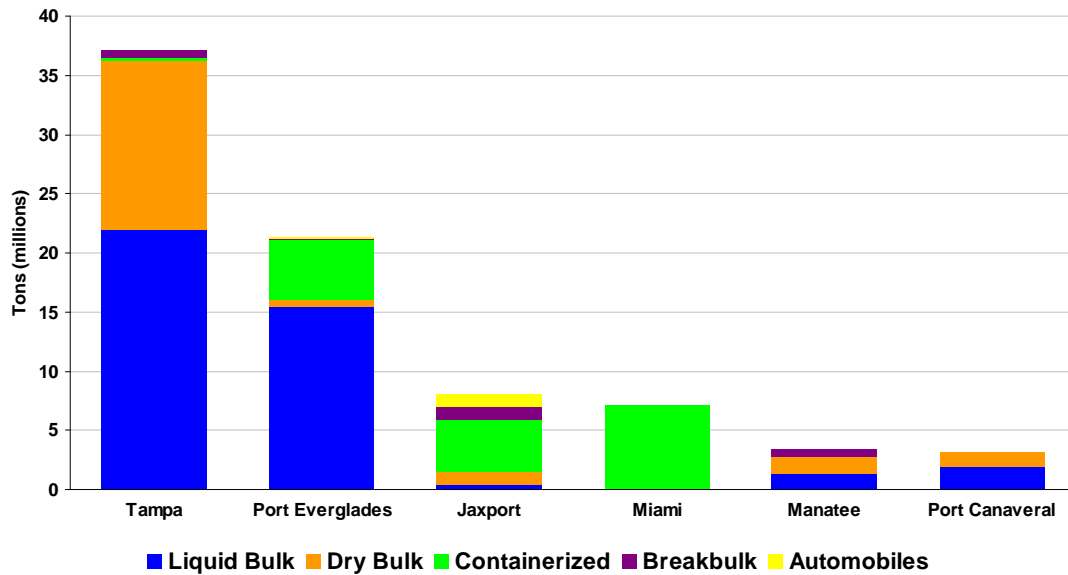
1. Overview of Cargo Transported by Florida Ports in FY2010

The Port's 2010 cargo throughput approximated 37 million tons. The Port's throughput was significantly greater than any other Florida port and nearly double the volume handled by Port Everglades, the second largest port in Florida. The Port's liquid and dry bulk cargo franchises, which are the largest in the Florida Ports system, accounted for 97% of the Port's total cargo traffic in 2010 (see Exhibit III-1-1).

The Port's other cargo franchises are comparatively small vs. major competitors:

- Breakbulk: the Port handled 634,000 tons of breakbulk cargo in 2010, ranking it third in terms of breakbulk tonnage handled behind Jacksonville (990,000 tons) and Port Manatee (638,000 tons). The Port's tonnage however, is down nearly 40% from an historical high of just over one million tons in 2006.
- The Port's container and automobile lines of business remain relatively small in comparison to other Florida ports.

Exhibit III-1-1
Major Florida Ports Tonnages by Cargo Type
FY2010



Source: Port web sites and annual reports; Norbridge analysis

Although the Port’s cargo tonnage declined between 2007 and 2010, largely owing to the global and US economic recessions (discussed in detail in section II), the Port remains the largest port in terms of tonnage handled in the State of Florida.

2. Vessel Access

The ultimate role of a port is to transfer cargo between vessels and land-based transport in an efficient and cost-effective manner. The ability of a port to accommodate a majority of the world’s cargo carrying fleets (container, breakbulk, dry bulk, liquid bulk) is thus a key determinant of its competitive positioning. This is particularly true given the long-term trend of increasing vessel size within the world’s container, breakbulk and dry bulk fleets. This section compares the Port’s vessel access capabilities to its major competitors.

The Port’s current 43 foot draft is the deepest in the Florida Ports system (see Exhibit III-2-1). The Port of Miami, with financial support from the State of Florida, is currently in the process of deepening its main shipping channel to 50 feet, a project that is expected to require six years to complete. If successfully implemented, the Port of Miami will be one of the four deepest draft ports on the U.S. Atlantic Coast. The other three are Norfolk, New York, and Baltimore. This means that Miami would be able to handle the largest container ships likely to traverse the expanded Panama Canal, allowing the port to compete for calls by these larger vessels and therefore potentially expand its competitive market reach within the State of Florida.

For container vessels, the Port’s draft is comparable to other Gulf Coast container ports in general and Houston in particular. As Houston represents the largest Gulf Coast container market, it will generally determine the maximum draft for Gulf Coast container services.

Exhibit III-2-1
Major Florida Ports Vessel Access Conditions

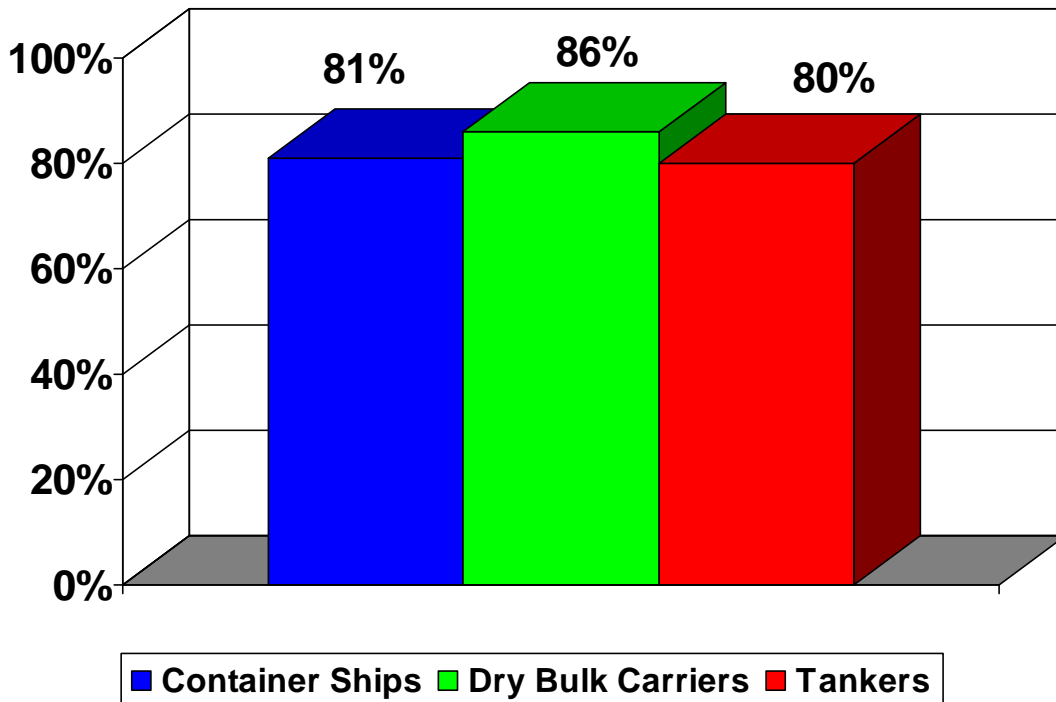
Port	Channel Width (min)	Reported Channel Depth (MLLW)	Air Draft Restrictions (MHW)	Depth Alongside Berths	Dredging Plans and Status
Tampa	400 feet	43 feet	175 feet	18 – 43 feet	Evaluating feasibility of deepening to 45' (potentially 50' in long-term)
Port Everglades	450 feet	42 feet	None	31 – 44 feet	Evaluating 50' deepening of the Port's access channel; USACE study to be released in 2012
Port of Miami	400 feet	42 feet	None	41 – 50 feet	Has secured federal and state funding to dredge main entrance channel to 50' within 6 years
Canaveral Port Authority	400 feet	41 feet	None	33 – 39 feet	Evaluated the feasibility of widening & deepening channel in a Section 203 study; project currently under review by USACE.
Jacksonville	375 feet	40 feet	169 feet (only to Talleyrand)	38 – 42 feet	Completed 40' deepening in July 2010. Currently evaluating deepening to 47-48'
Port Manatee	400 feet	40 feet	175 feet	20 – 40 feet	No plans to deepen channel
Palm Beach	300 feet	33 feet	None	33 feet	No plans to deepen channel

Source: AAPA; port web sites; U.S. Army Corps of Engineers port facilities database; Norbridge analysis

As illustrated in exhibit III-2-2, the Port's 43 foot draft allows it to handle a majority of the world's container, dry bulk and tanker fleets:

- **Container ships:** the Port of Tampa's main channel can accommodate 81percent of the world's container fleet. Since most medium size container ships are larger than the largest breakbulk general cargo vessels, the Port of Tampa can accommodate most of the world's breakbulk general cargo vessels
- **Dry bulk ships:** the Port of Tampa can accommodate 86 percent of the world's dry bulk carrier fleet, excluding certain special purpose vessel types like ore and ore/oil vessels that operate in specialty trades.
- **Tankers:** the Port of Tampa can accommodate 80 percent of the world's tanker fleet and virtually all of the world's tanker fleet that carries the types of petroleum products and chemicals that comprise the Port of Tampa's liquid bulk trade

Exhibit III-2-2
Percentage of the World Vessel Fleet Able to Navigate Port of Tampa Main Entrance Channel



Source: Lloyd's Fairplay World Register of Ships

3. Competitive Hinterland

A port's competitive hinterland is defined as the inland geography that the port can competitively serve, i.e. for which the total landed cost (ocean transportation, port, vessel stevedoring and terminal, inland transportation and inventory carrying costs for higher value cargoes) of cargo is lower than other port options. The geographic reach of a port's competitive hinterland is a major driver of demand for cargo through a port's facilities.

Martin & Associates developed a detailed competitive landed cost analyses for all major Florida port markets as part of its work on the 2010 Florida Department of Transportation Seaport Plan in 2010. The analyses included the estimation of each major Florida port's hinterland across the major trade lanes that generate a majority of Florida's waterborne containerized trade. Martin & Associates' work was based on a logistics model that analyzed vessel, port, intermodal rail, truck, and inventory carrying costs in order to identify which port gateway offers importers the lowest through cost option for various trade lane-Florida county combinations.

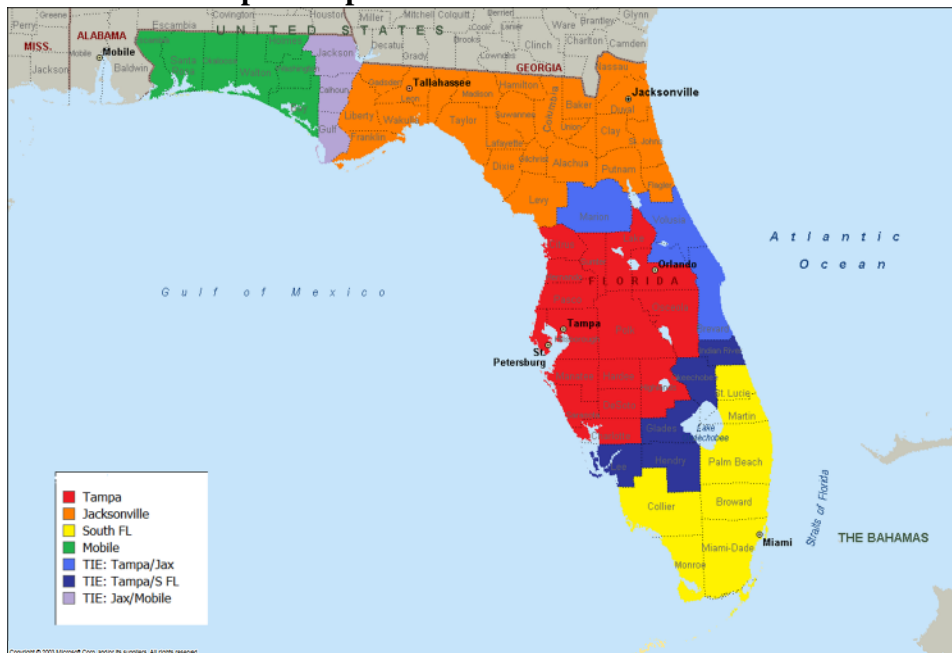
The Martin Associates logistics cost analyses indicate:

- The Port has a competitive advantage in an approximately 24 county market for Asian-based trades and a 17 county market for the Northern Europe, Mediterranean, and Indian

Subcontinent trade lanes. The Port's competitive hinterland market is very similar to the West & Central Florida market established in the 2007 Strategic and Master Plans (see Exhibits III-3-1 and III-3-2).

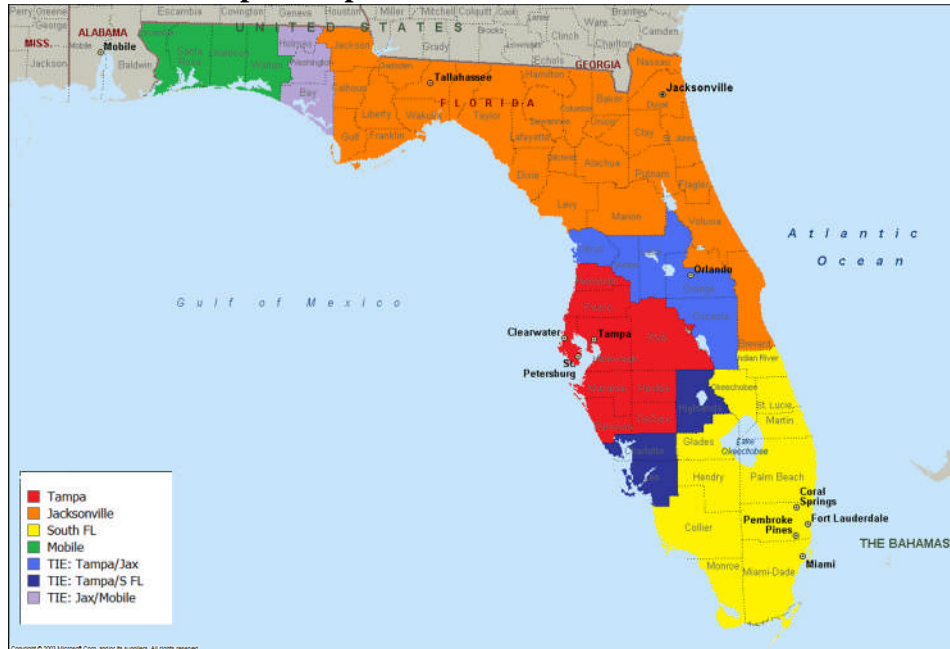
- The 24 country market for West-East trades (which accounts for the great majority of volume through the Port) contains 51% of Florida's population and is projected to be FL' fastest growing regional economy
- Assuming comparable levels of ocean carrier service, i.e. geographic coverage, service frequency and transit times, the Port should be the preferred gateway for serving the 24 country market for West-East trades and the 17 country market for East-West trades

**Exhibit III-3-1
Port of Tampa Competitive Hinterland for West-East Trades**



Source: Martin & Associates Analysis

**Exhibit III-3-2
Port of Tampa Competitive Hinterland for East-West Trades**



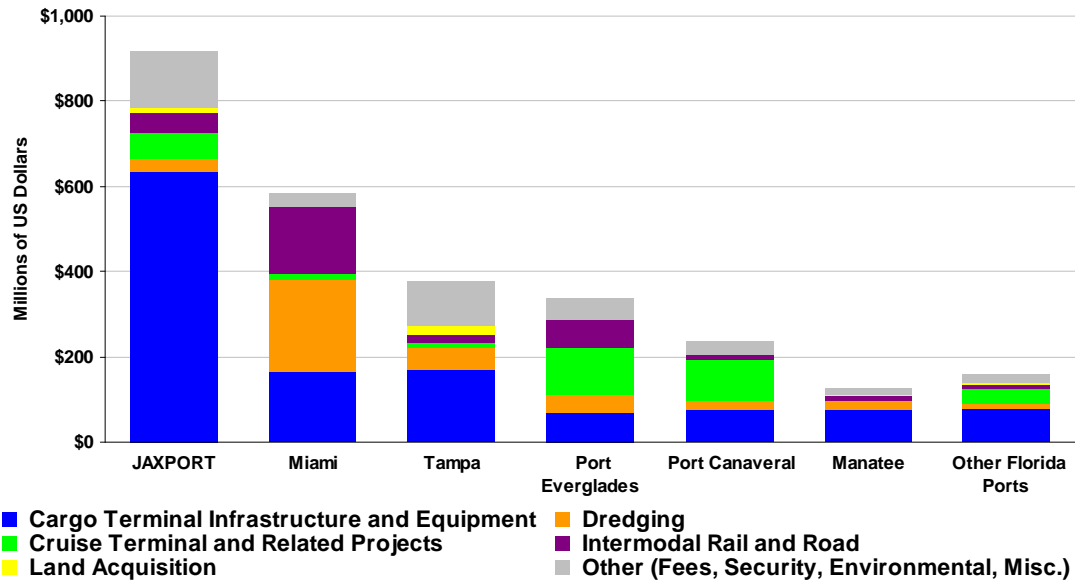
Source: Martin & Associates Analysis

4. Competitive Implications of Major Florida Ports' Capital Investment Programs

The port business is a capital intensive business. Optimizing capital investment to maximize throughput capacity relative to demand is important to successfully competing in the port industry. The purpose of this section is to assess the reported capital investment plans of the major Florida ports over the medium-term (5 years from 2010-2014).

The primary source of information for this section is the Florida Department of Transportation Seaport Plan conducted in 2010. The study independently evaluated the current capital investment programs of the various Florida ports as published in strategic and master plans or reported by the ports and thus offers a comparable and complete source of planned capital investment for the Port and its competitors. It is important to note the Port of Miami estimates appear to exclude the cost of the new tunnel project.

**Exhibit III-4-1
Florida Ports Reported Five Year Capital Investment Plans
FY2010-FY2014**



Note: Cargo terminal infrastructure and equipment includes cargo warehouses, terminal, and yards, berth/infrastructure rehabilitation, cargo equipment, general site improvements, and new cargo berths
Source: FDOT 2010 Seaport Plan; Norbridge Analysis

Exhibit III-4-1, which aggregates the results of FDOT’s research, shows the total planned capital investment between FY2010 and FY2014 by Florida port and project type. The Port ranks third on the list of Florida ports with \$400 million dollars in planned capital investments between FY2010 and FY2014.

The largest portions of this capital investment will be spent on berth expansion/replacement, berth and maintenance dredging, studies for new terminals at Eastport & Pendola Point, and land acquisition. This analysis indicates that the Port is actively investing in its future, specifically by exploring expansions of existing terminals and creation of new terminals in order to accommodate potential future cargo tonnage growth. The relatively larger levels of planned capital investment at Miami and Jaxport are primarily a result of two new state of the art container terminals (Jaxport) and significant future dredging plans (Miami, as discussed in the previous section). It should be noted here that government subsidy of capital programs (such as state funding for dredging the Port of Miami’s main channel) artificially enhances a port’s competitive positioning since it reduces its need to price on a compensatory basis and thus increases its ability to charge more competitive, i. e. lower prices.

5. Key Competitive Takeaways

The foregoing analyses suggest the following key competitive takeaways for the Port:

- **Current Volumes:** The Port is solidly established as the leader in terms of total cargo tonnage handled within the Florida Port's system, with nearly double the cargo volume of Port Everglades, the second largest Florida port, in FY 2010.
- **Vessel Access:** While the draft at the Port may potentially be shallower than the Port of Miami following its planned dredging project, its 43 foot draft positions the Port to accommodate the current and future vessel fleets likely to serve its core.
- **Competitive Hinterland:** the Port is the lowest cost port gateway (on a landed cost basis) for a 17-24 county market in west and central Florida. This market contains an estimated 51% of the state's population and is projected to be the fastest growing population region in Florida.
- **Future Capital Investment:** The Port is proactively investing in its future, through expansions of existing terminals and creation of new terminals in order to accommodate potential future growth. The relatively larger levels of planned capital investment at Miami and Jaxport are primarily a result of two new state of the art container terminals (Jaxport) and significant dredging plans (Miami).

6. Summary—Competitive Strengths

The TPA possesses six strategic competitive strengths. These strengths, together with TPA's future market potential (discussed below) drive the TPA's strategic direction.

- **Assets:** large scale, diverse, flexible with significant room to expand
- **Low cost gateway** for Florida's largest population center, i.e. the Tampa-Orlando I-4 corridor
- **Deepwater access** for its core lines of business
- **Energy and construction materials gateway** for the west central Florida market
- Expanding **rail** capability
- **Financial** performance

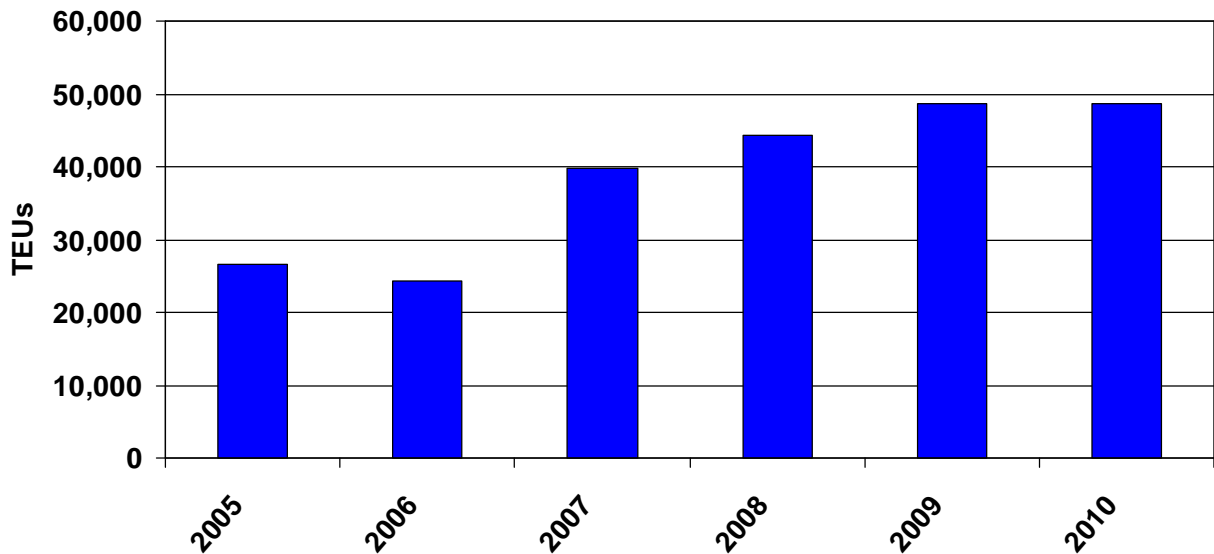
IV. Market Assessment

1. Container

The Port's container traffic is handled at TPA leased facilities. The container line of business is a comparatively new business for the TPA. The TPA has invested in modern container facilities at its Berth 212-213 complex during the past 3-5 years. Today, Berths 212-213 handled virtually all of the TPA's container traffic.

The TPA's container traffic has experienced steady growth during the past five years (Exhibit IV-1-1). The TPA's container volume increased 84 percent, averaging an annual compound rate of growth of 12.9 percent. The introduction of direct call and feeder services by Zim Integrated Shipping Services, in conjunction with the TPA's market development work with the Executive Shippers' Council and its investment in modern container facilities, have been the major drivers of container growth.

**Exhibit IV-1-1
TPA Container Traffic
FY2005-FY2010**

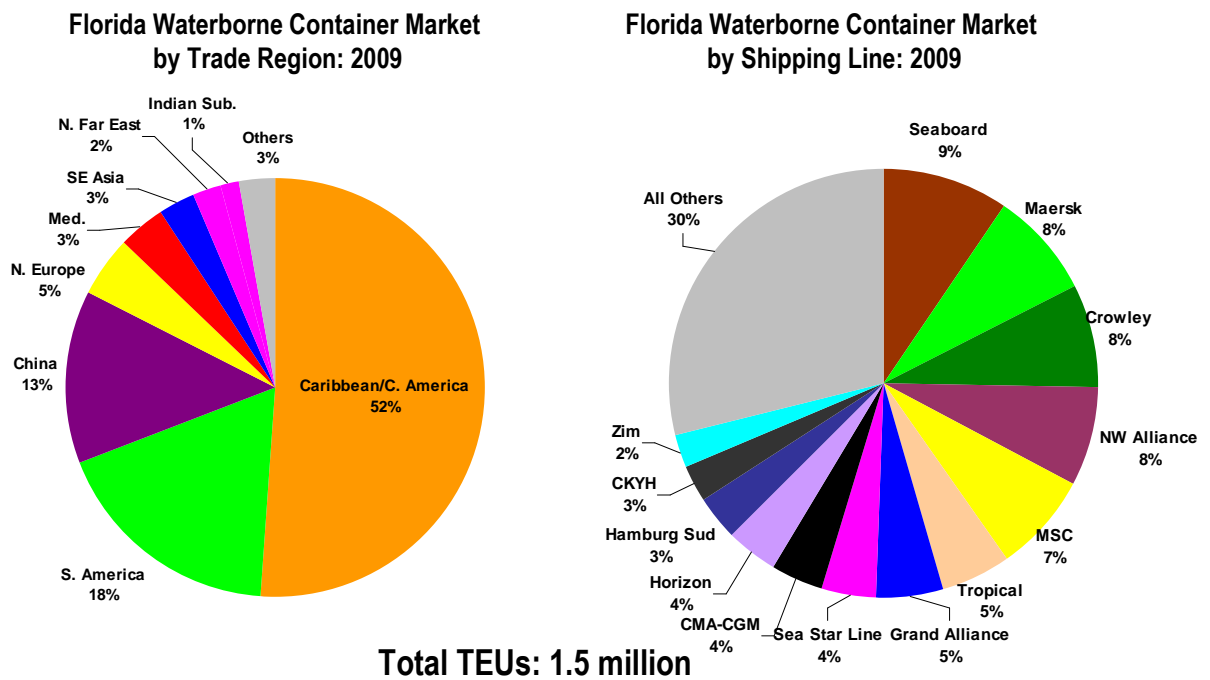


Source: TPA Summary Level Cargo Reports

a) Overview of the Florida Container Market and Port Industry

The Florida container market totaled an estimated 1.5 million TEUs in 2009. The market is relatively concentrated in terms of trade lanes (Exhibit IV-1-2). Conversely, it is relatively fragmented in terms of container shipping lines.

Exhibit IV-1-2
Container Traffic by Trade Lane and Shipping Line handled at Florida Ports
2009



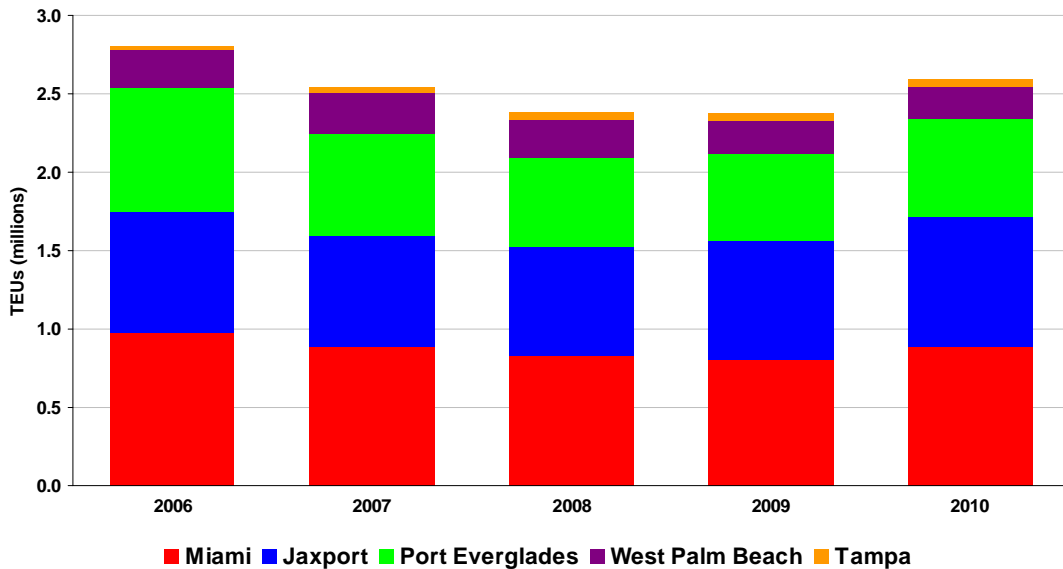
Source: NBI Analysis of JOC PIERS Data

Caribbean/Central American, South America and China container traffic represented an estimated 83% of all container traffic handled at Florida ports during 2009. The Caribbean/Central American trade lane, which includes Puerto Rico, represents more than half of all traffic moving via Florida's ports.

Most of the major global container shipping lines serve Florida's ports. In contrast to the trade lane concentration, no individual carrier has more than 9% of the Florida market. Seaboard Marine, Maersk, and Crowley are the three largest individual carriers. The New World Alliance (APL, Mitsui OSK, and Hyundai) is the largest alliance serving Florida's ports. Major regional container shipping lines (in addition to Seaboard and Crowley) serving Florida's ports include Tropical Shipping and Sea Star Line (principally Puerto Rico). Historically, the majority of the container services calling Florida ports have called at Miami, Port Everglades and Jacksonville. This concentration of services in these three ports reflects their historical market roles.

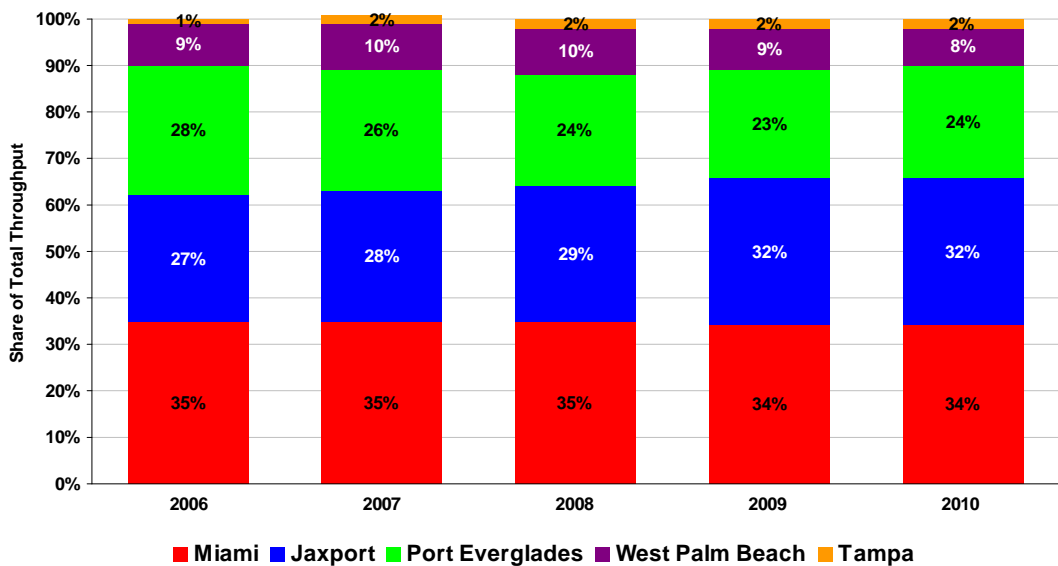
The Florida container port industry is concentrated in five ports: Miami, Port Everglades, Jacksonville, Palm Beach and the Port of Tampa. Miami, Port Everglades and Jacksonville handle the majority of the Florida ports' container traffic (Exhibits IV-1-3 and IV-1-4).

**Exhibit IV-1-3
Florida Ports Container Traffic
2006-2010**



Source: Port Websites; Port Annual Reports; Norbridge Analysis

**Exhibit IV-1-4
Florida Ports Container Traffic Market Share
2006-2010**



Source: Port Websites; Port Annual Reports; Norbridge Analysis

Collectively, these three ports handled 88-90 percent of Florida's container traffic. Consistent with the global and U.S. container port industries, Florida's container ports experienced significant reductions in container traffic during 2008 and 2009. The 2010 data indicate Florida's container traffic has begun to recover.

Historically, each of the Florida ports has played distinct roles in Florida's container port industry:

- Miami & Port Everglades: major gateway to the Florida market for most trade lanes and a gateway to/from the southeastern U.S. for the Central American and Caribbean container trades
- Jacksonville: the major South Atlantic gateway for U.S.-Puerto Rico container trades and a regional gateway for the South American trades

The Port of Palm Beach is the load center port for Tropical Shipping, a major container line in the Caribbean, Central American and selected South American trades. The TPA's traditional container role has been that of a niche port serving selected container lines and trade lanes.

The roles of most of Florida's container ports are evolving in response to macroeconomic changes in the Florida market, developments in the Florida and Southeastern container port industries, and the anticipated effects associated with the Panama Canal expansion program. Miami, with strong support from the U.S. federal government and the State of Florida, is attempting to position itself as the preeminent container port gateway to Florida. Major government supported capital investments include the construction of a tunnel to link Miami's container facilities to I-95, the construction of a rail line between Miami's container facilities and the Florida East Coast Railroad's Hialeah intermodal facilities, and the deepening of Miami's harbor to 50'. These major capital investments will enhance Miami's ability to accommodate most of the world's large container fleet and enhance its ability to more efficiently transfer containers between its container facilities and I-95 and the FEC rail facilities. The ultimate effect of these improvements on the competitive positioning of Miami vs. the other Florida container ports in serving the Florida market is addressed below.

Port Everglades recently completed a long-term master development plan for its port facilities. Its container development plan includes incrementally adding super post-Panamax cranes, deepening and widening access channels, constructing an on-terminal rail yard and making various container yard improvements. Ports Everglades enhancements will likely enable it to sustain its competitive position vs. Miami in particular, depending on the success of its channel widening and deepening program vs. the future size of container ships calling south Florida. Port Everglades already has very good access from its major container facilities to the regional interstate highway network. The addition of an on-terminal ICTF will significantly enhance its rail capabilities.

The Port of Jacksonville is pursuing several container-related capital investment projects. These include the planned construction of a fourth container facility (Blount Island, Talleyrand and TraPac are the three existing facilities) which is currently scheduled to be leased to Hanjin Container Line and a plan to deepen the St. John River from its current reported depth of 40 feet

to a reported 47'-48' depth . Jacksonville's TraPac and proposed Hanjin facilities are in part designed to expand its role in serving the Asia-Southeast U.S./Florida container trades.

The TPA also has significant, multi-phased container related capital investment plans which it is pursuing. These include:

- Enhancing its container vessel handling capabilities through a phase expansion of its container gantry crane and container berth capabilities
- The development of an on-dock rail facility directly behind its container terminal. The facility will be the largest on-dock rail facility capable of handling intermodal unit trains in the state of Florida
- Phased development of its container storage facilities to expand throughput capacity in response to market demand

The TPA is also participating in a joint marketing initiative with the Port of Houston and the Port of Mobile. The *Gulf Coast Advantage* marketing initiative highlights the growth potential for the U.S. Gulf container market and the participating ports' capabilities and investment initiatives to accommodate market growth. The initiative's ultimate objective is attracting new services operated by the world's largest global container lines to the Gulf Coast.

b) The TPA's Competitive Positioning in the Florida Container Market

NBI assessed the competitive positioning of the Port and the TPA's container line of business within the Florida container port industry. The competitive assessment focused on the key dimensions of competitive positioning: facilities and infrastructure, services, customers and costs. NBI's key findings in each of these areas are summarized below

(1) Facilities and Infrastructure

The TPA's facilities and infrastructure are competitive strengths. Key strengths include:

- Channel depth: at 43', the main shipping channel can accommodate 81 percent of the world's container fleet when operating at its maximum drafts. The 19 percent of the world fleet that cannot enter the Port at its fully loaded draft is unlikely to be deployed in trades serving the US Gulf. These ships are mostly deployed in the Asia-Europe trade route, i.e. the world's longest and largest trade lane. The characteristics of this route enable these very large container ships to maximize their inherent economies of scale.
- Container terminal facilities: the TPA's container facility has significant capability that can be quickly and cost effectively expanded in incremental phases to accommodate growth in demand. This flexibility to expand in response to growth and customer requirements optimizes the TPA's ability to incrementally invest, minimize financial risk and yet responsively meet customers' growth requirements. Therefore. The current and planned capacity is more than adequate to accommodate the high range growth forecasts for the West Central Florida Market.

- On-terminal rail facilities: the TPA's Hooker's Point rail terminal will provide the TPA with a unique on-terminal rail capability vs. other Florida ports. It will be the largest on-terminal rail facility in Florida and have the capability to handle both intermodal and bulk unit trains. Its location directly behind the container facility is ideal for supporting rail-based container operations.
- Highway connections: the I-4 connector project, in conjunction with ongoing roadway improvements on Hooker's Point, will significantly enhance TPA's ability to efficiently and cost effectively accommodate regional, truck-based container traffic. The I-4 connector in particular will provide direct access to the interstate highway network.

(2) Customers and Services

The TPA has an established relationship with Zim Container Lines. Zim is one of the largest independent container shipping lines in the world. Zim, with the support of the TPA and the Executive Shippers' Council, has introduced new container services to Tampa during the past three years. These new services have included a direct call service from Asia, a feeder service that links Tampa with Zim's major Caribbean transshipment center in Kingston, a service from Mexico, and a South American service. The Zim service linking Tampa to its Kingston hub is particularly important, since it is possible to link to most of Zim's global network via Kingston. The Port also has services to other Caribbean and Latin American destinations, including Tropical Shipping's weekly service to the Cayman Islands.

TPA's other strategic container partner is Ports America. Ports America is the largest container terminal operator within the U.S. Ports America operates the TPA's container facilities under a long-term lease. Ports America has extensive container terminal operating expertise, experience and relationships with most of the world's largest container shipping lines.

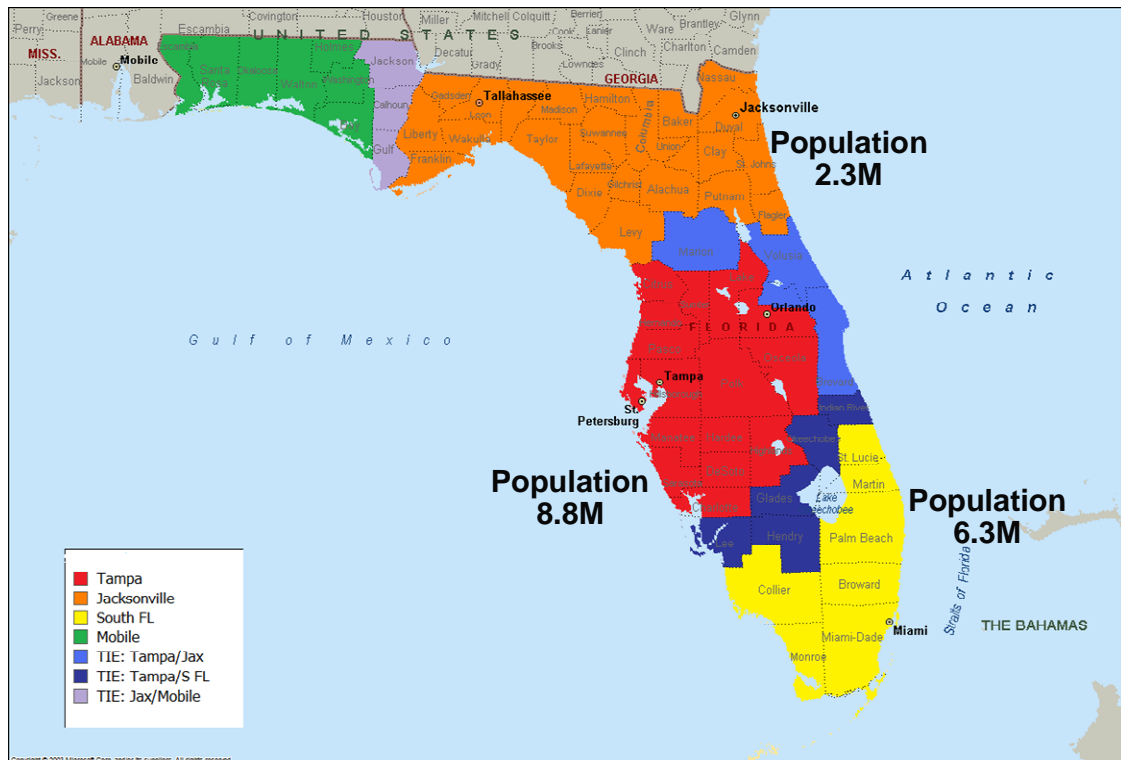
(3) Costs

Martin Associates, a leading transportation consulting firm and subcontractor to NBI for the strategic plan update, recently completed a major container market study for the Florida Department of Transportation. A key element of that study was a detailed competitive analysis of container logistics costs. This analysis analyzed ocean, port, inland transport and inventory carrying costs for Florida import container traffic for each of Florida's largest container trade lanes. The analysis estimated the total logistics cost to each major Florida County by port and trade lane. Martin Associates utilized this extensive analysis to estimate the TPA's competitive container hinterland. Specifically, Martin Associates identified those counties within Florida for which TPA represented the lowest cost routing for each of the major Florida trade lanes. The results of this analysis were highlighted in section III and shown here in Exhibit IV-1-5.

TPA's container market hinterland comprises 24 central and west central Florida counties. This market region currently contains an estimated 8.8 million or approximately 51 percent of Florida's total population. This region is projected to be the fastest growing region within Florida in terms of population over the next 20+ years. This large and growing region will likely become Florida's largest consumer market during the next 20+ years and therefore its largest

container market. The Port and TPA’s container line of business are well positioned to serve this market.

**Exhibit IV-1-5
TPA Container Market Hinterland**



Source: Martin Associates

c) Future Growth Potential and Forecasts

The future growth of TPA’s container line of business will be in part determined by its success in serving three markets: its core central/west central Florida market, expanding its market reach within Florida, and expanding its market reach in Latin America markets including Cuba.

(1) Core Central/West Central Florida Market

The TPA has significant competitive advantages in serving this market. The TPA’s ability to leverage these strengths and thereby become the preferred gateway for serving this market is an important element of its overall container business strategy. The TPA has already taken several of the requisite steps to expand its participation in this key market. The important steps going forward are to build on the market sizing and segmentation work completed during the strategic plan, target key trade lanes and potential shipping line customers, and then in conjunction with the Executive Shippers’ Council, work to expand Zim’s portfolio of services and attract additional carriers and services that build on the Zim portfolio.

(2) Expanding TPA's Reach to Other Florida Markets

TPA will require the participation and cooperation of its shipping line customers, the Executive Shippers' Council, the trucking companies that serve the Port and the CSX to significantly expand its market reach beyond its core central/west central market. Essentially, the TPA and its partners will need to develop services that are cost and transit time competitive with current and evolving port gateway options. Fundamentally changing the service and costs equations in these markets is beyond the TPA's span of control. Consequently, it will require a cooperative effort. The cooperative effort will need to include expanding the portfolio of container shipping line services, leveraging the capabilities and capacity of the large and expanding regional distribution center industry, working with the CSX to explore incremental, rail-based growth opportunities associated with the TPA's on-dock rail facility and CSX's central Florida asset investment program, and working with the Executive Shippers' Council to attract additional shippers to use Tampa.

NBI and the TPA explored a number of additional initiatives that could potentially enhance its participation in other Florida markets. These included assessments of transload operations and leveraging potential backhaul pricing opportunities in the motor carrier industry. While several structural challenges exist to successfully leveraging these initiatives, they do offer potential incremental opportunities for the TPA and its partners.

(3) Expanding TPA' Reach to Latin American Markets

The TPA is geographically well positioned to compete in several of the most important Latin American container trades. The recently introduced Zim services from Mexico and the East Coast of South America are salient examples of the TPA's geographic advantages. Many of the container lines serving these markets are regional carriers with strong market connections. These carriers may potentially begin to experience container terminal capacity and productivity challenges at Florida east coast container ports as trade recovers and the expanded Panama Canal opens. TPA's significant existing capacity, in combination with the ability to flexibly expand capacity in incremental phases, offers these carriers unique terminal capacity opportunities. Specifically it provides these carriers with long-term access to container terminal capacity that can be expanded in phases to meet their evolving needs. NBI and TPA have undertaken a detailed sizing and segmentation of these trades as part of the strategic plan update. TPA now needs to build on this analysis by identifying, evaluating and targeting those shipping lines that could best benefit by calling Tampa.

A potentially significant Latin American market opportunity is Cuba. While Cuba faces financial, political and structural challenges, it also offers significant upside opportunity. While no one can accurately predict when trade between the U.S. and Cuba may be normalized, it is fairly certain that Florida ports will function as key gateways for this trade. TPA's flexible asset base is a key strength to be maintained in anticipation of the eventual opening of Cuba. The TPA's ability to accommodate small to large RoRo, RoPax and LoLo vessels is a key advantage. The TPA needs to preserve this asset base in order to maximize its opportunities to expand its role in the Latin American trades in general and position itself to participate in the Cuban trade (see section IV-7 for a detailed evaluation of Cuban trade potential).

(4) TPA's Future Container Growth Potential

The next five years will be a particularly dynamic time in the international and U.S. container trades. The container shipping industry has fundamentally restructured its business model in terms of service, capacity management and chassis ownership. It is also continuously exploring new network deployment strategies as a means of optimizing service and improving profitability. Shippers' supply chain strategies also continue to evolve. Today's emphasis is more on flexibility and options, less on pure speed or price. Diversified distribution center strategies, DC bypass strategies, and the advent of near sourcing to address fuel price spikes are becoming more common place. Shippers' direct involvement in port evaluation and selection decisions is also increasing. Finally, port competition intensity is increasing. All of the major Florida container ports have significant capital investment plans. These plans are all designed to increase each port's share of the future Florida container market and to extend their reach into southeast US markets. TPA can expect increased competition in its core central/west central Florida market in the future. Finally, the expanded Panama Canal offers potential growth opportunities for both Florida and Gulf Coast ports.

Recognizing the increasingly dynamic nature of the global and U.S. container trades, the competitive strategies of other Florida ports, and the TPA's competitive strengths and weaknesses, NBI developed a likely future range of potential growth for the TPA's container line of business. The projections are conservative in terms of future growth. They are based primarily on the TPA's success in penetrating its core market, i.e. central and west/central Florida. This conservative approach ensures the TPA does not needlessly invest in capacity before it is required. However, as noted above, core strength of the TPA is its ability to quickly flex container capacity to address growth opportunities. Consequently, the TPA is in the advantaged position of being able to plan conservatively knowing it can quickly and cost effectively develop capacity in response to higher than expected growth.

NBI has developed a lower end and higher end forecast for the TPA's future container growth. Collectively, these two forecasts identify the likely range of future growth:

Low Range Growth Forecast:

- The Florida container market in general and the central/west central Florida container market in particular experiences a comparatively slow extended economic recovery
- The expanded Panama Canal creates relatively few growth opportunities for Florida and Gulf Coast ports
- TPA successfully leverages its significant competitive strengths to successfully increase its share of its core central/west central Florida market

High Range Growth Forecast

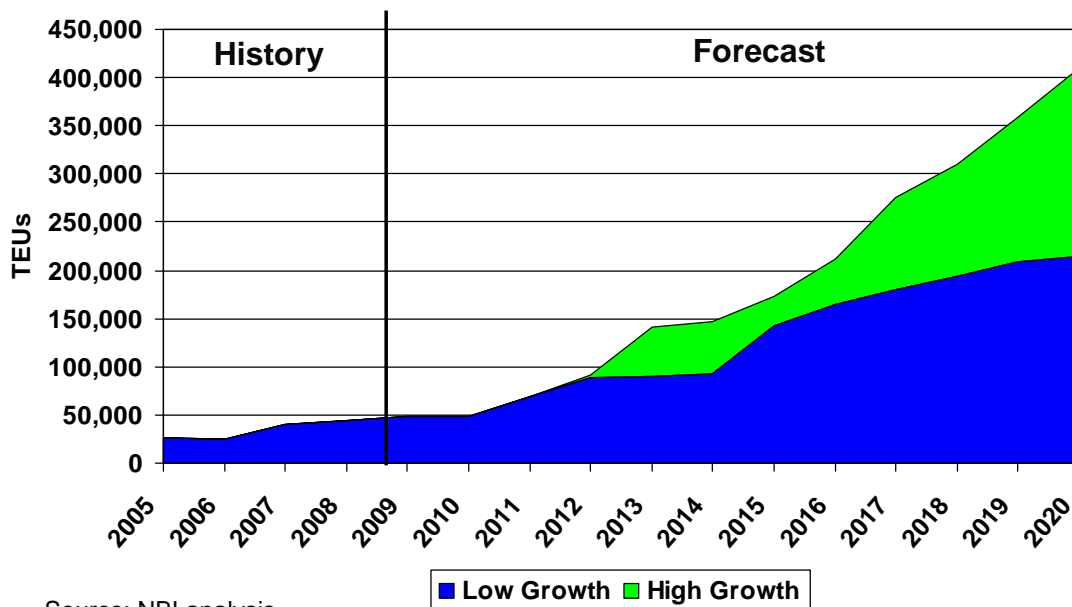
- The Florida container market in general and the central/west central Florida container market experiences a moderately strong, sustained economic recovery
- The expanded Panama Canal generates a significant increase in Gulf Coast container services that include Tampa calls

- TPA successfully leverages its significant competitive strengths to significantly increase its share of its core central/west central Florida market

Additional upsides to the high forecast include the aforementioned opportunities associated with transloading, leveraging DC industry capabilities, and expanding the TPA’s reach in Latin American markets.

Under the NBI forecasts, TPA’s container business is expected to range between approximately 200,000+ and 400,000 TEUS in 2020 (Exhibit IV-1-6). These projections represent five and nearly tenfold increases over the TPA’s existing container base.

**Exhibit IV-1-6
TPA Container Traffic Forecasts**



Source: NBI analysis

2. Petroleum Products

The Port's petroleum products business is one of its largest and most important. It generates significant tonnage and revenue and is a key source of sustainable competitive advantage. NBI's 2007 analysis of the Port's petroleum products business concluded:

- Gasoline, diesel oil, aviation fuels and residual fuel oil will remain the major drivers of the Florida economy
- Florida will continue to source its energy requirements from out-of-state sources with waterborne deliveries from U.S. Gulf Coast refining centers and international imports representing the major sources
- The U.S. Gulf refining industry capacity investments are expected to continue to modestly lag the growth in demand and create additional demand for imports
- The distribution of imports across these origins is likely to fluctuate from year to year and is not expected to have a significant, long-term detrimental effect on the Port
- The Port's competitive advantages (location relative to the Central/West Florida Market, number of deep draft liquid bulk berths, comparatively deepwater, and the Central Florida Pipeline) position the Port to continue to fulfill its role as the petroleum product gateway for West Central Florida.
- Based on the foregoing, Norbridge projected the Port's future petroleum product imports to increase at average annual rates of growth of 1.4 percent to 2.0 percent per year

This section presents NBI's 2010 selected update of the Port's petroleum products LOB. It sequentially addresses the following topics:

- Overview of the Florida Market
- Overview of Port of Tampa and Florida Ports Petroleum Products Trade
- Future Demand
- Sourcing Considerations
- U.S. Refinery Capacity
- Current and Future Jones Act Product Tanker and Barge Fleets
- Additional Growth Potential
- Forecasts

a) Overview of the Florida Market

In 2010, the State of Florida was the third leading user of petroleum products within the United States. As outlined in NBI's 2008 report, Florida receives the majority of its petroleum products via its ports since it lacks a petroleum refining industry and is not directly connected to the Colonial Pipeline. The Colonial Pipeline transports petroleum products from the West Gulf petroleum refining industry to major consumption markets along the eastern seaboard. Florida's

waterborne petroleum receipts originate from both domestic (principally West Gulf oil refineries) and from international locations, though the predominant share is sourced domestically.

Strong population growth in combination with Florida's tourism and agriculture industries drove the demand for petroleum products in the state through 2007. Waterborne petroleum product imports and receipts also grew significantly during this period. However, in 2008 and 2009, Florida's petroleum product consumption and waterborne petroleum product receipts decreased as a result of the global economic recession (see exhibit IV-2-2) and the resulting negative effects it had on:

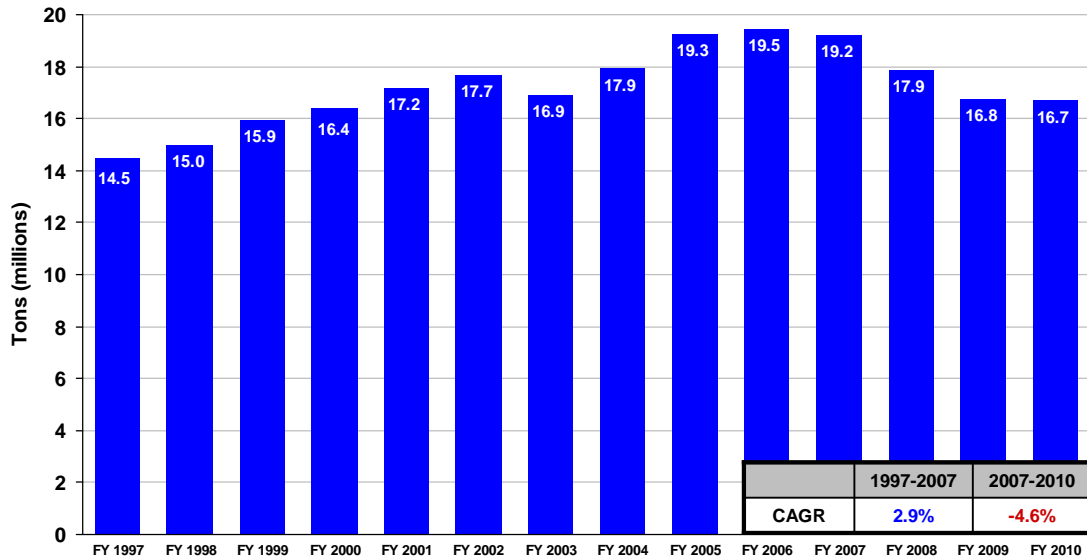
- Employment, purchasing power, and consequently personal consumption (see section II of this report)
- Per capita vehicle miles driven
- Truck miles driven
- Agriculture and tourism activity

Domestic and international trade increased for the U.S. as a whole in 2010. However, as shown in Section II of this report, Florida's economic recovery has lagged the nation as a whole, and consequently growth in petroleum product consumption and waterborne petroleum product receipts have lagged the general increase seen by the nation. Florida's estimated 2010 consumption remained flat while U.S petroleum product consumption increased.

b) Overview of Port of Tampa and Florida Ports Petroleum Products Trade

The Port's petroleum product receipts increased at nearly 3 percent per year between 1997 and 2007—roughly in line with population and economic growth in the state of Florida during the same period. However, during the 2008-2009 global economic recession, the Port's petroleum products traffic declined by a compound annual rate of nearly 5% (see exhibit IV-2-1). Petroleum product receipts for the Port remained relatively flat in 2010 as the Florida economy's recovery lagged the recovery seen by the nation as a whole. Since 2000, Petroleum products have been the Port's largest source of cargo throughput.

**Exhibit IV-2-1
Port of Tampa Petroleum Products Trade
FY 1997-FY 2010**



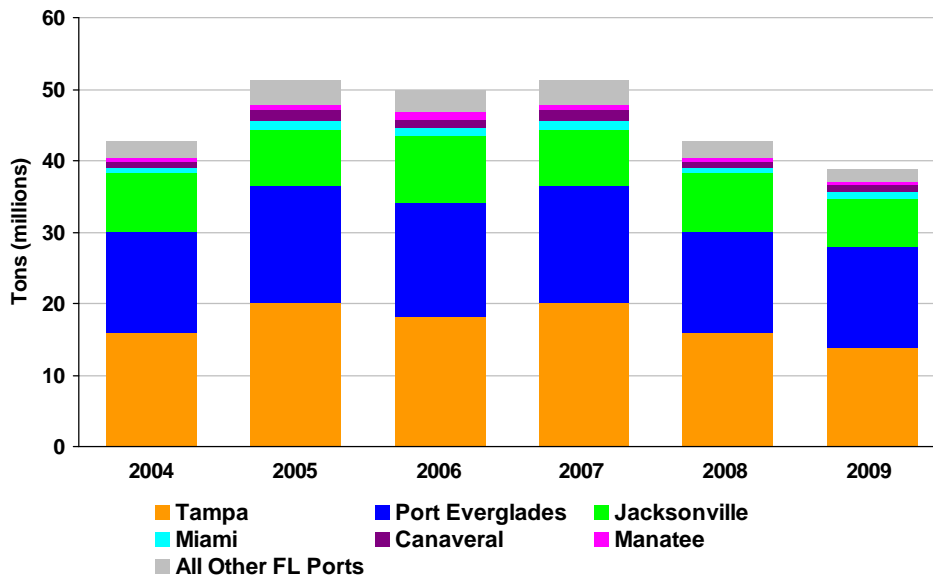
Source: TPA

The Port of Tampa handled an estimated 36% of the waterborne petroleum products received at Florida ports' private and public terminals during 2009, which is roughly equal to the share it handled in 2004 (see exhibit IV-2-2) Other significant entry points for Florida's waterborne petroleum product receipts (domestic and international origins) include Port Everglades, Jacksonville (private terminals), Miami (private terminals), Port Canaveral and from the Colonial Pipeline via its Bainbridge, Georgia terminal. A variety of barge terminals on the Florida Panhandle Coast handle waterborne petroleum receipts for Northwest Florida.

The Port of Tampa and Port Everglades dominated the market between 2004 and 2009. Their dominance is the result of a number of competitive advantages including:

- Proximity to major consumption markets, i.e. central/west and southeast Florida respectively
- Pipeline service to major markets, i.e. Orlando/Taft and Miami International/Fort Lauderdale International/West Palm Beach airports respectively
- Significant petroleum product tank storage capacity
- Many of major petroleum product companies that distribute and sell product in the U.S. operate from these two ports
- Inland transportation cost advantages to regional markets.

**Exhibit IV-2-2
Florida Waterborne Petroleum Product Receipts by Port
2001-2005**



Source: Waterborne Commerce Statistics Center

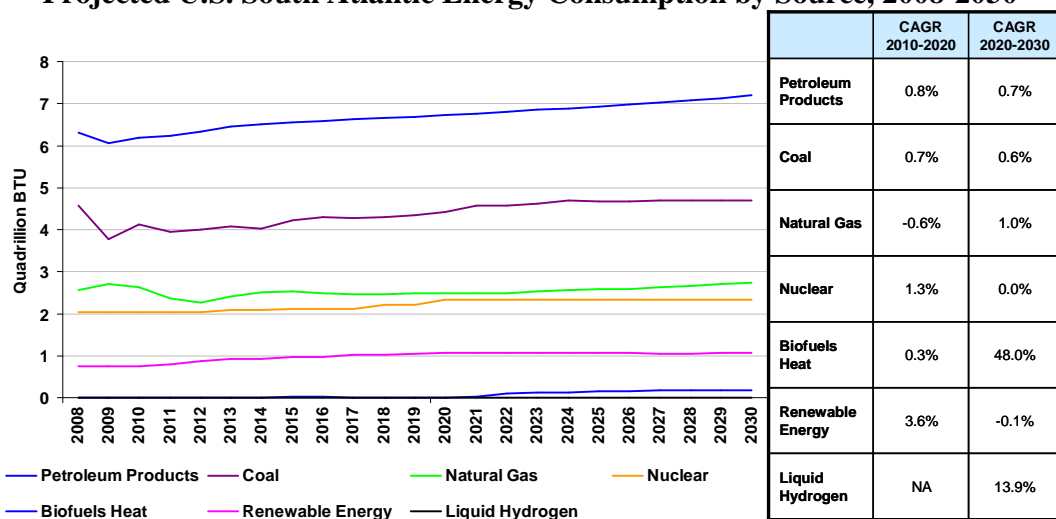
c) Future Demand

Understanding the end-uses that will drive future petroleum products demand in the State of Florida and the range of likely future growth is critical to determining the Port's potential petroleum products cargo traffic going forward. Gasoline, diesel oil, aviation fuels and residual fuel oil are the primary petroleum products consumed in Florida and handed at the Port. Norbridge research indicates that these petroleum products will remain the major drivers of Florida petroleum demand:

- Most energy forecasts (e.g., DOE, EIA) project modest growth in petroleum products consumption in the Southeast U.S. in general and the state of Florida in particular in the short and long-term (1% CAGR between 2010 and 2020—see exhibit IV-2-3).
- Florida's population in general and its driving age population in particular are expected to continue to grow
- Continued long-term growth in tourism will also contribute to increased demand
- Per capita vehicle miles traveled in Florida are expected to continue to increase
- The Florida economy remains essentially a truck served market so as the Florida economy continues its recovery, truck trips and miles driven are likely to increase accordingly
- The one unknown is the price of fuel. If fuel prices continue to escalate at significant real rates in the future, then the population will likely experience potentially significant erosions in purchasing power. This trend has the potential to result in a flattening or potentially a decline in gasoline and diesel oil consumption as a result of consumers taking significant actions to limit or eliminate a long-term erosion in purchasing power.

Based on the foregoing trends and analyses of energy consumption projections for the total U.S., the South Atlantic, and given that the Port is an established leader in waterborne petroleum products handled for the state of Florida, a long-term demand trend that parallels South Atlantic petroleum products consumption appears to present a practical basis for projecting future demand. Norbridge believes the Florida economy’s growing driving age population, large agriculture and tourism industries, and dependence on truck transportation in most markets could poise the state for growth in petroleum product consumption above what is projected for the U.S. South Atlantic Region.

**Exhibit IV-2-3
Projected U.S. South Atlantic Energy Consumption by Source, 2008-2030**



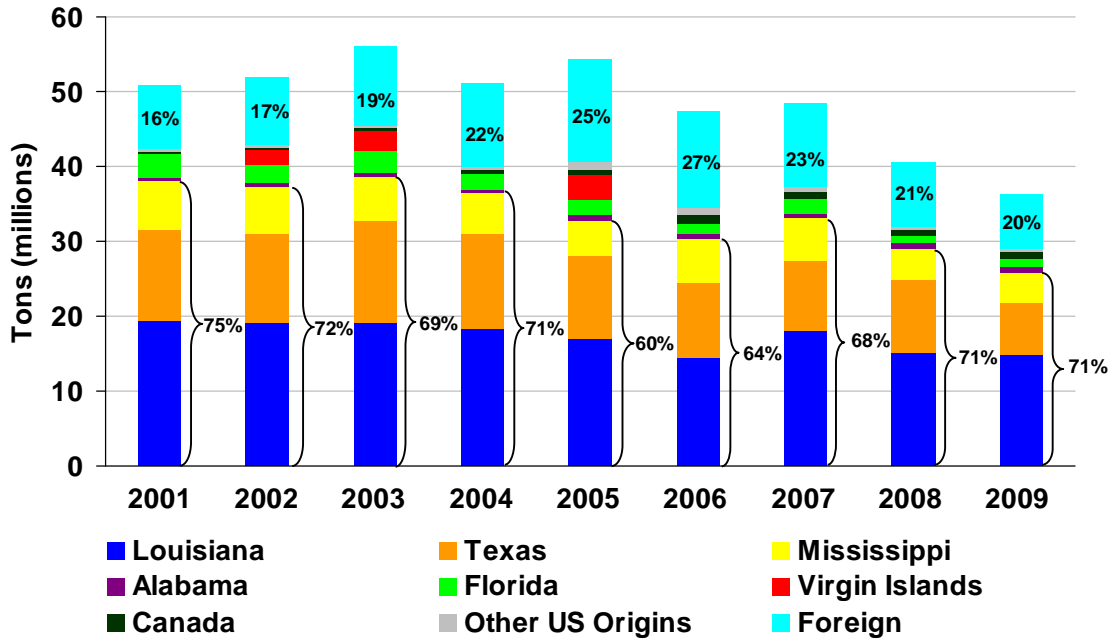
Source: Energy Information Administration

d) Sourcing Considerations

The current and future sources of petroleum product receipts have a potentially significant influence on the Port of Tampa’s competitive position within the Florida Port’s system. This is especially true given the distinct geographic positioning of the Port on the Gulf Coast of Florida relative to Port Everglades on the Atlantic Coast and the implied economic advantages relative to specific sources of petroleum products (domestic Gulf receipts from the Gulf for Tampa versus international imports from the East for Port Everglades).

The Florida economy is dependent on waterborne imports and domestic receipts (from both domestic and international locations) of petroleum products for its energy needs since Florida lacks a refining industry. The majority of Florida’s petroleum waterborne receipts are sourced primarily from U.S. Gulf Coast refining centers in Texas, Louisiana and Mississippi (Exhibit IV-2-4).

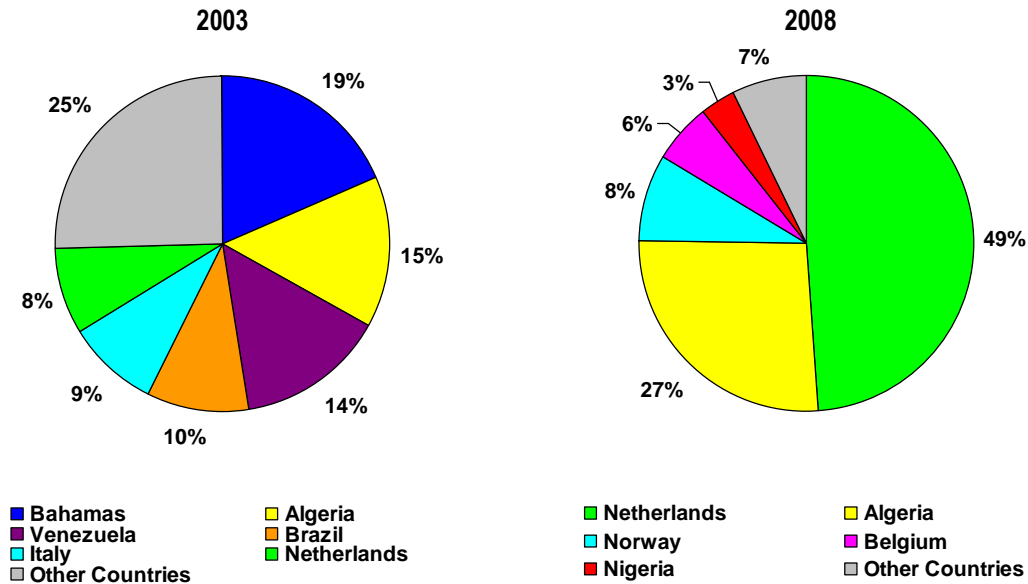
**Exhibit IV-2-4
Florida Petroleum Product Receipts
2001-2009**



Source: 2001-2009 Waterborne Commerce Statistics Center, Commodity Movements-State to State by Commodity

International imports and receipts from the Colonial Pipeline at Bainbridge, Georgia comprise the remaining sources of Florida’s inbound petroleum shipments. The Netherlands is reportedly the largest international source of refined petroleum products for Florida. Other international origins vary significantly by year as evidenced in Exhibit IV-2-5 and reflect the “flexibility” of global oil companies to adjust supply to any region based on world supply/demand balances, the comparative delivered costs of alternative sources in any given market, and the availability of supply.

**Exhibit IV-2-5
International Sources of Florida Petroleum Products**

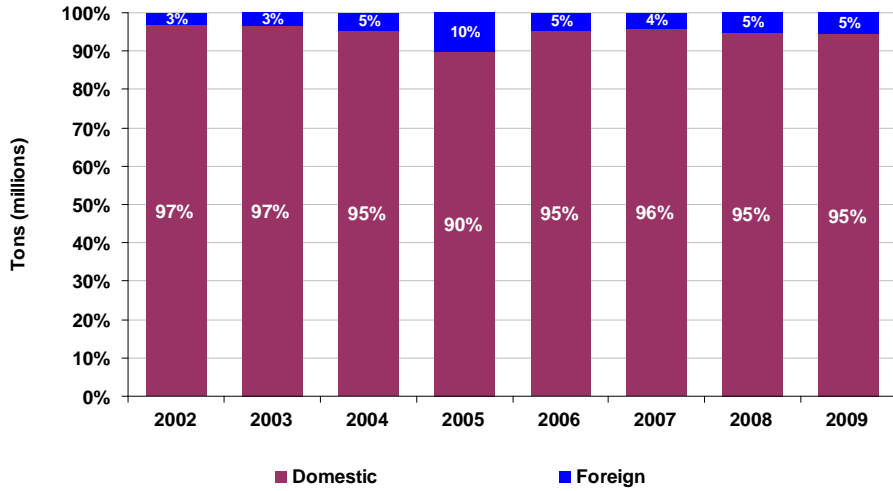


Source: U.S. Census Bureau

The Port sources a greater portion of its petroleum products from domestic sources than the State of Florida as a whole. Since 2002, the Port has received more than 5% of its petroleum products from foreign sources only once, in 2005 (10%), when a series of hurricanes negatively affected Gulf Coast refineries' and ports' collective ability to ship products (see Exhibit IV-2-6). In 2006, when a combination of high domestic demand, rapidly escalating U.S. coastal tanker and barge rates (see Exhibit IV-2-11), and high refinery utilization rates (see Exhibit IV-2-9) resulted in increased foreign imports for the total U.S., the Port conversely received 95% of its petroleum product tonnage from domestic sources. Its proximity to the West Gulf refining industry and the comparative efficiency of the cross-Gulf Jones Act Fleet likely sustained the competitiveness of domestic receipts in the Port. This trend suggests that even in periods of high demand and comparatively tight Jones Act fleet capacity, substitution of foreign-sourced for domestically-sourced petroleum products is likely to occur in other parts of the country first (specifically the Atlantic coast which is nearer to large exporters of petroleum products such as the Netherlands and Northern Africa).

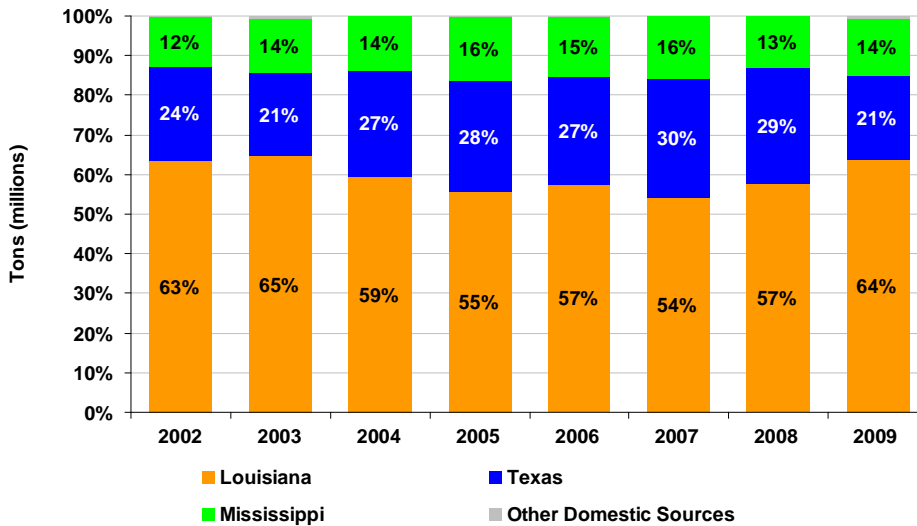
The Port's proximity to Gulf Coast refineries (and the implied economic advantages) relative to other States that handle large volumes of waterborne petroleum products suggest that domestically sourced petroleum products will continue to be more attractive for the Port relative to other ports and states. Nearly 100 percent of the Port's domestic petroleum product receipts have come from Louisiana, Texas, and Mississippi since 2002 (see Exhibit IV-2-7).

Exhibit IV-2-6
Port of Tampa Petroleum Product Receipts by Source
2002-2009



Source: TPA

Exhibit IV-2-7
Port of Tampa Domestic Petroleum Product Receipts
2002-2009



Source: TPA

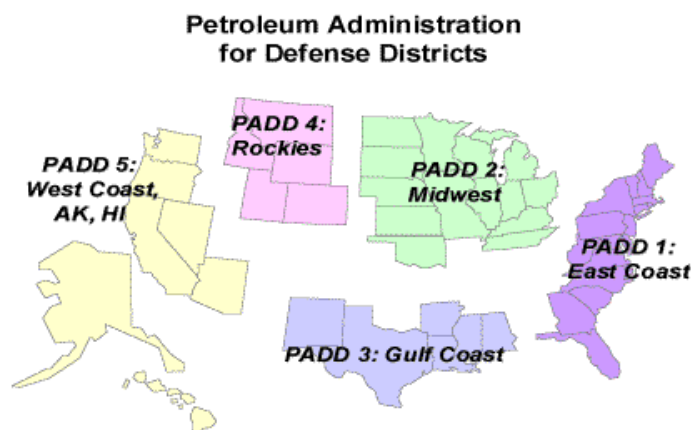
The future mix of petroleum product sourcing will be driven by a number of key events including:

- Gulf Coast refining capacity (existing plus potential expansions) and demand. Refinery capacity increases will, in part, determine:
 - The competitiveness of the West Gulf refining industry relative to international sources
 - The relative strength of the dollar vs. international currencies
 - The price of oil
 - Environmental regulation
 - Gulf of Mexico offshore oil production
 - The delivered cost of imports vs. domestic receipts at Florida's major ports of entry
- The ability of the Jones Act (U.S.-flagged) petroleum product tanker and barge fleets to effectively handle the current and projected U.S. petroleum products trade, specifically given:
 - The MARPOL regulation that all tankers and tank barges carrying petroleum products must be entirely double-hulled by 2015

(1) U.S. Refinery Capacity

The U.S. petroleum refining industry is segmented into five PADDs (Petroleum Administration for Defense Districts—see Exhibit IV-2-8). As outlined above, the state of Florida in general and the Port in specific source the most significant portions of their refined petroleum products from Gulf Coast refineries in PADD III, which collectively account for approximately 50% of U.S. refining capacity.

**Exhibit IV-2-8
U.S. PADD Districts**

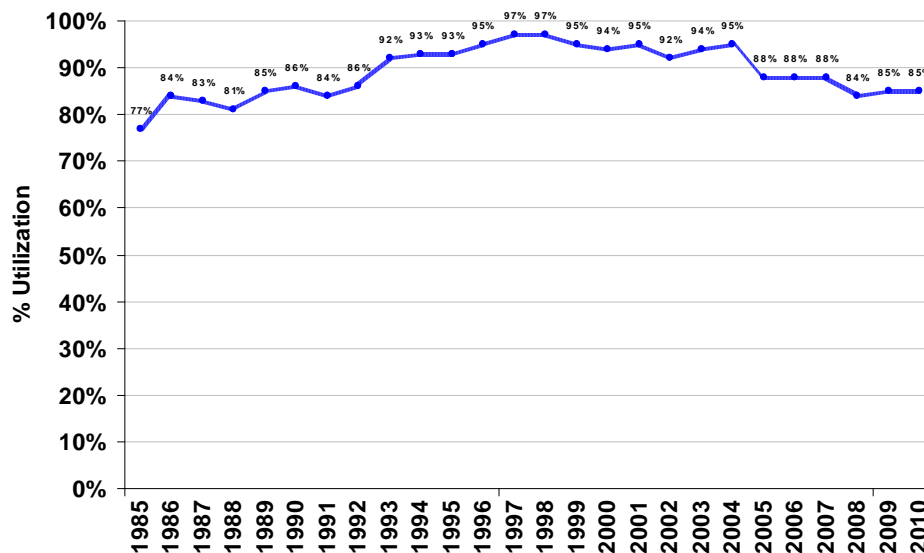


Source: Energy Information Administration (EIA)

After reaching utilization levels of 90%-95% between 1993 and 2004, Gulf Coast refinery utilization levels are the lowest they have been since 1990. The relatively low utilization levels shown are the result of:

- Lower domestic demand as a result of the global economic recession
- Capacity expansions/additions during the past 10 years
- Increased foreign sourcing of foreign petroleum products by U.S. in general and Atlantic Coast consumption markets in particular during periods of high domestic demand and higher domestic tanker and barge rates (see Exhibit IV-2-9).

**Exhibit IV-2-9
PADD III (Gulf Coast) Historical Refinery Utilization
1985-2010**

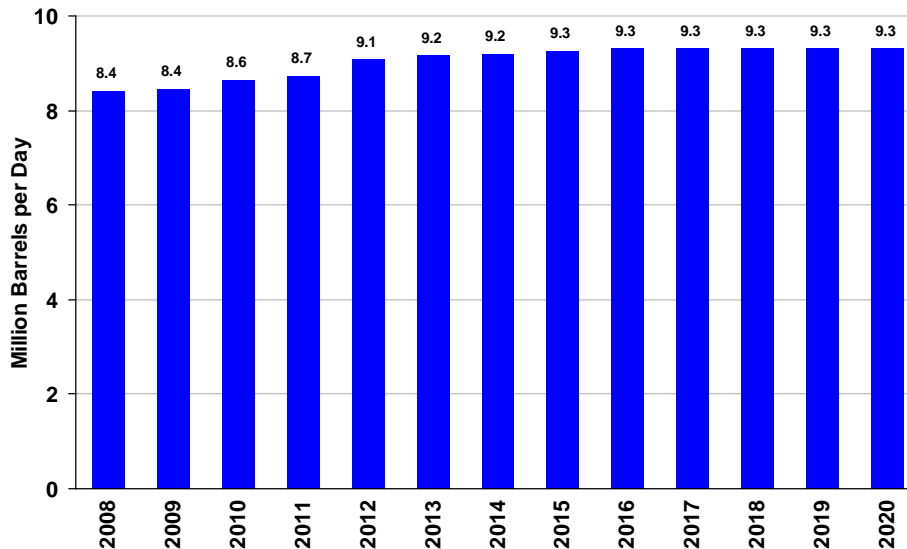


Source: Energy Information Administration (EIA)

A number of planned PADD III capacity expansions/addition will likely cause this utilization level to further decline. The Energy Information Administration estimates that an additional 0.9M barrels per day (7% of current PADD III capacity) will be added between 2011 and 2015 (see Exhibit IV-2-10).

Given the comparatively lower levels of current (vs. historical) utilization at PADD III refineries, projected capacity additions, and the modest growth in petroleum product consumption forecasted for the nation as a whole (from a small base relative to historical consumption), future West Gulf refinery capacity should be sufficient.

Exhibit IV-2-10
PADD III (Gulf Coast) Historical and Estimated Operable Capacity
2008-2020



Source: Energy Information Administration

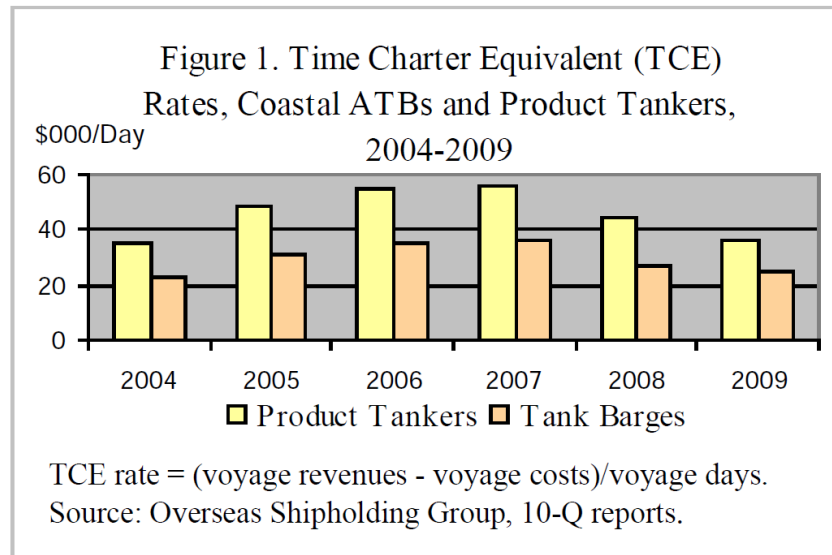
(2) Current and Future Jones Act Product Tanker and Barge Fleets

Apart from refinery capacity, the Jones Act regulation that all crude oil and petroleum products transported between U.S. ports must be carried in a U.S. flagged vessel is another critical potential constraint to the future viability of the cross-Gulf petroleum products trade. This stipulation is ever the more critical in the face of new, incremental regulation that affects the U.S. petroleum products trade in general and the cross-Gulf petroleum products trade in particular.

After numerous high profile oil spills around the world and specifically, the Exxon Valdez oil spill disaster outside the Port of Valdez, Alaska, the U.S. Government held the International Convention for the Prevention of Pollution from Ships (or MARPOL Convention) and passed new legislation that required all new oil and product tankers and barges built for use between U.S. ports be equipped with a full double hull. Moreover, it dictated that all tankers and barges currently operating on the coastal crude oil and petroleum product trades between two U.S. ports must be entirely double-hulled by 2015.

This legislation, along with high national demand for petroleum products and soaring coastal tanker and barge rates during the period from 2005 to 2007 (see Exhibit IV-11-2) led to a boom in new U.S. flagged double-hull tanker and barge tanker construction as well as conversions of active vessels from single-hull to double-hull.

Exhibit IV-2-11
U.S. Coastal Trade Average Daily Time Charter Rates
2004-2009

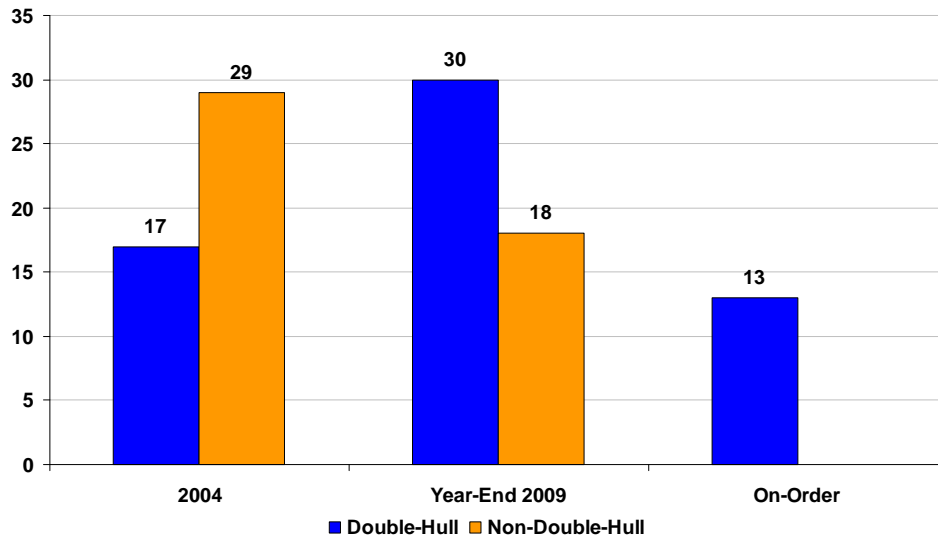


Source: MARAD

Exhibits IV-2-12 and IV-2-13 show the U.S. Jones Act Petroleum Products tanker and barge fleets in 2004 and at the close of 2009 according to MARAD. The petroleum products tanker fleet amounted to 48 vessels at the end of 2009 as compared to 46 vessels in 2004. Although the total number vessels increased only slightly, the number of double-hulled vessels increased significantly. Thirteen double-hull product tankers were added to the fleet between 2004 and 2009 while 11 single-hull product tankers were removed from coastal trades. At the time of MARAD's last update to their coastal tank and barge market report in June 2010, thirteen double-hull product tankers amounting to 29% of the existing fleet were scheduled for delivery through 2012.

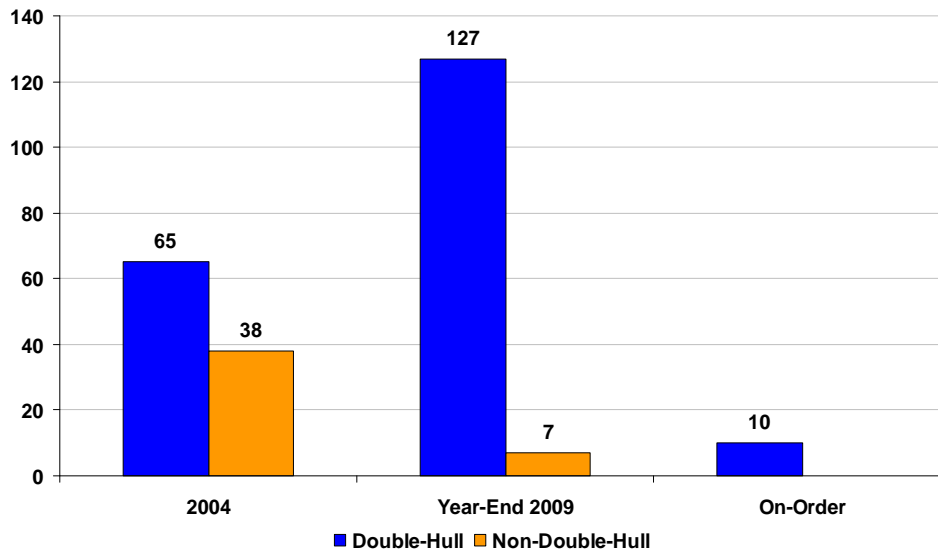
The petroleum products barge fleet saw much greater additions to double-hull capacity between 2004 and 2009. The U.S.-flagged coastal petroleum product barge fleet amounted to 127 barges at the end of 2009 as compared to 103 vessels in 2004. Double-hull vessel capacity increased even more dramatically. Sixty-two double-hull product barges were added to the fleet between 2004 and 2009 while 31 single-hull product barges were removed from coastal trades. At the time of MARAD's last update to their coastal tank and barge market report in June 2010, ten double-hull product barges were scheduled for delivery through 2012.

Exhibit IV-2-12
U.S. Jones Act Petroleum Product Tanker Vessel Fleet
Year-End 2009



Source: MARAD

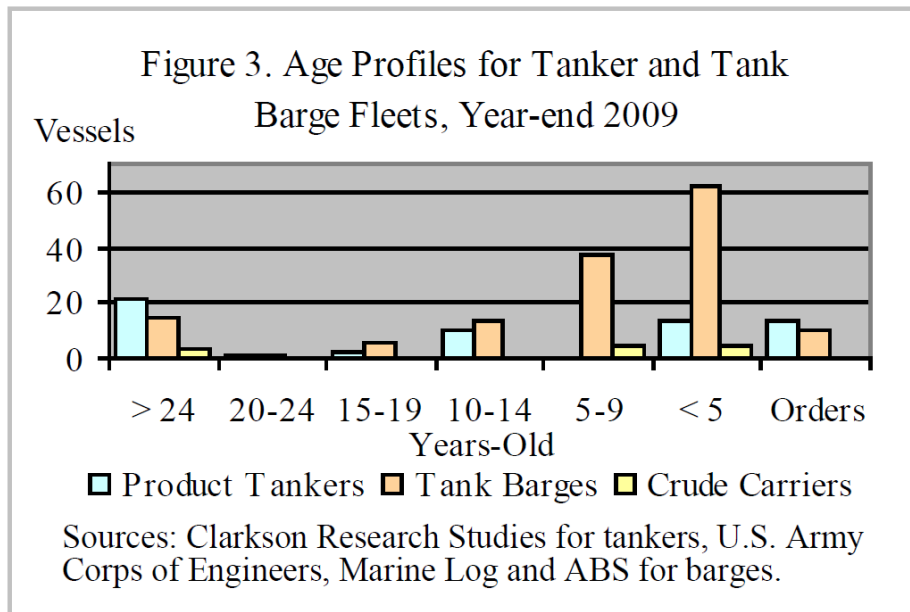
Exhibit IV-2-13
U.S. Jones Act Petroleum Product Barge Vessel Fleet
Year-End 2009



Source: MARAD

Aside from offering a longer useful life going forward, newer tankers and barges offer efficiency and productivity gains over older vessels (fuel efficiency, lower manning requirements, greater lifetime ton-miles per DWT, etc.) and thus incur lower operational costs than older tankers and barges. The Jones Act petroleum products barge fleet is relatively young. As of year-end 2009, 74% of the barge fleet was less than ten years old. Currently, only 27% of the Jones Act petroleum product tanker fleet is less than ten years old. However, as on-order tankers are delivered and older tankers (>24 years) are scrapped, the age profile of the Jones Act product tanker fleet will shift and by 2012, nearly 70% of the fleet will be less than ten years old. Moreover, the low number of product tankers and barges in the 15-24 year old range suggests that a relatively low number of tankers and barges will be scrapped during the period from 2012 to 2020 (see Exhibit IV-2-14).

Exhibit IV-2-14
U.S. Jones Act Petroleum Product Tanker and Barge Fleet Age Profile
Year End 2009



Source: MARAD

Exhibit IV-2-15 shows the estimated current and future annual service capacities of the Jones Act product tanker and barge fleets. By 2012, it is estimated that the trade will have approximately 95 billion ton-miles of annual service capacity, which is a 24% increase relative to the fleets' combined annual service capacity in 2009.

Given this estimated increase in annual service capacity during the period from 2004 to 2009, the expected increase in capacity between 2009 and 2012, and the modest projected growth in U.S. petroleum product consumption from a relatively low base, Norbridge estimates that annual service capacity of the Jones Act Fleet will not be a constraint to serving the U.S. coastal petroleum products trade in general and the Gulf coastal petroleum products trade in specific in the mid to long term (see Exhibit IV-2-16).

Exhibit IV-2-15
U.S. Jones Act Petroleum Product Tanker and Barge Double-Hull Fleet Service Capacity
Year End 2009

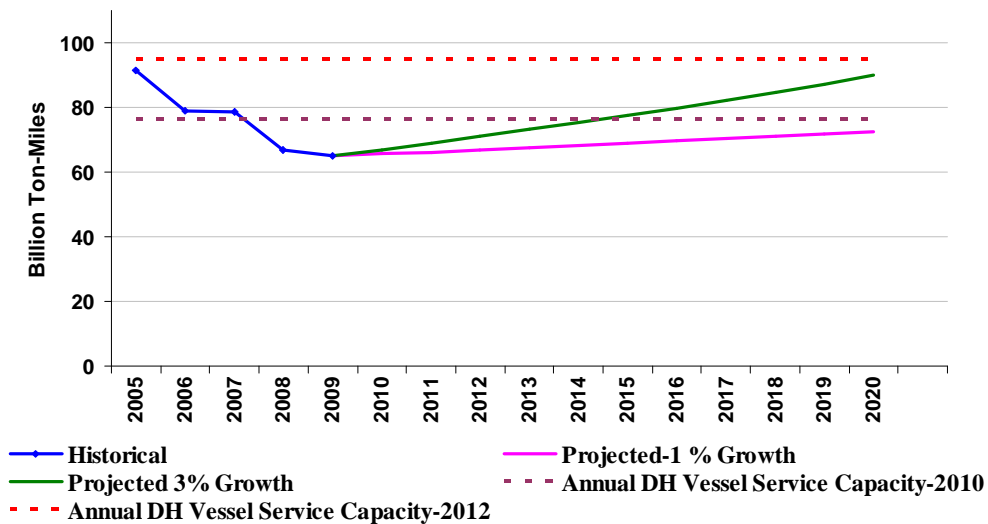
Type/Age	DWT		Ton-miles/ DWT	Service Capacity	
	2009	2012		2009	2012
Product Tankers	1,367	1,756		40.6	56.4
< 10 Years	624	1,250	34,952	21.9	43.6
10-25 years	743	506	25,219	18.7	12.8
Tank Barges	2,154	2,428		35.5	38.3
< 10 years	1,787	1,665	17,322	30.9	28.8
10-25 years	367	763	12,410	4.6	9.5
Total	3,521	4,184		76.1	94.7

* Excludes vessels older than 25 years.

Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States, detailed files for non-estimates.

Source: MARAD

Exhibit IV-2-16
Historical and Projected U.S Coastal Petroleum Products Trade
2005-2020



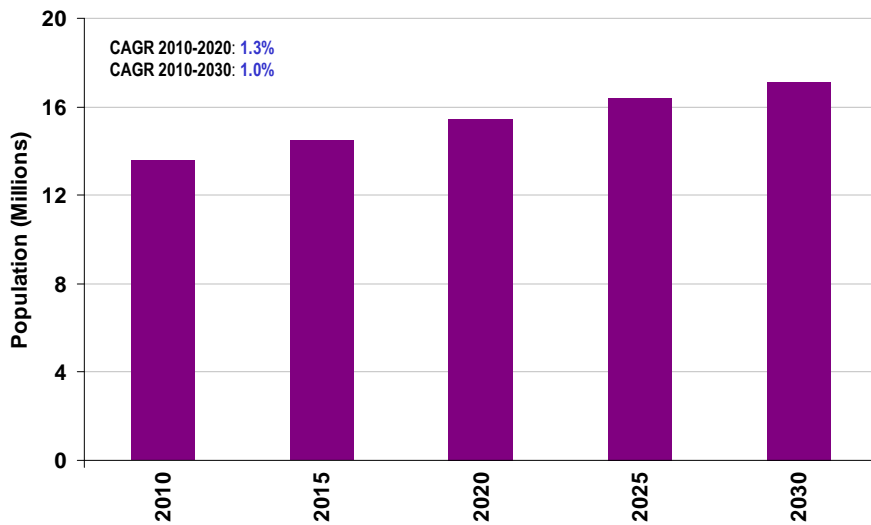
Source: MARAD; Norbridge Analysis

e) Additional Growth Potential

There are other factors that could potentially contribute to additional growth in petroleum product consumption for the state of Florida and thus drive growth beyond what is currently projected for the South Atlantic region as a whole (see Exhibit IV-2-3).

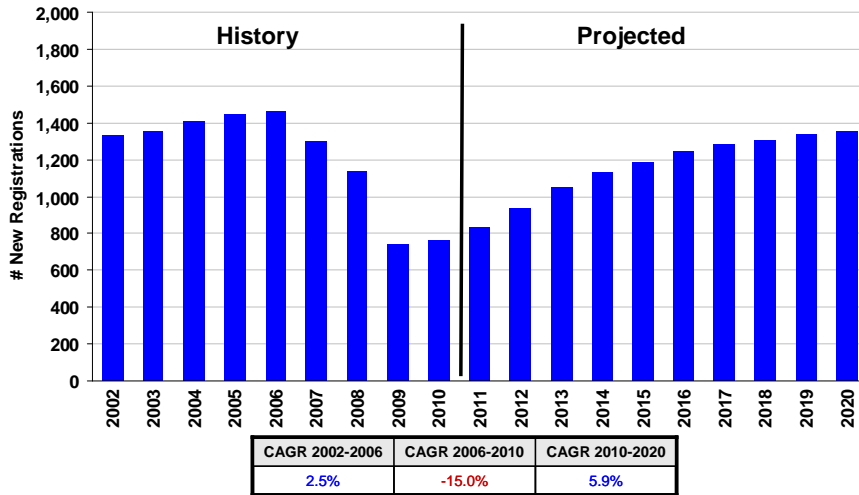
As shown in Exhibits IV-2-17 and V-2-18, both the driving age population and the number of new vehicle registrations in the state of Florida are projected to increase consistently between 2010 and 2020. While conservation, i.e. improved fuel efficiency in vehicle fuel consumption, car-pooling, etc., may slightly reduce the overall demand growth rate, it is unlikely these factors could offset underlying population growth and lead to stagnant or reduced petroleum product consumption. The ongoing debate over setting fuel efficiency standards is the most salient indication of this trend. Consequently, it is unlikely that improved fuel economy, in combination with source substitution associated with hybrid vehicles and bio fuels will offset growth in population and miles traveled per capita. Thus, a faster than anticipated increase in the driving age population represents an upside potential for above average growth of petroleum products demand within Florida.

Exhibit IV-2-17
Projected Florida Driving Age Population
2002-2009



Source: Bureau of Economic and Business Research; Norbridge Analysis

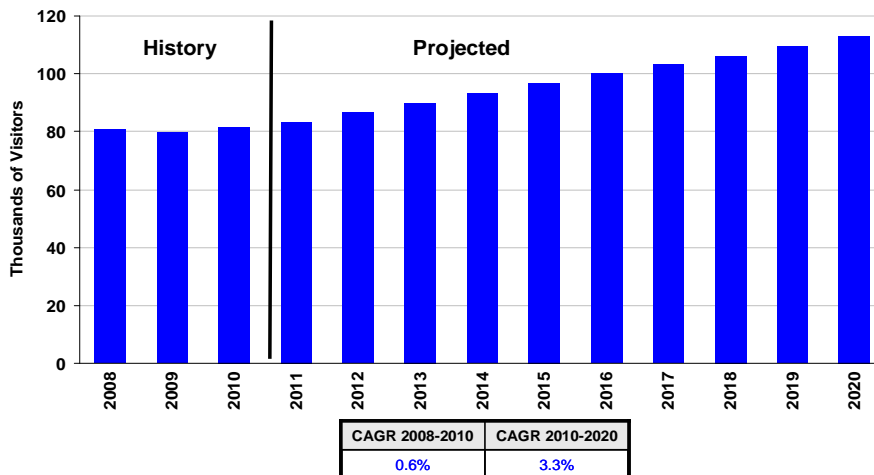
Exhibit IV-2-18
Historical and Projected Florida New Vehicle Registrations
2002-2020



Source: 2010 Florida Long Run Estimating Conference; Norbridge Analysis

Moreover, tourism in Florida is projected to increase by 3% year-over-year following the U.S. and Florida economic recoveries between 2011 and 2020 (see Exhibit IV-2-19). This increase in tourism will likely drive increased rental car use, increased use of public transportation and increased personal consumption which will in turn drive increased merchandise trade and truck-miles driven. This projected increase in tourism is likely to support the increased growth in demand of Florida petroleum product consumption relative to the South Atlantic Region as a whole.

Exhibit IV-2-19
Historical and Projected Florida Tourist Activity
2008-2020



Source: 2010 Florida Long Run Estimating Conference; Norbridge Analysis

f) Summary

- The Port's decreased petroleum products traffic since 2008 mirror the situation at other U.S. and Florida ports
- Florida economic recovery and correspondingly, petroleum product consumption, has lagged the nation as a whole
- South Atlantic petroleum product consumption is projected to increase at a modest rate (0.8 percent CAGR) between 2011 and 2020
- Florida's growing driving age population along with its large tourism industry could drive additional growth in petroleum product consumption in the state of Florida relative to other states in the South Atlantic
- Gulf Coast refining capacity is estimated to be sufficient for supplying U.S. and Florida demand increases between now and 2020
- The current and future Jones Act fleet is projected to have ample capacity for serving the U.S. Coastal petroleum products trade in general and the U.S. Gulf Coast petroleum products trade in particular between 2011 and 2020
- Consequently, it is likely the state of Florida in general and the Port in particular will continue to source the predominant portion of their petroleum products from domestic, Gulf Coast sources

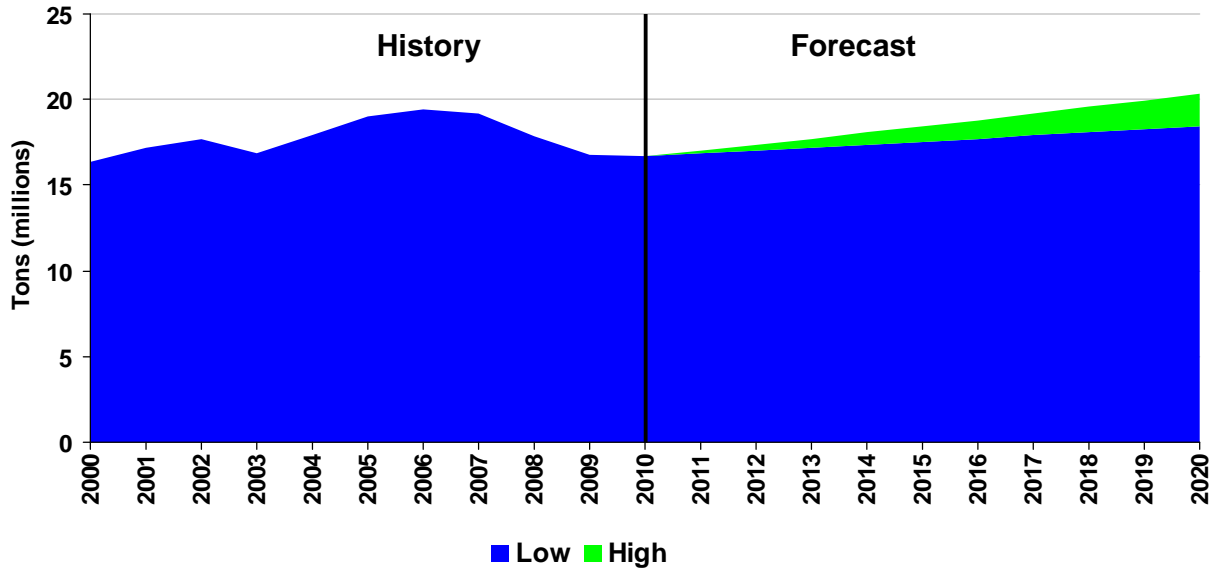
g) Forecast

The Port's competitive advantages (location relative to the Central/West Florida Market, number of deep draft liquid bulk berths, comparatively deepwater, and the Central Florida Pipeline) position the Port to continue to fulfill its role as the petroleum product gateway for West Central Florida. Based on the forecasts and analyses in the foregoing section, Norbridge developed two petroleum product forecast scenarios for the Port (Exhibit IV-2-20). These forecasts are intended to represent the likely range of future Port and TPA petroleum products growth:

Low Range Growth Scenario- Florida petroleum consumption demand, and consequently, Port petroleum receipt grows at a CAGR of 1% between FY2010 and FY2020, roughly in line with EIA projections for the South Atlantic region as a whole

High Range Growth Scenario- Florida petroleum consumption and consequently, Port petroleum receipt grows at a CAGR of 2% between FY2010 and FY2020, which is higher than the demand projected for the South Atlantic Region as a whole. The higher CAGR assumes Florida's growing driving age population and tourism industries grow faster than the South Atlantic as a whole

**Exhibit IV-2-20
Port of Tampa Petroleum Products Forecast
FY2000-FY2020**



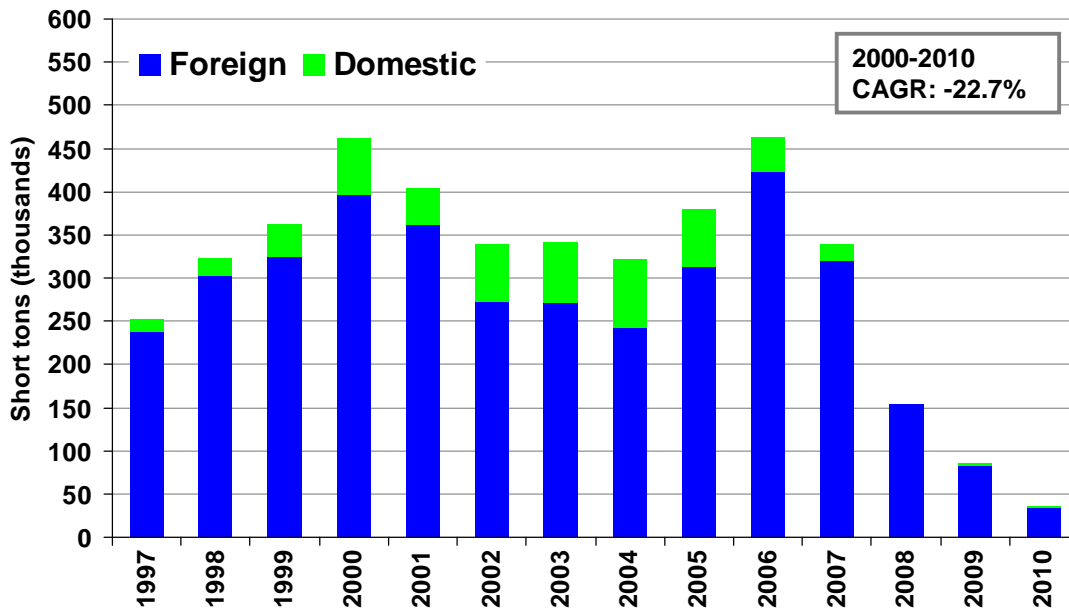
Source: Norbridge Analysis

3. Steel Products

a) Historical TPA Steel Products Traffic

Historically, steel products have been handled at TPA-leased facilities. TPA’s steel products trade totaled 35,000 tons in 2010, down significantly from its historical peak of 463,000 tons in 2006 (Exhibit IV-3-1). It is important to note that FY2006 volumes represent a peak associated with non-economic events, like the significant reconstruction that occurred following major hurricanes that struck Florida during the 2004-2005 hurricane seasons. Absent the FY2006 peak, TPA’s steel products trade has been trending downwards in a cyclical pattern since 2000. For the ten year period from 2000 to 2010, steel products declined at an average annual compound rate of -22.7%. Domestic receipts of steel, which historically represented up to 25% of the Port’s steel cargo, have essentially disappeared. Conversely, TPA reports from the first quarter of 2011 have indicated that the market is slowly turning upward.

**Exhibit IV-3-1
TPA Steel Products Traffic
FY1997-FY2010**



Note: Foreign vs. domestic detail not available for FY 2010 steel products cargo. For FY 2010, NBI assumed that the ratio of foreign vs. domestic traffic was the same as FY 2009
Source: Port of Tampa Tonnage Reports

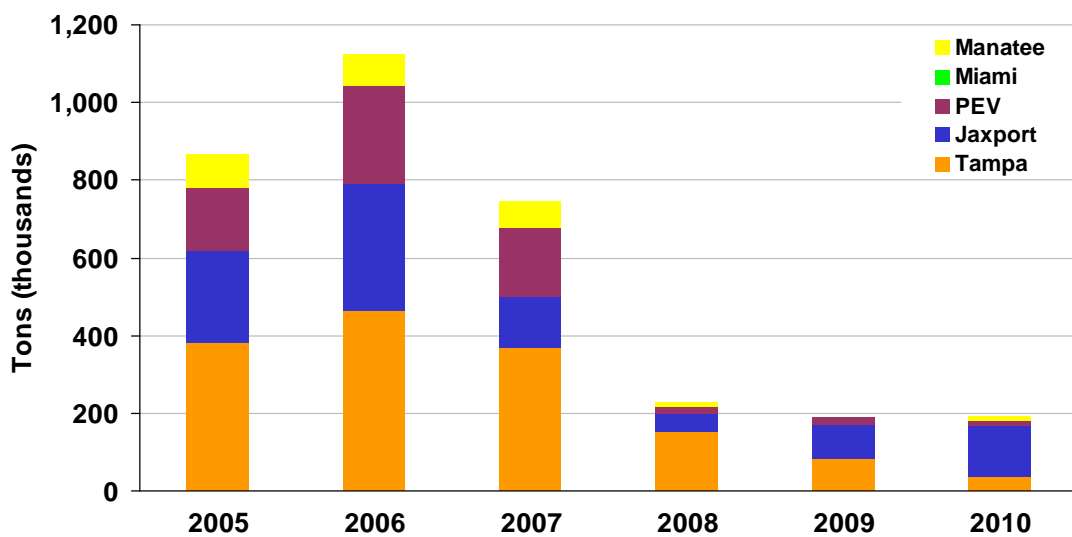
b) Florida Ports Steel Traffic

As a result of the economic recession caused in part by the collapse of the real estate bubble bursting and the resulting slowdown in construction and manufacturing, all major Florida ports saw a sharp decline in steel imports from the historical peak in 2006. It is important to note again that the 2006 peak was associated with non-economic events, in particular the 2004-2005

hurricane seasons and the subsequent reconstruction in Florida. Absent the exogenous peak in 2006, the market has essentially continuously declined. In fact, Florida ports' steel cargo in 2010 was less than 20 percent of 2006 volumes, and the market declined at a compound annual rate of -26% between the years 2005 and 2010.

The majority of Florida's steel imports are handled through four major ports: Jacksonville, Port of Tampa, Port Everglades, and Port Manatee (see Exhibit IV-3-2). Prior to 2009, Tampa held the largest market share of steel imports among the major Florida ports. However, during the period from 2005 to 2010, Tampa steel imports declined at a rate of -38% per year, 12% faster than the overall market. In contrast, Jacksonville, historically the second largest Florida steel gateway behind Tampa, declined at only -11% per year in the same period. In 2010, Jacksonville had a market share of 70%, followed by Tampa with 18%. Port Everglades and Port Manatee account for the other 12% (Exhibit IV-3-3). This shift in market share is likely due to a number of factors, including a less sharp decline in construction activity in the Jacksonville area as well as the construction of the new Trapac container terminal at the port. Distribution center construction activity in the Jacksonville area was relatively strong in 2008-2009, which is reported to have also contributed to local construction activity in Northeastern Florida.

**Exhibit IV-3-2
Primary Steel Product Imports by Florida Port
2005-2010**



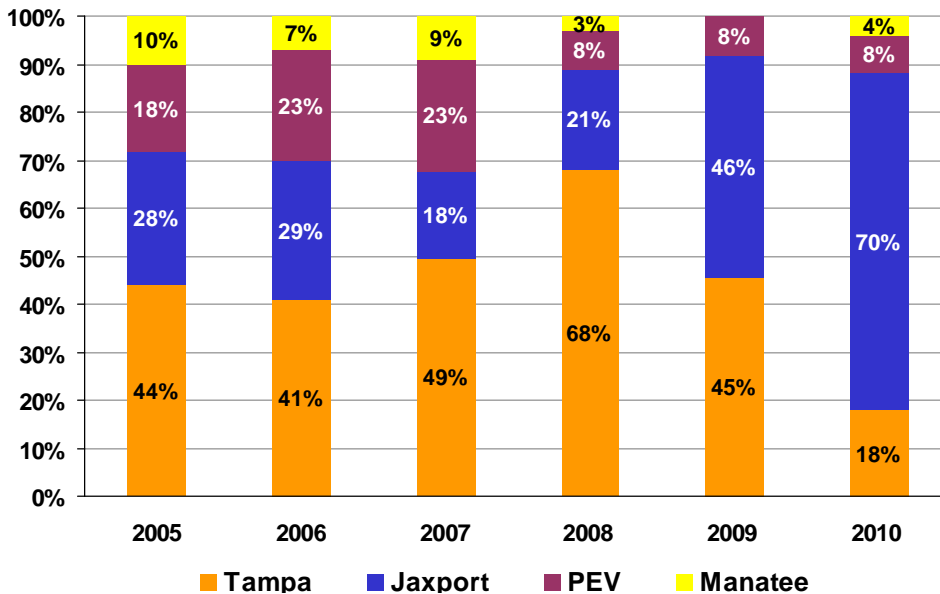
Source: Port Authorities, 2005-2010

**Exhibit IV-3-3
Primary Steel Product Imports Growth Rate by Florida Port
2005-2010 and 2009-2010**

Florida Port	Steel & Iron CAGR	
	2005-2010	2009-2010
Manatee	-37%	1421%
Port Everglades	-38%	-2%
Jacksonville	-11%	52%
Tampa	-38%	-59%
All Major FL Ports	-26%	2%

Source: Port Authorities, 2005-2010; Norbridge analysis

**Exhibit IV-3-4
Percentage of Primary Steel Product Imports by Florida Port**



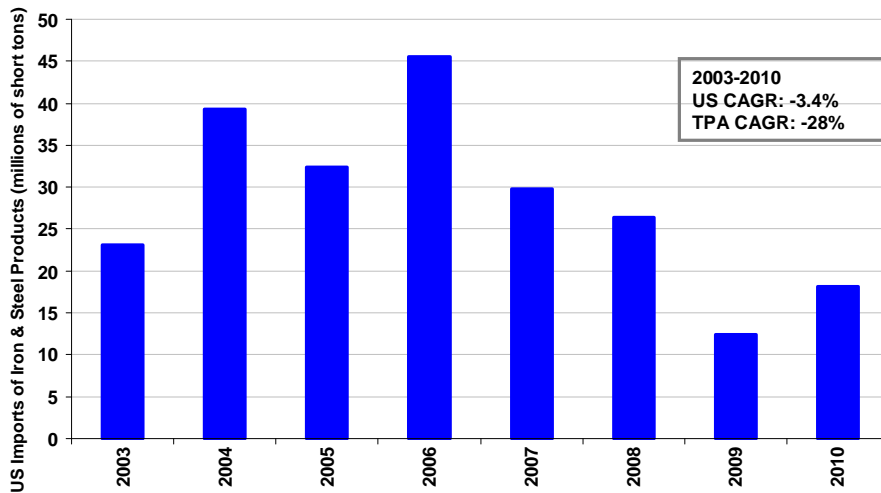
Source: Port Authorities, 2005-2010

c) Sourcing Considerations

According to the U.S. Census Foreign Trade Division, steel product imports comprise approximately a quarter of total US steel product consumption. U.S. demand for import and domestically-produced steel has declined due to the global recession and its affect on the manufacturing and construction industries. Moreover, the U.S. has displayed the same pattern of decline as Tampa and other major Florida ports: excluding the peak year 2006, imports have consistently declined since 2004 and are now below 2003 levels (see Exhibits IV-3-5 & IV-3-1).

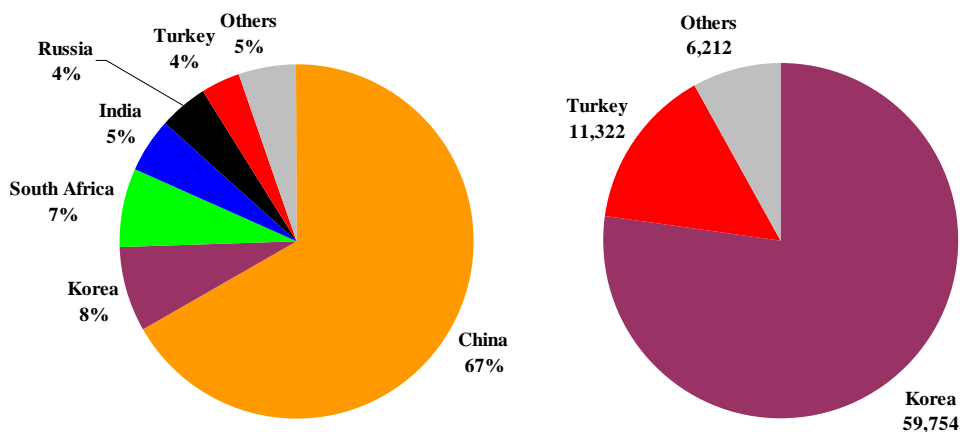
The sourcing of import steel products has changed in recent years. According to PIERS data, the largest sources of TPA’s steel imports in 2010 were Korea and Turkey. In contrast, the dominant source of TPA’s steel in 2007 was China (see Exhibit IV-3-6). The shift between 2007 and 2010 is likely due to the significant growth in China’s domestic steel consumption.

Exhibit IV-3-5
U.S. Iron & Steel Product Imports
2003-2010



Source: US Census Foreign Trade Division

Exhibit IV-3-6
Tampa Steel Products Imports
2007 2010



Source: JOC PIERS Data 2007 & 2010

In addition to the effects of the global recession on the US and FL economies, federal legislation has also likely had an effect on steel imports. The American Recovery and Reinvestment Act of 2009 stipulated that only domestically-produced iron and steel could be used in the public works

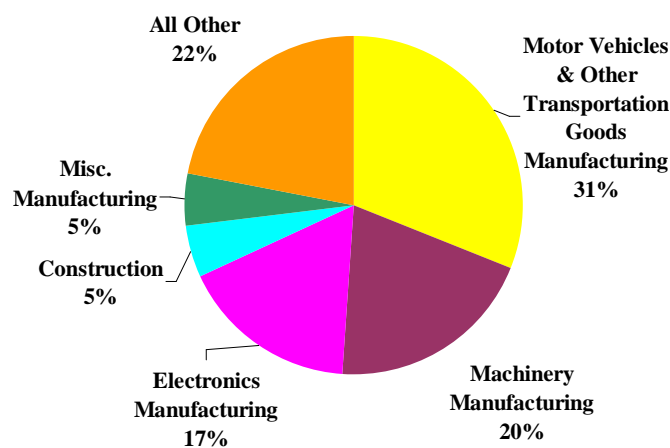
projects awarded to the various states. Thus, although the Act awarded major grants for Florida transportation projects, it likely had a negative effect on the amount of foreign steel products imported through Florida Ports, as it increased the share of domestically-sourced steel products used for construction in the state.

d) Demand Drivers

Steel products are a cyclical trade, with links to construction and manufacturing activity. Manufacturing accounts for an estimated 73% of total US steel consumption as reported by the Bureau of Economic Analysis (see Exhibit IV-3-7). Conversely, construction is the major source of steel consumption in Florida. The construction sector's dominant position reflects Florida's lack of a significant manufacturing base.

Given both the long-term decline in steel imports and the state of the Florida economy, NBI interviewed major TPA steel customers. The purpose of the interviews was to understand the key geographic and commodity markets that drive TPA's steel products imports and to understand steel companies' future outlooks for business in those markets. In speaking with major steel shippers using the TPA's facilities, NBI learned that a large portion of TPA's historical steel product imports has been cold and hot rolled coil, which are used in various residential, commercial, and industrial applications including HV/AC and utilities piping, fencing, and structural applications (in Florida, steel wire mesh is used in foundations for residential as well as commercial buildings). Cold-rolled coil is also used in the manufacturing of household appliances and equipment. Historically, very little rebar, which is used in highway and road construction, has been sourced through the Port. The foregoing explains the strong historical correlation between residential construction and steel products at the Port of Tampa.

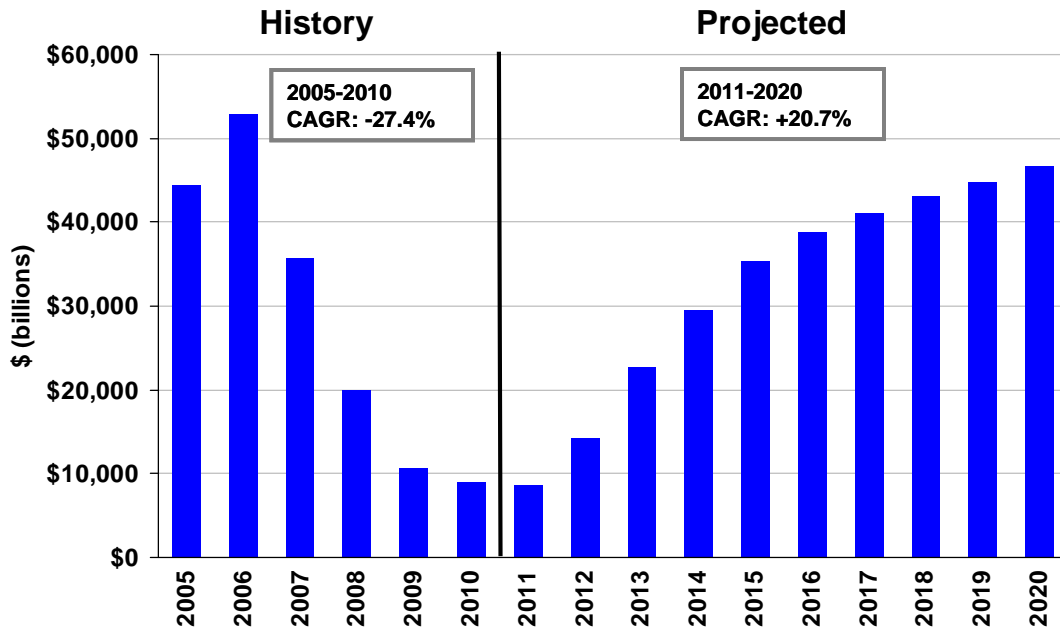
**Exhibit IV-3-7
End-Uses of U.S. Steel Products
2003-2010**



*Note: Charts are based on the 2009 Bureau of Economic Analysis' Input-Output table for end-use of primary metals and basic steel (SIC 331). Basic steel comprises of steel pipes and tubes, cold-rolled steel sheet, strip, and bars. SIC 331 also includes the output from companies involved in steel works, rolling mills, and steel wiredrawing industries.
Source: Bureau of Economic Analysis, Input-Output tables, SIC 331 (primary metals and basic steel)*

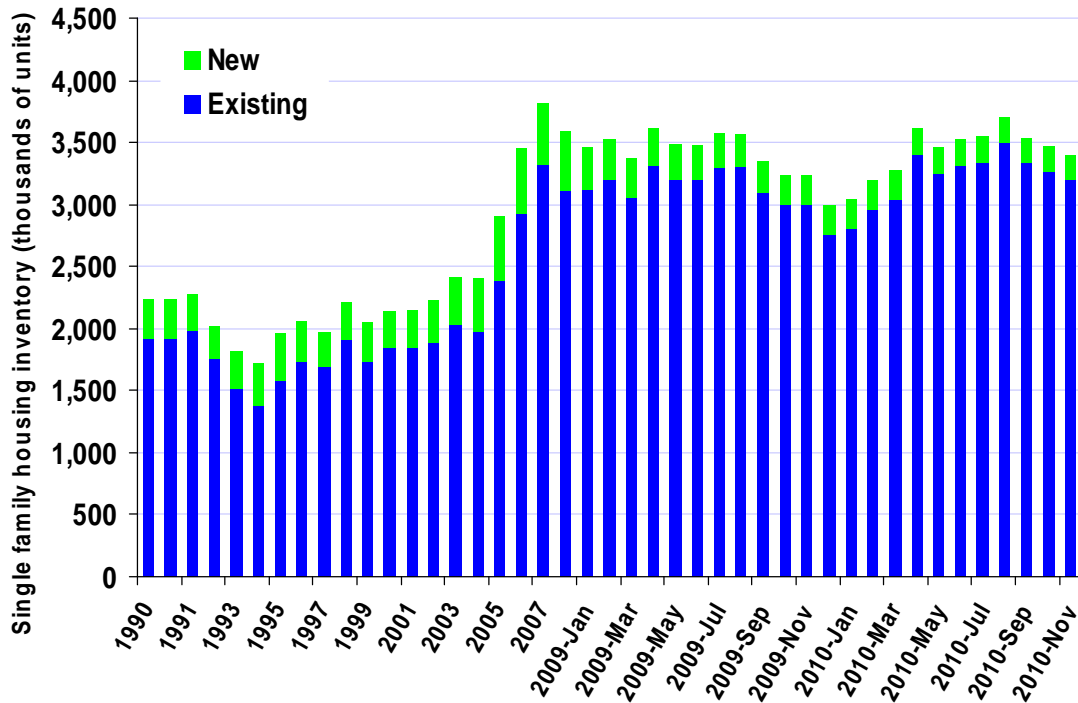
The Florida Long Run Estimating Conference held in November of 2010 projects a strong recovery in residential construction expenditures between 2010 and 2020 (see Exhibit IV-3-8). Despite this comparatively strong growth, 2020 projected expenditures will only recover to 2005 levels. However, existing homes comprise a majority of the US housing inventory, an inventory that has been growing significantly in recent years due to the well publicized housing crisis (see Exhibit IV-3-9). New home construction, given tight lending policies and the significant number of existing home mortgages that exceed the market value of the associated homes (reportedly 25% of all mortgages), is unlikely to drive demand for steel products. Consequently, it will likely be the home improvement sector that is the primary source of demand within the residential housing sector.

**Exhibit IV-3-8
Projected Florida Residential Construction Expenditures**



Source: Florida Economic Estimating Conference: Long Run Tables. 11/2010

Exhibit IV-3-9
US Single Family Housing Inventory, 1990-2010



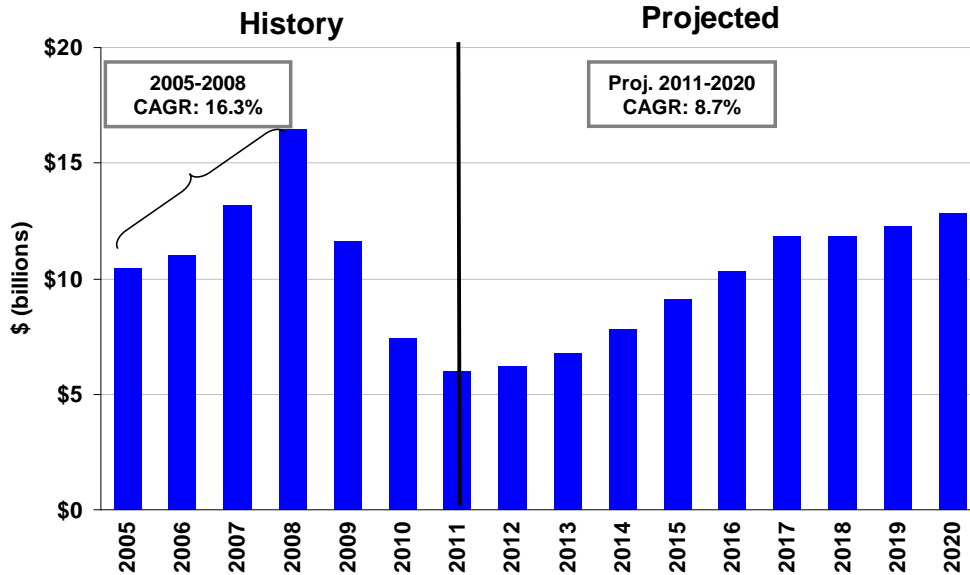
Source: National Association of Homebuilders (NAHB)

Given the short-term outlook on the residential construction industry, it is more likely that commercial & public works construction, and industrial manufacturing, will drive the near-term growth of steel products traffic at the Port. The Florida Economic Estimating Conference has projected commercial construction expenditures in Florida to grow at an average annual compound rate of 8.7% between 2011 and 2020. Despite this significant projected growth, 2020 expenditures will approximate 2004-2005 levels (see Exhibit IV-3-10).

The current Florida Department of Transportation (FDOT) 5-year work plan, which summarizes the state's planned expenditures as it relates to transportation infrastructure, projects lower levels of spending relative to past years. Planned road, highway, and bridge construction expenditures in Central Florida are projected to increase at a future compound annual growth rate of only 0.5%. Given this modest growth, 2020 expenditures will approximate 2005 levels, or only 60% of the peak 2006-2009 levels (see Exhibit IV-3-11). Moreover, as discussed, domestically-sourced steel will be used in any ARRA-funded transportation infrastructure project.

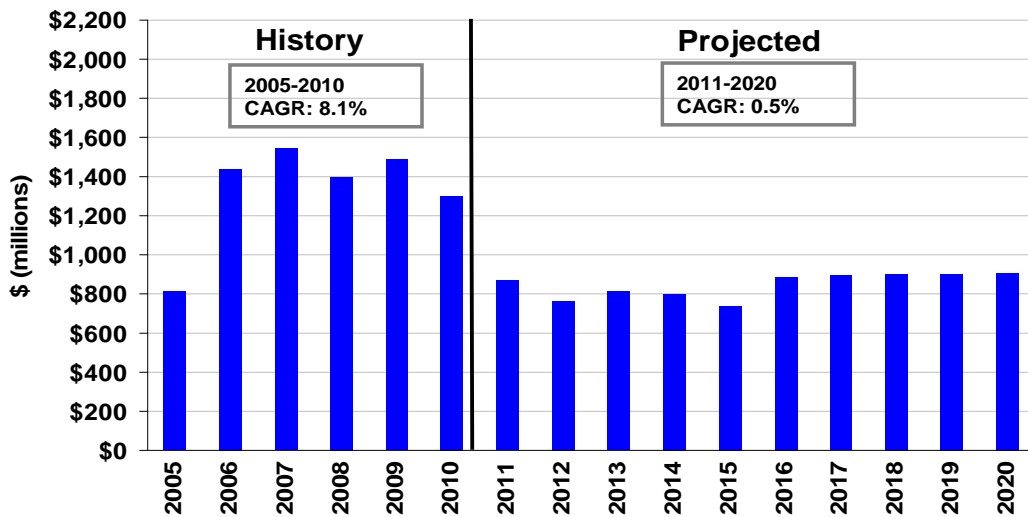
The manufacturing sector appears to be showing greater improvement than the commercial construction and public works sectors. As reported by the U.S. Census Bureau, the durable goods manufacturing sector, a major consumer of rolled steel, showed strong growth in the fourth quarter of 2010. In the same quarter, the Institute for Supply Management's Manufacturing Index, which tracks the amount of manufacturing activity that occurred in the previous month, was the strongest since 2005 (see Exhibits IV-3-12 and IV-3-13).

Exhibit IV-3-10
Projected Florida Commercial Construction Expenditures



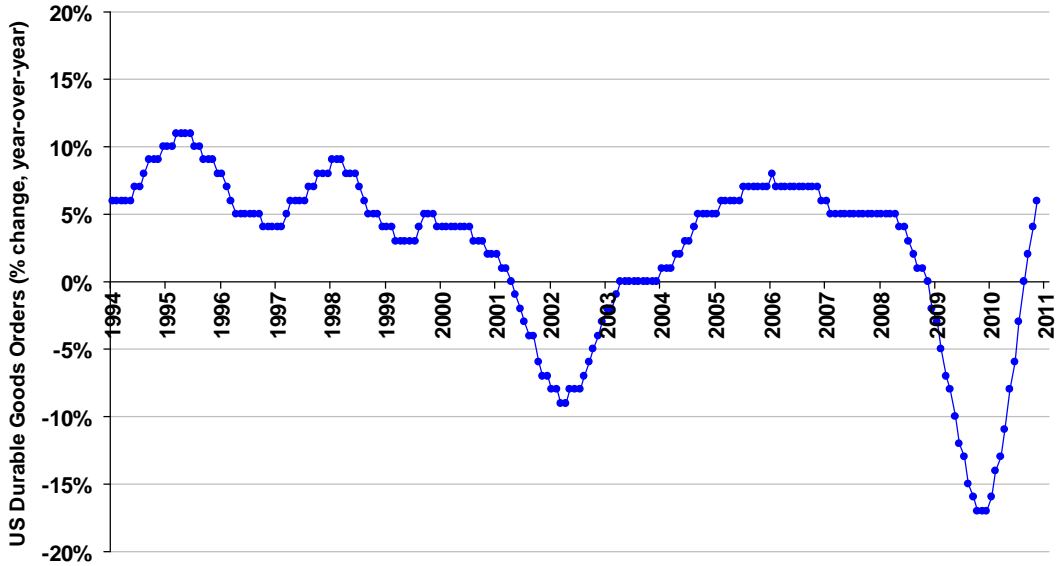
Source: Florida Economic Estimating Conference: Long Run Tables. 11/2010

Exhibit IV-3-11
Historical & Projected Central Florida Highway and Bridge Construction Expenditures



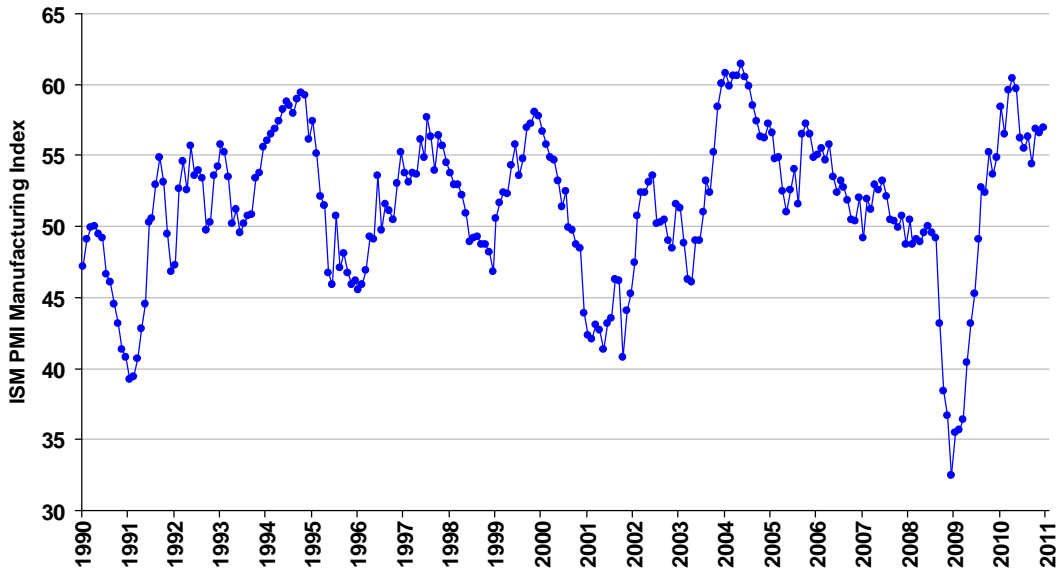
Source: Florida Dept. of Transportation with Extrapolation

Exhibit IV-3-12
U.S. Durable Goods Orders, 1994-2010
Year-Over-Year Percentage Change, 12-Month Rolling Average



Source: US Census Bureau

Exhibit IV-3-13
U.S. ISM Manufacturing Index, 1990-2010



Source: Institute for Supply Management (ISM)

e) Steel Products Forecast

Based on the outlook for major drivers of Florida steel demand, Norbridge developed two steel products forecast scenarios for the TPA (Exhibit IV-3-14). These forecasts are intended to represent the likely range of future TPA steel products growth.

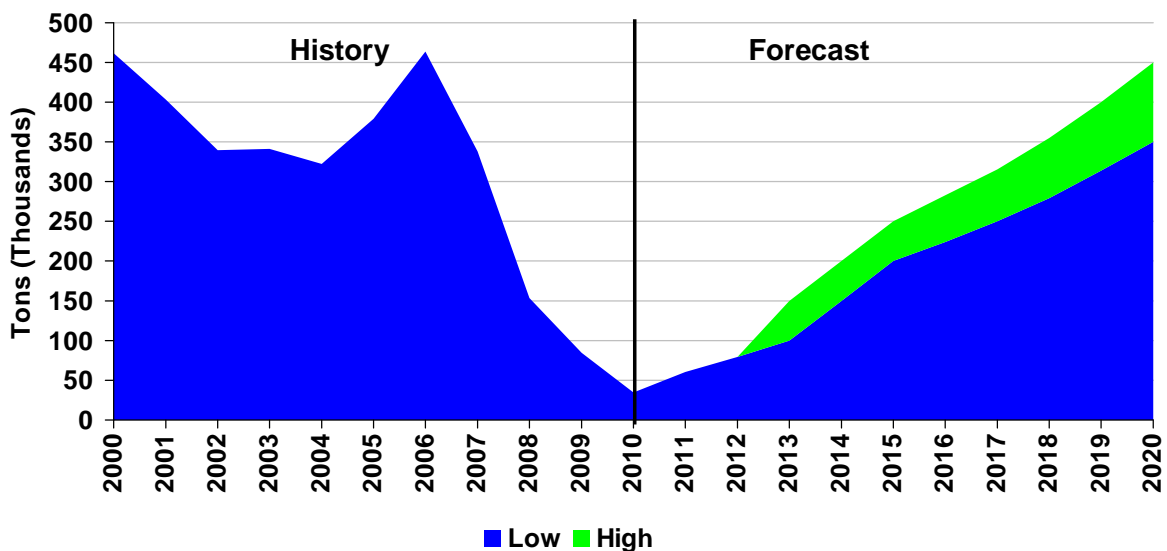
Low Growth Range Case

- TPA’s steel products volumes experience a slow recovery due to a longer than anticipated economic recovery, high interport competition, the regulatory effects of ARRA, and modest growth in road and commercial construction.
- In this scenario, TPA’s steel products volumes grow at a rate of 22% compounded annually (compared to -23% year-over-year between 2000-2010) to reach approximately 75% of the 2006 historical peak volume by 2020 (see Exhibit IV-3-14).

High Growth Range Case

- TPA’s steel products volumes experience a moderate recovery
- In this scenario, road and commercial construction experience strong growth, but high interport competition and the regulatory effects of ARRA remain
- TPA’s steel products volumes grow at a rate of 25% compounded annually (compared to -23% year-over-year between 2000 and 2010) to levels just below the 2006 historical peak volume by 2020 (see Exhibit IV-3-14).

**Exhibit IV-3-14
TPA Historical and Projected Steel Products Traffic
FY2000-FY2020**



Source: Norbridge, Inc. analysis

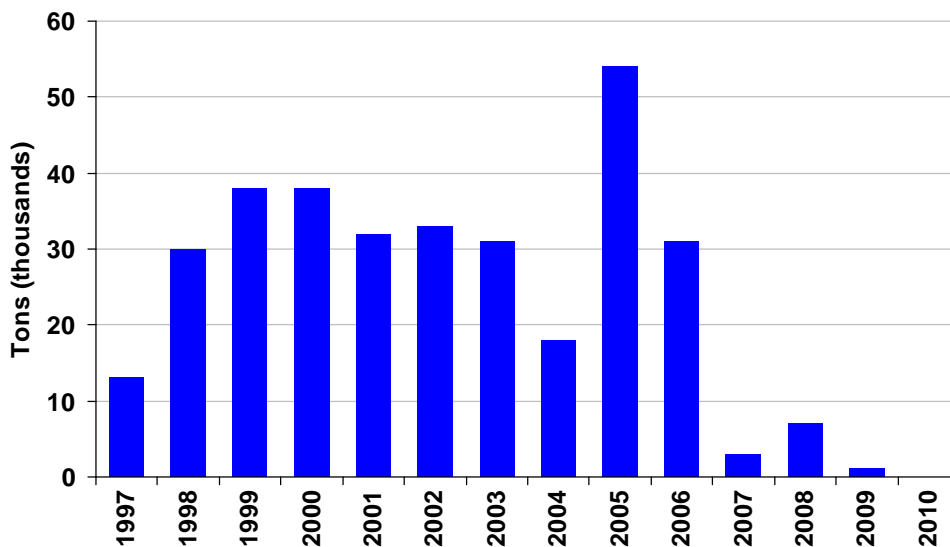
4. Lumber and Plywood

Lumber and plywood are two of the larger breakbulk cargoes handled through Florida ports. They are key inputs to the residential construction industry and to a lesser extent the commercial construction industry. Although historically the Port has not been a major gateway for lumber and plywood cargoes, these cargoes were included in the 2010 strategic plan update given their overall importance to the Florida economy and ports.

a) Historical Port of Tampa Lumber and Plywood Traffic

Lumber and plywood are handled at TPA leased facilities at the Port of Tampa. The TPA handled less than 100 tons of lumber & plywood in 2010, and the business has all but disappeared following its 2005 peak of 54,000 tons (Exhibit IV-4-1). It is important to highlight that the 2005 peak in lumber and plywood cargoes was a result of the reconstruction following the major hurricanes of 2004 and 2005. In the years preceding the 2005 peak, TPA's lumber and plywood business was essentially flat, with a significant decline occurring in 2004. The historical volatility of TPA's lumber and plywood business reflects the competitive intensity among Central Florida ports for these cargoes.

Exhibit IV-4-1
TPA Lumber and Plywood Traffic
FY1997-FY2010



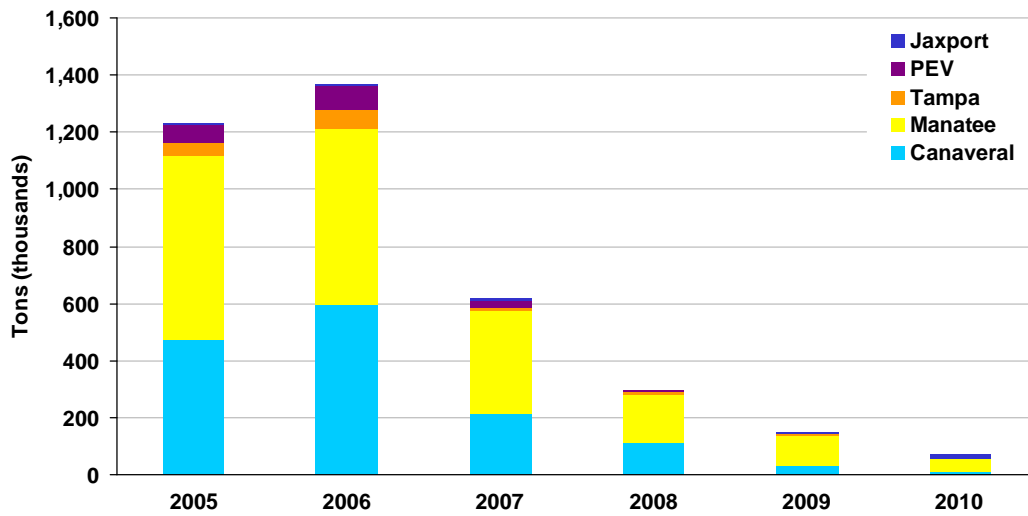
Source: Port of Tampa Tonnage Reports FY1997-FY2010

b) Florida Ports Lumber and Plywood Traffic

The majority of Florida's lumber and plywood imports are handled through five ports: Port Canaveral, Port Manatee, Jaxport, the Port of Tampa, and Port Everglades (Exhibits IV-4-2 and IV-4-3). Port Manatee, located just south of the Port of Tampa, is the largest lumber and plywood port gateway in the State. Its market share has averaged 59 percent over the period from 2005 to 2010. Conversely, the Port's share has averaged less than 5 percent.

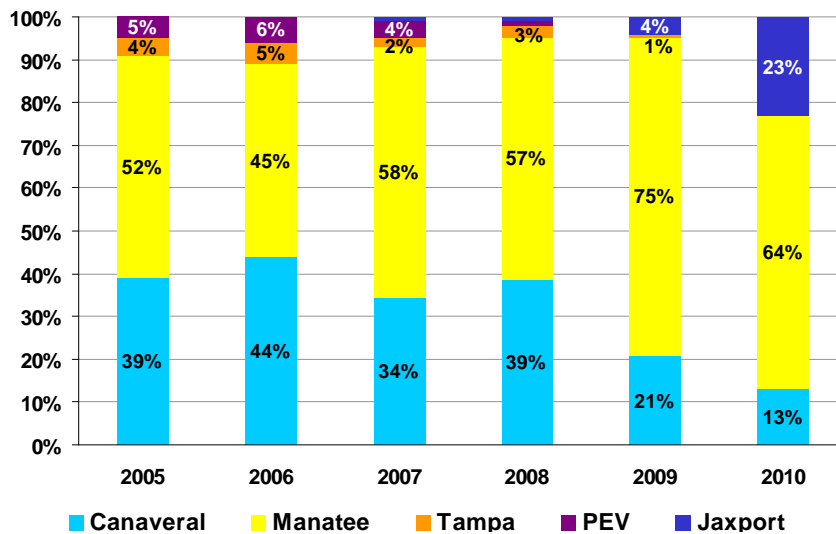
Florida ports lumber and plywood traffic has declined significantly over the period 2005-2010, including the two largest lumber and plywood gateways, Port Manatee and Port Canaveral. It is important to note that lumber and plywood are cargoes that tend to move back and forth between containers and breakbulk. In periods of depressed volumes and low freight rates, lumber in particular will often shift from breakbulk to containers. This trend has mostly likely contributed to a degree to the significant declines in Florida ports' lumber and plywood gateways.

Exhibit IV-4-2
Lumber and Plywood Volumes by Florida Port
2005-2010



Source: Port Authorities, 2005-2010

Exhibit IV-4-3
Lumber and Plywood Volumes by Florida Port



Source: Port Authorities, 2005-2010

**Exhibit IV-4-4
Lumber and Plywood Cargo Growth Rate by Florida Port
2005-2010 and 2009-2010**

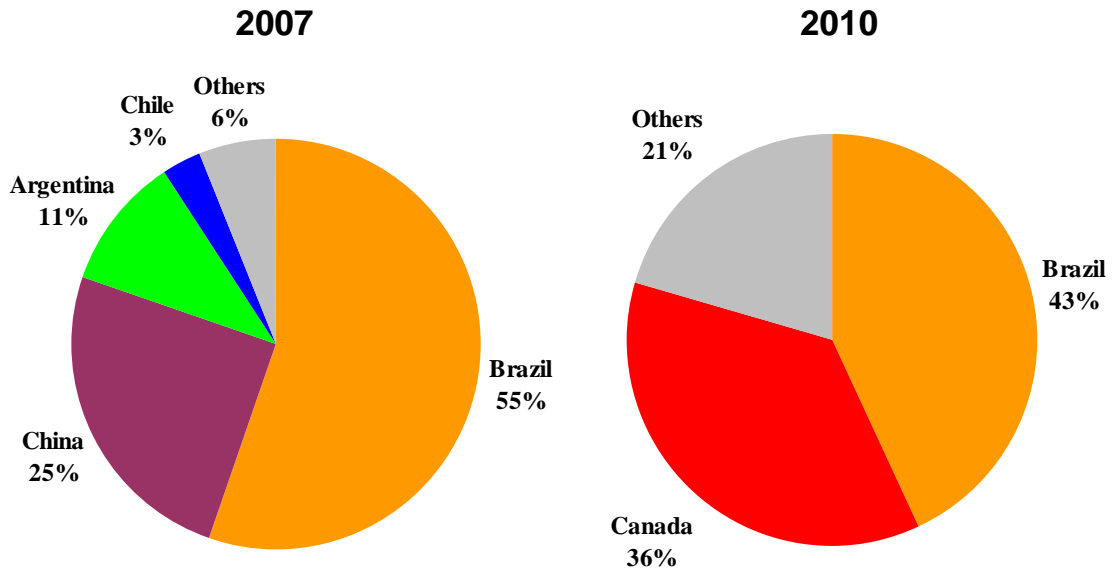
Florida Port	Forest Products CAGR	
	2005-2010	2009-2010
Canaveral	-54%	-70%
Manatee	-41%	-58%
Port Everglades	-74%	-56%
Jacksonville	52%	205%
Tampa	-100%	n/a
All Major FL Ports	-43%	-51%

Source: Port Authorities, 2005-2010; Norbridge analysis

c) Sourcing Considerations

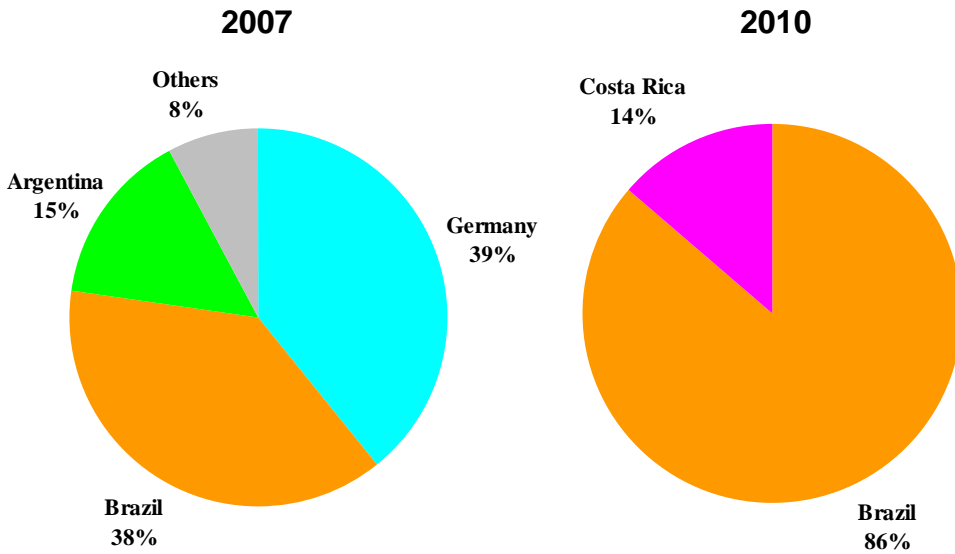
Lumber and plywood are predominantly inbound trades with foreign imports representing the dominant source of these cargoes. In both 2007 and 2010, Brazil was the largest single source of lumber and plywood for TPA. Moreover, Canada replaced China as the second leading source of lumber and plywood products at the Port in 2010 (see Exhibit IV-4-5). Port Manatee also received the largest portion of its lumber and plywood traffic from Brazil in 2010, while Germany led the way for the port in 2007 (see Exhibit IV-4-6). It is important to note that Gearbulk, one of the world’s largest breakbulk forest products carriers and a leading carrier in the Brazil forest products trade, has been a longstanding customer of Port Manatee. NBI understands that Gearbulk has a facilities lease agreement with Port Manatee that results in Gearbulk routing most of its breakbulk lumber and plywood traffic through Port Manatee.

**Exhibit IV-4-5
TPA Lumber and Plywood Countries of Origin,
CY2007 & CY2010**



Source: PIERS data; Norbridge Analysis

**Exhibit IV-4-6
Manatee Lumber and Plywood Countries of Origin,
CY2007 & CY2010**



Source: PIERS data; Norbridge Analysis

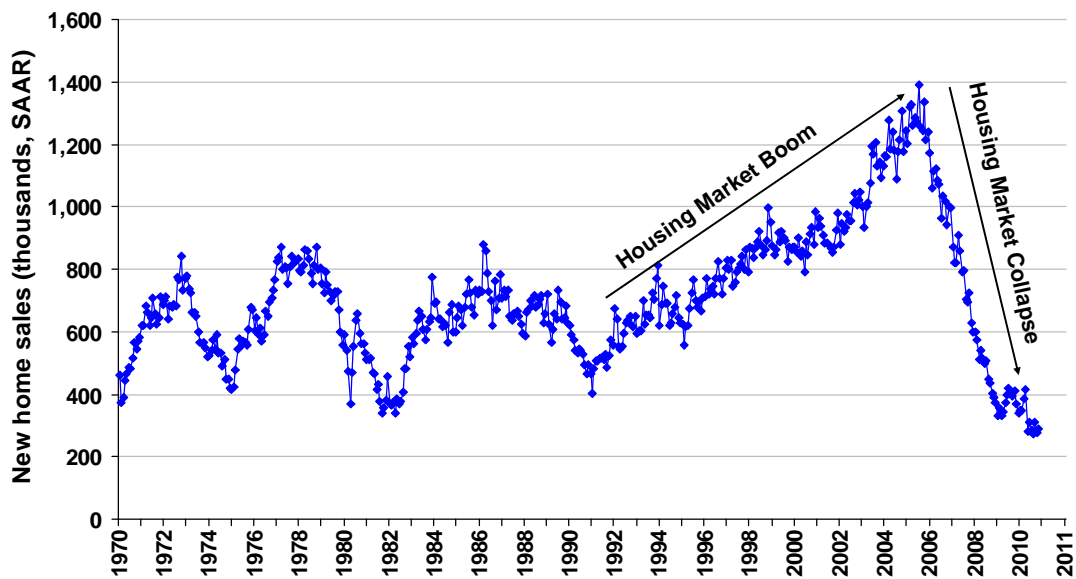
d) Demand Drivers

The lumber and plywood trades are cyclical trades and are strongly linked to the residential construction industry:

- The residential construction industry is the largest consumer of lumber and plywood.
- More than 50 percent of hardwood products and 70 percent of structural softwood products are consumed in residential construction.

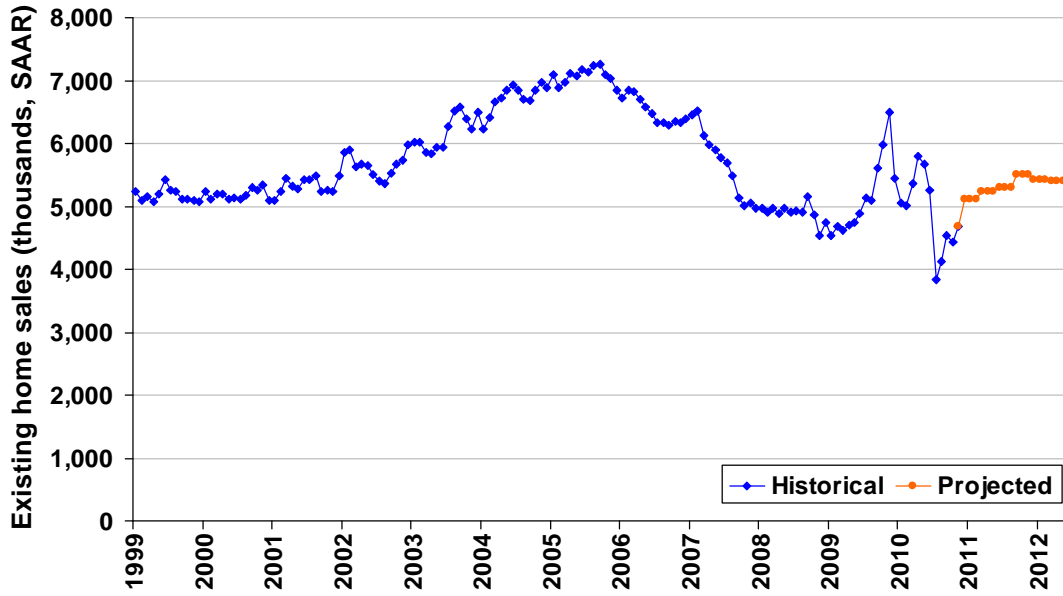
As a result, recovery in the Florida lumber and plywood import trades will be driven by the pace of recovery in the Florida housing market. Thus far, a recovery in the housing market has been stalled by several factors: high unemployment, weak income growth, and high household debt burdens. Moreover, lost homes and foreclosures have added to the supply of housing inventory (see Exhibit IV-4-9).

Exhibit IV-4-7
US New Home Sales, 1970-2010



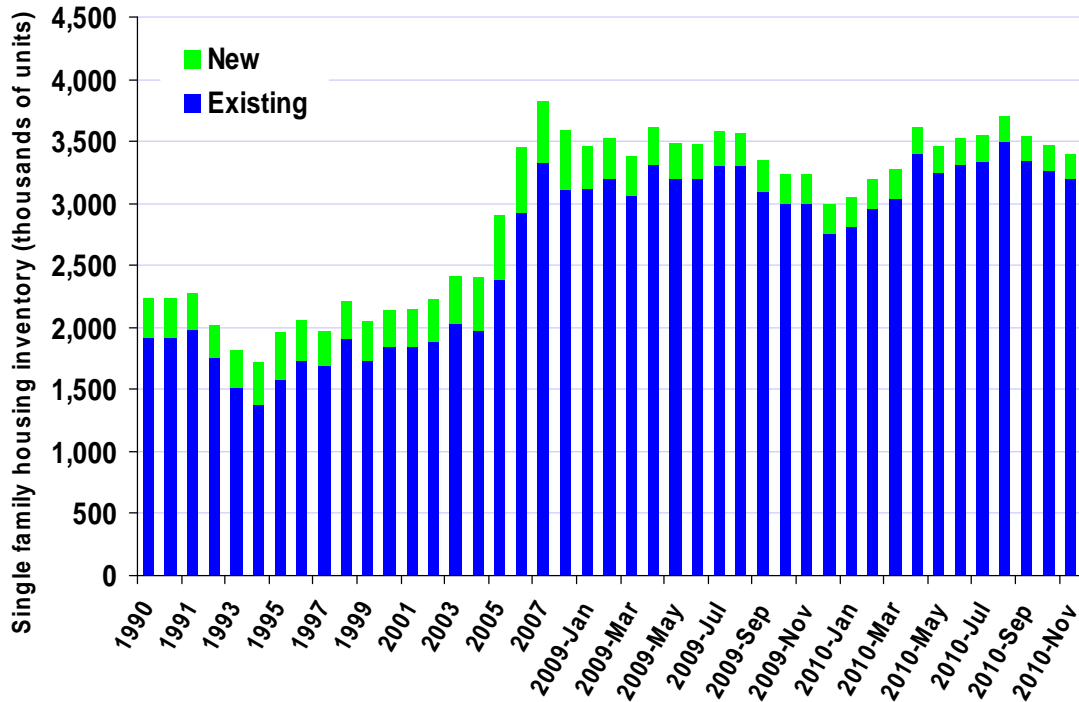
Source: US Census Bureau

Exhibit IV-4-8
US Existing Home Sales, 1999-2010, 2011-2012 projections



Source: National Association of Realtors' Existing-Home Sales Series

Exhibit IV-4-9
US Single Family Housing Inventory, 1990-2010

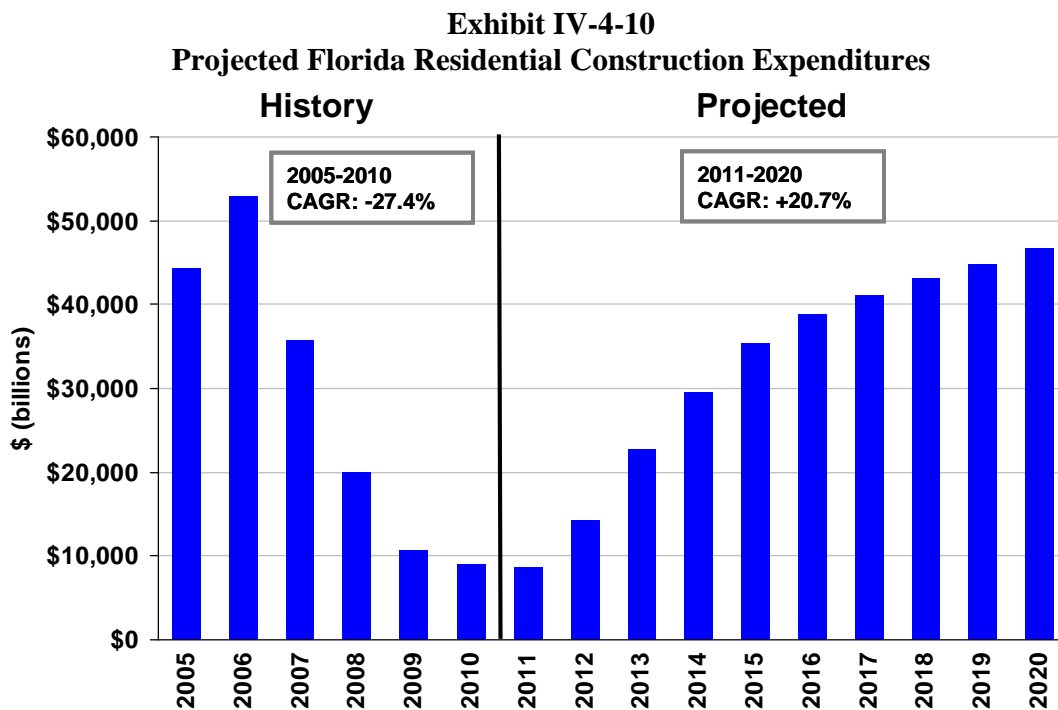


Source: National Association of Homebuilders (NAHB)

Housing starts and residential construction expenditures are the key drivers of demand for lumber and plywood imports. In the short term, the housing market outlook is uncertain.

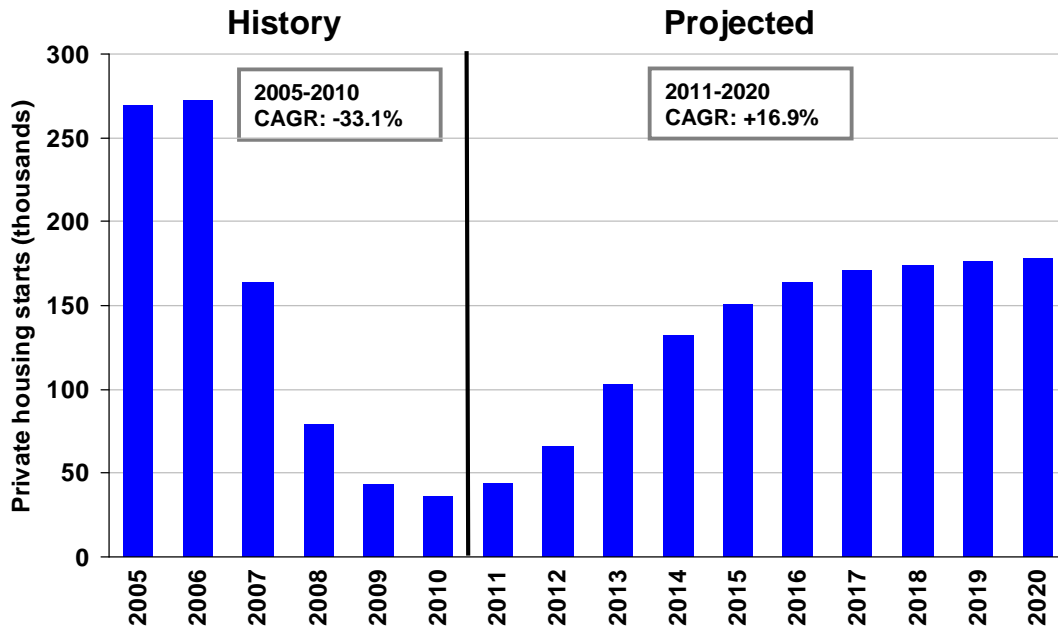
National unemployment remains high, but is down 0.7% from a peak in October 2010. However, Florida economic recovery is lagging overall U.S. recovery and Florida unemployment, as discussed in section III of this document, remains higher than the national average. Non-farm employment in Florida is projected to grow at a modest compound annual growth rate of 1.7% between 2011 and 2020.

Single family housing inventory remains substantial but U.S. existing home sales, which have been declining since 2007, are predicted to improve beginning in 2011 and continuing into 2012 (see Exhibit IV-4-8). Moreover, the Florida Economic Estimating Conference held in November of 2010 predicted residential construction expenditures in Florida to recover to pre-recession levels by 2020, growing at a compound annual growth rate of 20.7% between 2011 and 2020. Likewise, housing starts in Florida are predicted to recover and level out at pre-recession levels by 2020, growing at a compound annual rate of 16.9% between 2011 and 2020 (see Exhibits IV-4-10 and IV-4-11).



Source: Florida Economic Estimating Conference: Long Run Tables. 11/2010

**Exhibit IV-4-11
Projected Florida Private Housing Starts**



Source: Florida Economic Estimating Conference: Long Run Tables. 11/2010

e) Lumber & Plywood Forecast

Based on the forecasts and analyses in the foregoing section, Norbridge developed two lumber and plywood forecast scenarios for the Tampa Port Authority (Exhibit IV-4-12). These forecasts are intended to represent the likely range of future TPA lumber and plywood growth.

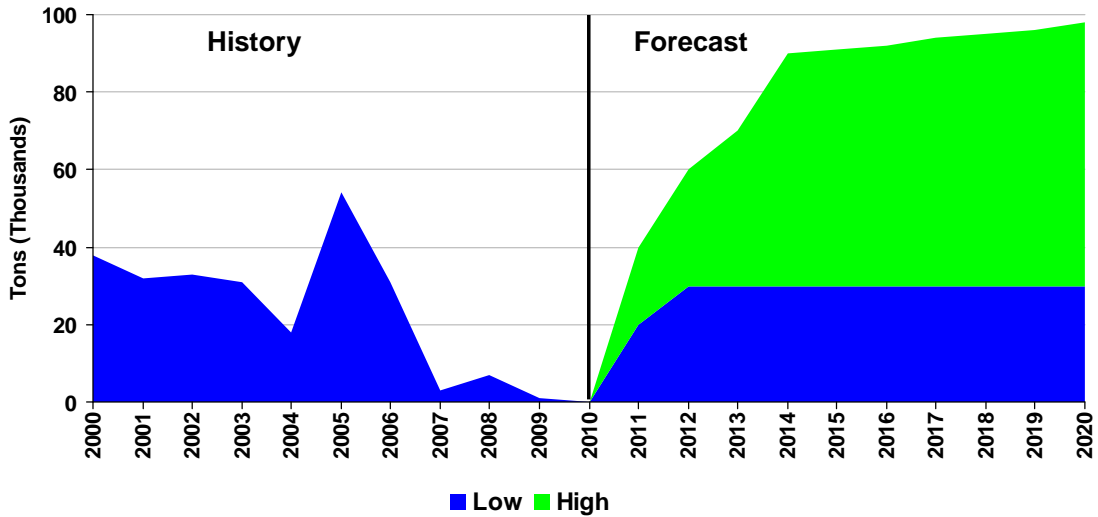
Low Growth Range Scenario

- Modest recovery in Central Florida housing market
- Interport competition with Port Manatee and other Florida East Coast ports remains high
- The TPA experiences comparatively low growth, consistent with historical trends

High Growth Range Scenario

- Strong recovery in Central Florida housing market
- Interport competition with Port Manatee and other Florida East Coast ports is moderate
- The TPA experiences moderate growth relative to historical trends

**Exhibit IV-4-12
TPA Historical and Projected Lumber and Plywood Traffic
FY2000-FY2020**



Source: Norbridge, Inc. analysis

TPA’s lumber and plywood business could range between 30,000 and nearly 100,000 tons by 2020. The strength of recovery in Florida residential spending and interport competition will drive future volumes. Under the low forecast scenario, the lumber and plywood trade totals 30,000 tons in 2020. This volume is approximately 55 percent of TPA’s FY2005 historical peak (54,000 tons). Under the high forecast, the 2020 projected volume is 98,000 tons, approximately 181 percent of TPA’s FY2005 peak. Given the historical volatility in the TPA’s lumber and plywood trade, future lumber and plywood volumes will likely remain volatile on a year to year basis. Consequently, the projections should be considered as the most likely range within which TPA’s actual lumber and plywood volumes will fall throughout the forecast horizon.

5. Vehicles

The following section provides an assessment of the vehicle line of business at the Port, which has historically been a small trade relative to:

- Other lines of business within to the Port
- Other major Gulf (Houston) and Atlantic (Jacksonville) Coast competitors

The section will sequentially address the following topics:

- TPA Vehicle Traffic Overview
- Florida Waterborne Vehicle Traffic Overview
- Overview of U.S. Waterborne Vehicle Trade
- Vehicle Traffic Opportunities for the TPA
- The Florida Rental Car Market
- Forecast ranges for TPA Vehicle Traffic

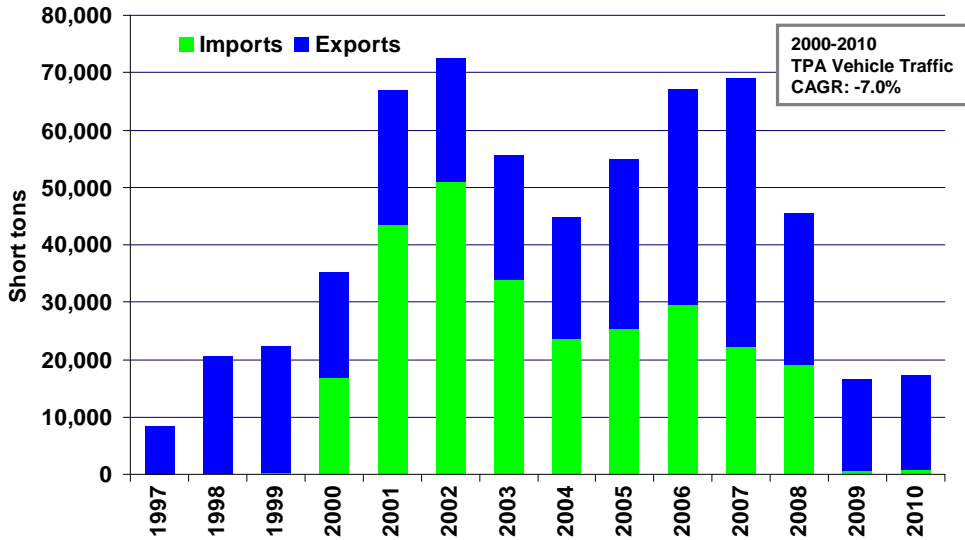
a) Tampa Port Authority Vehicle Traffic Overview

Vehicles are handled at Tampa Port Authority berths at the Port. In 2010, the TPA's vehicle trade totaled 17,000 tons (see Exhibit IV-5-1). For the ten year period from 2000 to 2010, vehicles declined at an average annual compound rate of 7.0%.

The TPA's current vehicle trade is dominated by export vehicles (primarily personal vehicles and used vehicles sold at auctions) and exported to Central America. The used export vehicle trades tend to be, by their nature (private transactions, wholesale used vehicles, small overseas markets, exchange rate driven), highly volatile. At its 13-year peak in 2002, nearly 70% of the TPA's 70,000 short tons of vehicle traffic were new auto imports, predominantly Chrysler vehicles from Mexico. In recent years, Chrysler has ceased importing its PT Cruiser model to the U.S. and shifted the delivery mode for other models from ocean to rail delivery. Consequently the TPA's import vehicle trade has declined significantly.

In 2009, the dominant countries of export for used vehicles from the Port of Tampa were Costa Rica and Guatemala (see Exhibit IV-5-2). On the import side, Tampa imported 720 tons of vehicles in 2009. The dominant countries of import in 2009 were Mexico and Colombia though, as noted, above, import traffic has declined significantly over the past 5-10 years (see Exhibit IV-5-3).

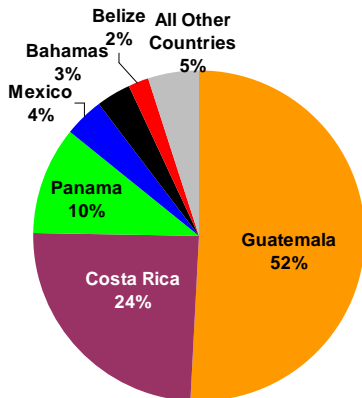
**Exhibit IV-5-1
TPA Historical Vehicle Traffic
FY1997-FY2010**



Note: Import vs. export detail not available for FY 2010 vehicles cargo. For FY 2010, NBI assumed that the ratio of import vs. export traffic was the same as FY 2009.
Source: TPA Tonnage Reports

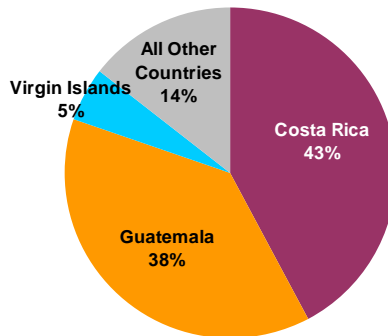
**Exhibit IV-5-2
TPA Vehicle Exports, Countries of Origin,
2005 & 2009**

TPA Vehicle Exports, Destination Countries, FY2005



FY2005 Vehicle Exports = 29,000 tons

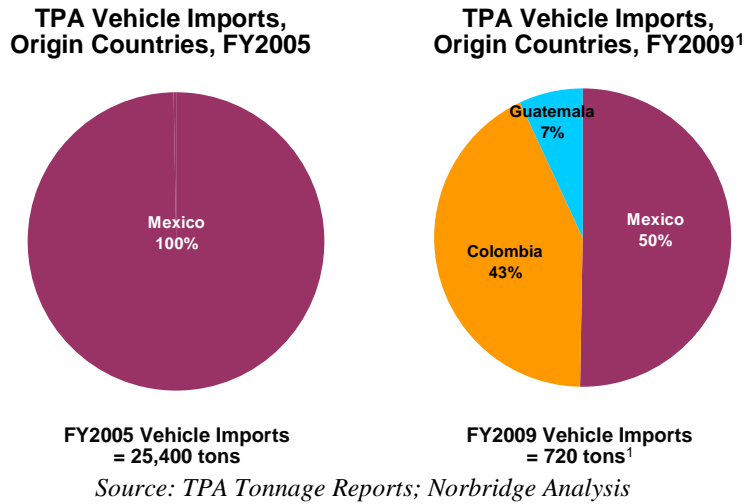
TPA Vehicle Exports, Destination Countries, FY2009¹



FY2009 Vehicle Exports = 16,000 tons¹

Source: TPA Tonnage Reports; Norbridge Analysis

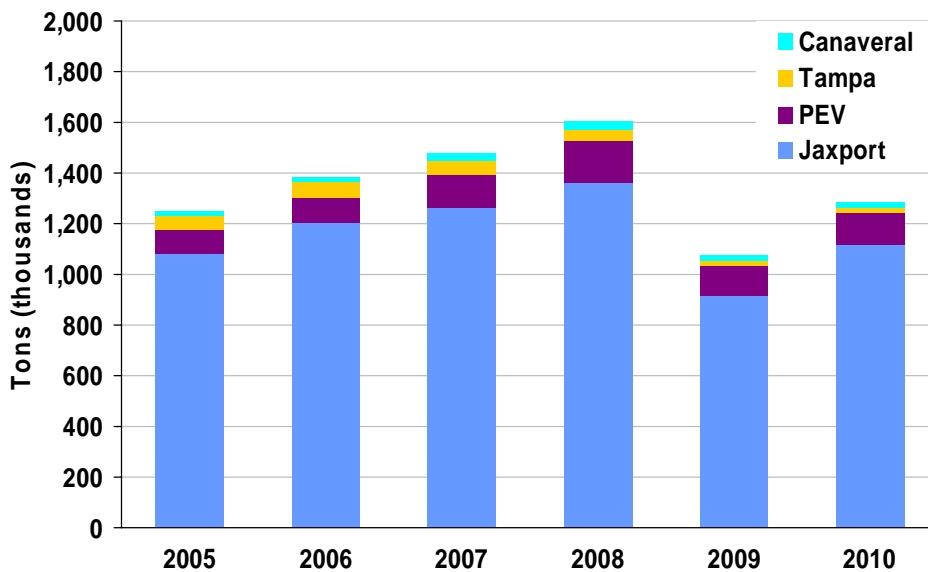
**Exhibit IV-5-3
TPA Vehicle Imports, Countries of Origin,
2005 & 2009**



b) Florida Waterborne Vehicle Traffic Overview

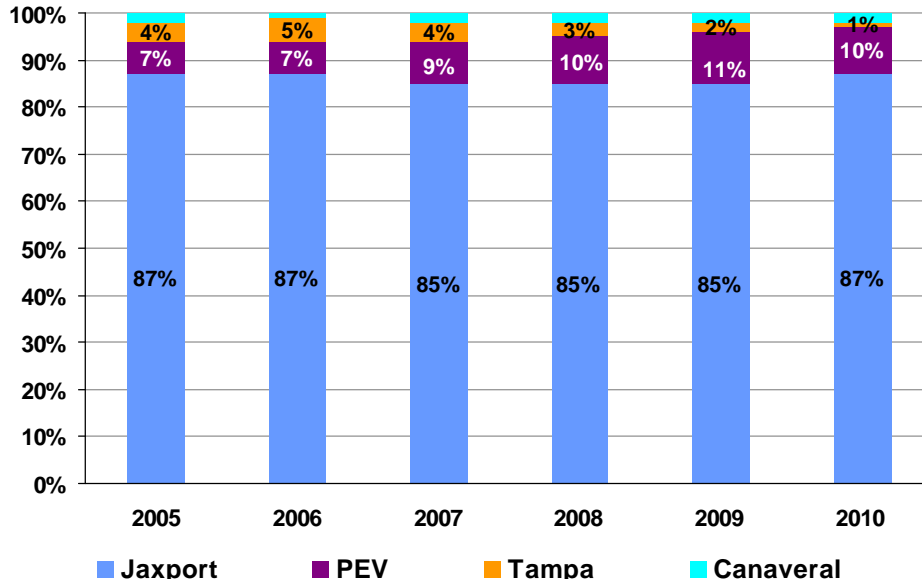
The Port of Jacksonville is Florida's dominate vehicle gateway port, handling nearly 90% of all Florida vehicle traffic (see Exhibits IV-5-4 and IV-5-5). The Port of Tampa has historically been a minor player in the Florida waterborne vehicle trades and its role has been diminishing (see Exhibit IV-5-6), The Port's role has declined primarily due to the discontinuation of Chrysler imports from Mexico.

**Exhibit IV-5-4
Vehicle Traffic by Florida Port
2005-2010**



Source: Port Authorities, Norbridge Analysis

**Exhibit IV-5-5
Vehicle Traffic by Florida Port
2005-2010**



Source: Port Authorities, Norbridge Analysis

**Exhibit IV-5-6
Vehicles Cargo Growth Rate by Florida Port
2005-2010 and 2009-2010**

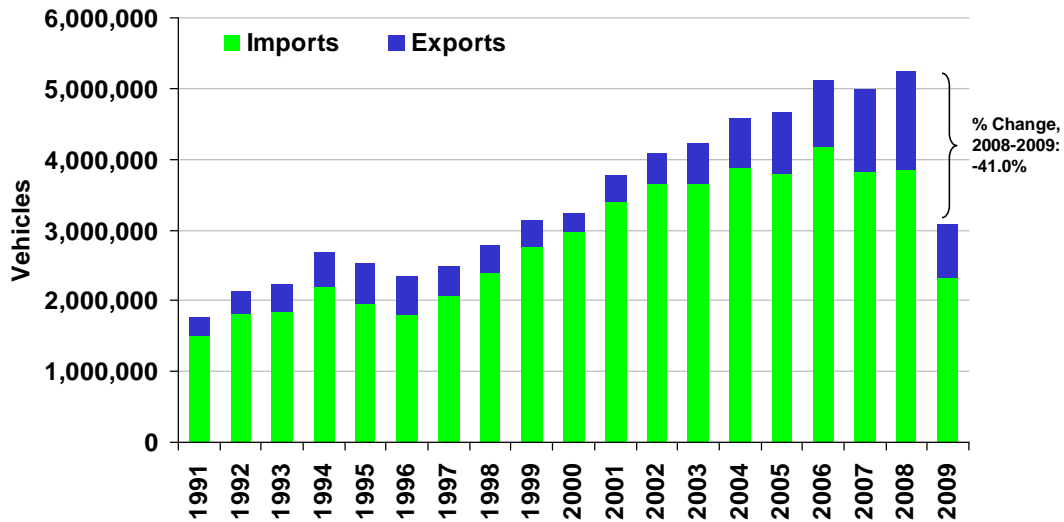
	Vehicles CAGR	
	2005-2010	2009-2010
Florida Port		
Canaveral	5%	16%
Port Everglades	6%	7%
Jacksonville	1%	22%
Tampa	-21%	-19%
All FL Ports	1%	19%

Source: Port Authorities, Norbridge Analysis

c) Overview of U.S. Waterborne Vehicle Trade

The U.S. vehicle trade is a comparatively mature trade, dominated by imports of new vehicles (see Exhibit IV-5-7). In 2009, imports accounted for 75% of the U.S. vehicle trade. New vehicle imports are strongly tied to the economy, especially employment growth and credit availability. In 2009, the U.S. vehicle trade contracted by 41% as U.S. auto sales collapsed with the economic recession.

**Exhibit IV-5-7
U.S. Vehicle Imports and Exports
1991-2009**



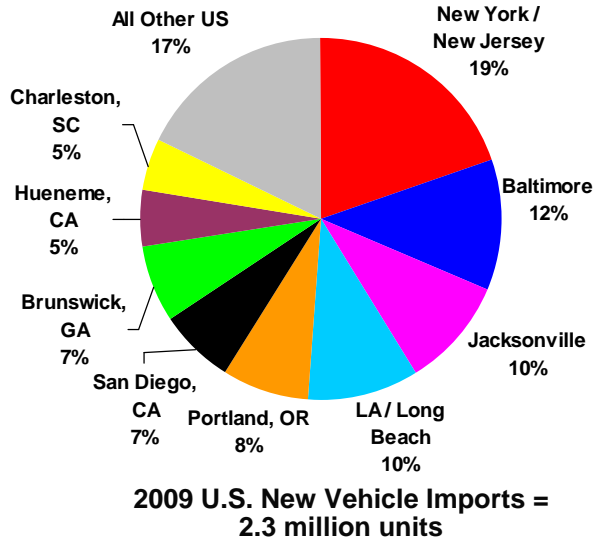
Source: Norbridge analysis of AAPA data

The U.S. inbound new vehicle trade is a mature trade in terms of the producers, ocean carriers, gateway ports and port vehicle processors. During the past 10 years there has been a significant consolidation in the U.S. import trades in terms of ocean carriers and ports.

The U.S. inbound new vehicle trades today are dominated by five ocean carriers: Wallenius Wilhelmsen, NYK Line, K-Line, Mitsui OSK and Hoegh Autoliners. Each of these lines has developed long-term relationships with the major international vehicle producers. These carriers, in conjunction with their vehicle producing customers, have also consolidated import gateway ports. For their long-haul east-west routes, these carriers predominantly use Savannah, Charleston, Brunswick, and Jacksonville as their South Atlantic automotive gateways, and Houston and Galveston as their Gulf Coast gateways. Thus, with the exception of Jacksonville, Florida ports are not major automotive gateways. Two of these carriers (NYK and K-Line), however, operate several bi-weekly short-haul Mexico/Latin America to U.S. inbound services that call ports like Canaveral, Miami, and Tampa.

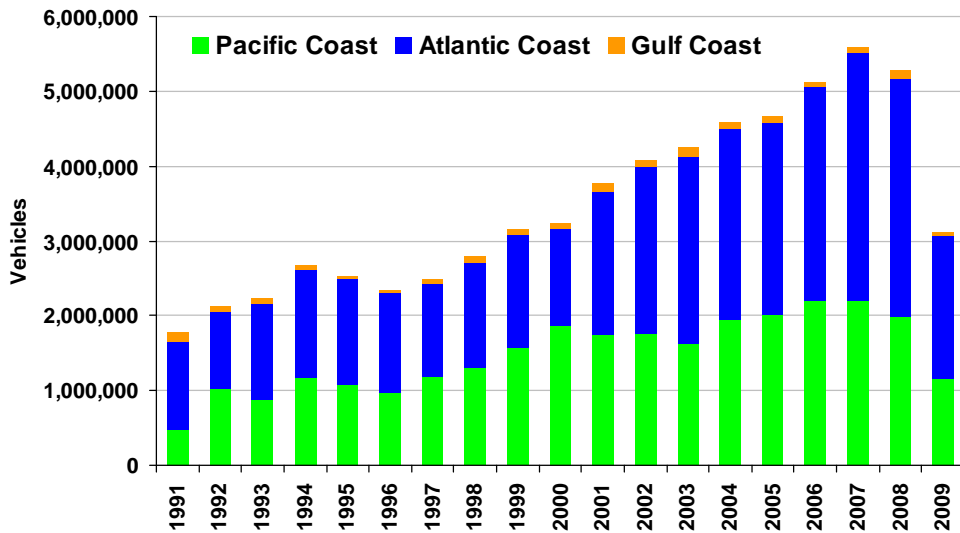
Today, New York, Baltimore, Jacksonville, LA/Long Beach, Portland, San Diego, and Brunswick dominate the U.S. vehicle import trades (see Exhibit IV-5-8). The majority of U.S. vehicle cargoes are routed via these ports. The Gulf Coast handles a relatively small share in comparison (see Exhibit IV-5-9). Historically, Houston has been the Gulf Coast gateway for vehicle traffic, but the port only handled 2% of U.S. vehicle imports and exports in 2009.

**Exhibit IV-5-8
U.S. New Vehicle Trade – Top Import Gateways
2009**



Source: Norbridge analysis of AAPA data

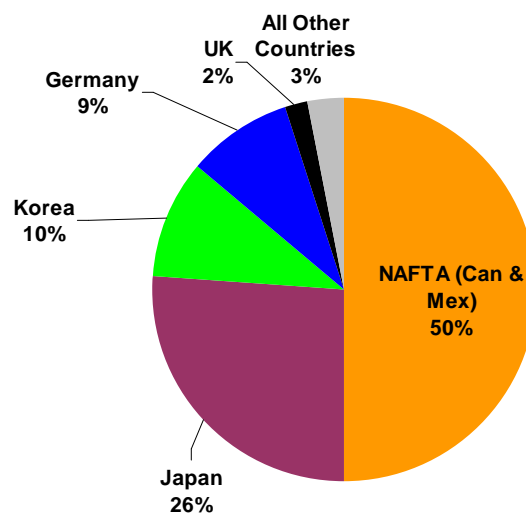
**Exhibit IV-5-9
U.S. Vehicle Imports and Exports by Coast
1991-2009**



*Note: Includes new and used vehicles
Source: Norbridge analysis of AAPA data*

The origins of new vehicle imports have also become concentrated in a relatively few regions and countries (see Exhibit IV-5-10). Canada and Mexico have dominated the production of vehicles imported to the U.S. Outside of the NAFTA trade region, the major sources of vehicle production are Japan, Korea, Germany, and the United Kingdom. In recent years, China has begun investing in vehicle production and in the future may become a major source of vehicle imports to the U.S.

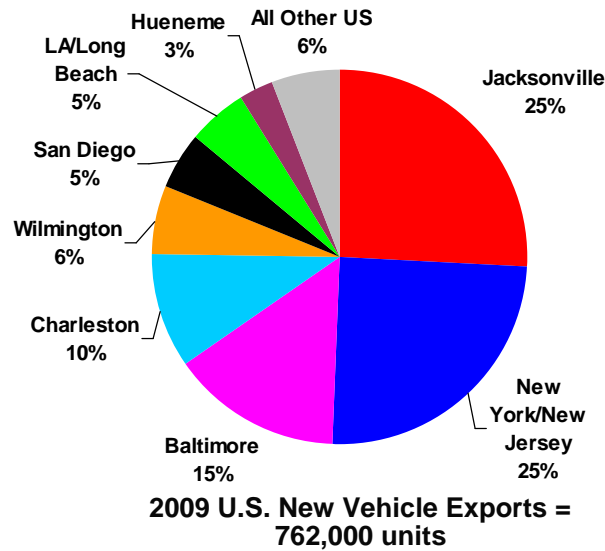
Exhibit IV-5-10
U.S. New Auto Imports Origins
2010



Source: US International Trade Commission

The U.S. new vehicle export trades are relatively small compared to the import trade. Jacksonville, New York, and Baltimore are the largest gateway ports for new vehicle exports. The proximity of these ports to vehicle manufacturing plants, direct rail connections, and large scale import operations which attract most of the major vehicle carriers and port processors are key reasons for these ports' significant roles in the new vehicle export trades (see Exhibit IV-5-11).

**Exhibit IV-5-11
U.S. New Vehicle Trade – Top Export Gateways
2009**



Source: Norbridge Analysis of AAPA data

d) Vehicle Traffic Opportunities for the Tampa Port Authority

The TPA faces significant challenges in attempting to expand and diversify its vehicle business. The import vehicle market is highly concentrated and not likely to significantly expand in terms of port gateways. The new vehicle export trades are also concentrated in those ports located in close proximity to major U.S. vehicle manufacturing plants with good rail and ocean transportation connections (Baltimore, Brunswick, Jacksonville and possibly in the future Mobile). Consequently, the TPA’s future growth prospects are likely to remain associated with its historical business, i.e.:

- The potential to attract new vehicles imports from Mexico to the U.S
- Export of used vehicles to the Latin America, Caribbean and South American market.
 - In the mid-to-long-term the opening of the Cuba economy represents an upside for this market segment

The import of new vehicles from Mexico, where automakers have invested heavily in production facilities in the past decade, continues to be an opportunity for the Port of Tampa. According to the U.S. Bureau of Transportation Statistics (see Exhibit IV-5-12), just under 30% (estimated 19,000 units) of Florida’s vehicle imports from Mexico were reportedly transported via water in 2010, up from 25% of Mexican imports (estimated 13,000 units) in 2009.

However, it is critical to understand the following points regarding Mexican export vehicle opportunity as it relates to the Port of Tampa:

- The U.S. domestic producers are the heaviest investors in Mexico together with Japanese producers
 - However, the highest U.S. demand markets for many of the vehicles produced in Mexico are in the Central and Northeast portions of the U.S.
- There is a well established, highly efficient supply chain for vehicles moving among the US, Canada and Mexico. This supply chain is oriented around rail and major U.S. Midwest and Southeast distribution hubs
- Consequently, comparatively few vehicles are shipped by water as evidenced in Exhibit IV-5-12
- TPA’s ability to participate in this trade will be determined by the comparative popularity of specific models in the Florida market. The inability to export used cars to Mexico is a challenge since used vehicle exports is TPA’s strength and would provide backhaul opportunities for shipping lines.
- Thus TPA’s challenges are mainly beyond their control, i.e. the relative popularity of Mexican-produced vehicle models in the Florida market, inability to export to Mexico, lack of scale relative to Jacksonville and Brunswick, and geographic position relative to major US southeast export vehicle manufacturing plants.

Exhibit IV-5-12
Mexico-to-Florida Vehicle Imports by Freight Mode, 2004-2010

(US Short Tons)	2004	2005	2006	2007	2008	2009	2010
Imports by Truck	51,814	34,409	12,640	17,973	20,208	29,331	32,873
Imports by Rail	41	21	1,186	8,180	4,683	10,016	11,788
Imports by Vessel	70,530	35,439	26,082	35,068	13,583	12,905	18,597
Total	122,385	69,869	39,908	61,221	38,474	52,252	63,258
<hr/>							
(Percent of Annual Total)	2004	2005	2006	2007	2008	2009	2010
Imports by Truck	42%	49%	32%	29%	53%	56%	52%
Imports by Rail	0%	0%	3%	13%	12%	19%	19%
Imports by Vessel	58%	51%	65%	57%	35%	25%	29%

Source: Bureau of Transportation Statistics (BTS), NAFTA Transborder Freight Data

The second historical source of automobile volume at that Port of Tampa, the export of used vehicles to the Latin American market, continues to be an opportunity for growth. The U.S. exported 600,000 used cars in 2007, the latest year for which data was available. The major regions of export for used vehicles were Europe, NAFTA (Canada and Mexico), the Middle East, and Africa (see Exhibit IV-5-13).

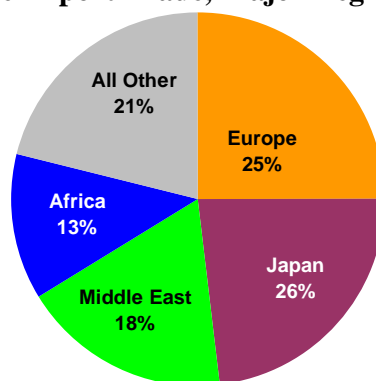
Japan has a very well-developed and more mature used vehicle export trade relative to the United States. Japan exported 1.1 million used cars in 2006 and Peru, Bolivia, Paraguay, and

Chile were major destinations. Many Latin American and South America countries have restrictions on the imports of used automobiles. For example:

- Imports of used automobiles into Brazil are not allowed under any circumstances, with special authorization required for the import of used parts. Brazil also has a ban on diesel passenger car imports, but still exports diesel cars to Argentina.
- Argentina is also currently considering a similar ban on imports and production of diesel passenger cars. There is a possibility this ban will be extended to the entire MERCOSUR region; however, this has yet to be determined under the CAP negotiations.
- Mexico bans all used cars imports except those older than 8 years old until 2019 when the ban will be eliminated
 - 6 years old in 2013
 - 4 years old in 2015
 - 2 years old in 2017
- In Peru, the government has authorized importing used cars until 2010 for socio-economic reasons, with a planned phase-out of used technology afterwards.

However, there appears to be no used car trade restrictions in several key Caribbean/Central American markets: Barbados, Belize, Bolivia, Guatemala, El Salvador, and Panama, and Costa Rica. These markets and other proximate markets where no restrictions are in place offer opportunities for the TPA to expand its used-car export line of business. It is, however, highly dependent on individual country economic growth and exchange rates.

Exhibit IV-5-13
US Used Vehicle Export Trade, Major Regions of Export, 2007



**2007 U.S. Used Vehicle Exports =
600,000 units**

Source: U.S. International Trade Commission (USITC)

e) The Florida Rental Car Market

As part of its research, Norbridge also investigated the rental car market in the state of Florida overall and in Central Florida specifically. The rental car market offers two potential sources of incremental traffic:

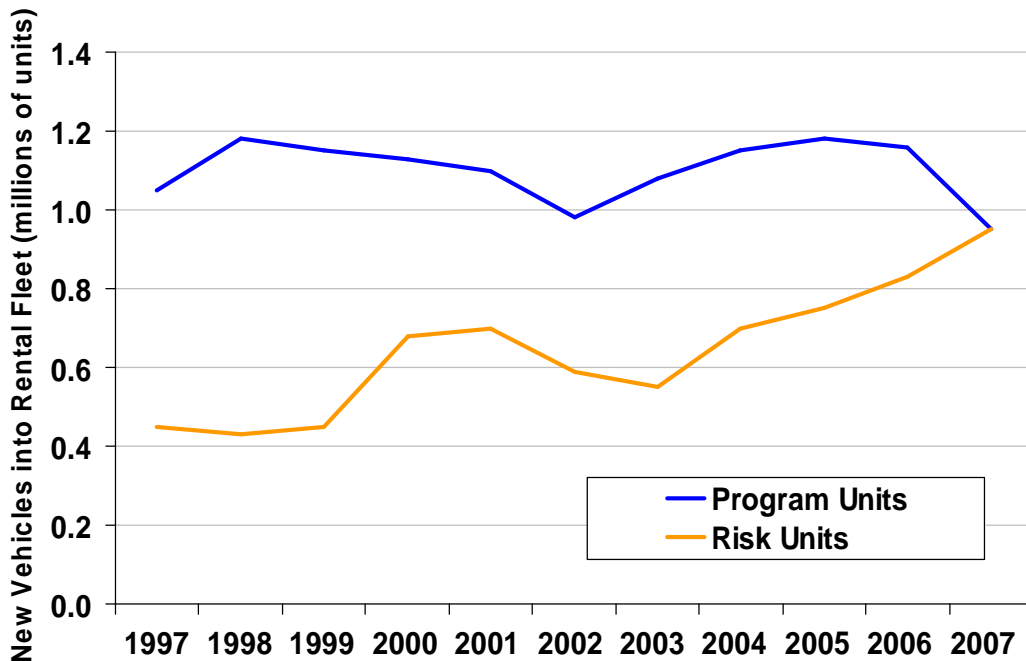
- Imports of new vehicles for the Central and West Central Florida car rental industry
- Exports of used out-of-service rental cars to other countries, specifically Latin and South American countries

Rental car companies buy approximately two million new vehicles every year. Cars are split roughly 50/50 between "risk vehicles" and "program vehicles":

- "Risk vehicles" are wholly-owned by rental companies, who assume the risk of re-selling the car at the end of their commercial life.
- "Program vehicles" are owned by rental companies, with "guaranteed buy-back" agreements between the rental car companies and manufacturers.

Manufacturers typically build a depreciation charge into the repurchase price of program vehicles. The mix of program versus risk vehicles in a fleet is determined by weighing upfront costs and expected resale value (see Exhibit IV-5-14).

Exhibit IV-5-14
New Vehicle Sales into Rental Market by Model Year
1997-2007



Source: Manheim Auctions, 2008 Used Car Market Report

While there is scale and critical mass when rental car companies source and purchase their fleets, the top rental car models are all assembled in either the U.S. or Canada and 75 percent of all rental cars are from the traditional “Big Three” domestic manufacturers: Chrysler, Ford, and General Motors (see Exhibit IV-5-15).

Moreover, on the export side, the majority of rental cars are remarketed via car auctions, and rental car companies have no visibility or influence over who purchases the cars at auctions (see Exhibit IV-5-16). National car auction chains like Manheim or ADESA are the largest players in the car auction business. The largest “buying groups” at auto auctions are franchised and independent car dealers.

Based on the foregoing observations, the import of rental cars into the Central and Western Florida market does not appear to be a viable business opportunity for the Port of Tampa given that the most popular rental cars in the U.S. market are predominantly produced domestically or imported from Canada (predominantly via rail).

Exports, likewise, do not present a compelling opportunity for the Port of Tampa to pursue. Rental companies wholesale risk vehicles at auctions while manufacturers likewise tend to wholesale program vehicles at auctions. In either case, neither is involved in vehicle exportation. Moreover, the buyers of used rental cars are highly fragmented (dealers, individuals, overseas companies, third parties or all the above). Consequently it is difficult to build relationships with large companies that dominate the business and have scale economies.

Consequently the rental car market does not appear to offer significant, scale opportunity for the TPA other than further building an export vehicle base which could potentially in the mid to long-term serve as a basis for attracting one or more inbound ocean carrier services.

**Exhibit IV-5-15
Top 5 Rental Fleet Vehicle Registrations, 2009**

Make & Model	Number	Assembly Location
Chevrolet Impala	70,000	Ontario, Canada
Ford Focus	36,100	Michigan, US
Chevrolet Cobalt	33,500	Ohio, US
Hyundai Sonata	32,000	Alabama, US
Chevrolet Malibu	31,100	Michigan, US

Source: Automotive Fleet News, 2009 Fleet Vehicle Report

**Exhibit IV-5-16
2009 Remarketing Consignor Volumes**

Segment	Number of vehicles to be remarketed (millions)	Number sold at auction (millions)	Percent sold at auction	Segment as a share of total auction volume
Dealer	10.10	3.73	37%	40.8%
Repossession	1.91	1.62	85%	17.7%
Off-lease	2.65	1.68	63%	18.4%
Rental (prgm. and risk)	1.28	0.87	68%	9.5%
Fleet	1.75	0.75	43%	8.2%
Other	0.70	0.49	71%	5.4%
Total	18.39	9.14	50%	100%

Source: Automotive Fleet, 2009 Remarketing Report

2. Forecasts

Based on the forecasts and analyses in the foregoing section, Norbridge developed two vehicle traffic forecast scenarios for the TPA (Exhibit IV-5-17). These forecasts are intended to represent the likely range of future TPA vehicle traffic growth:

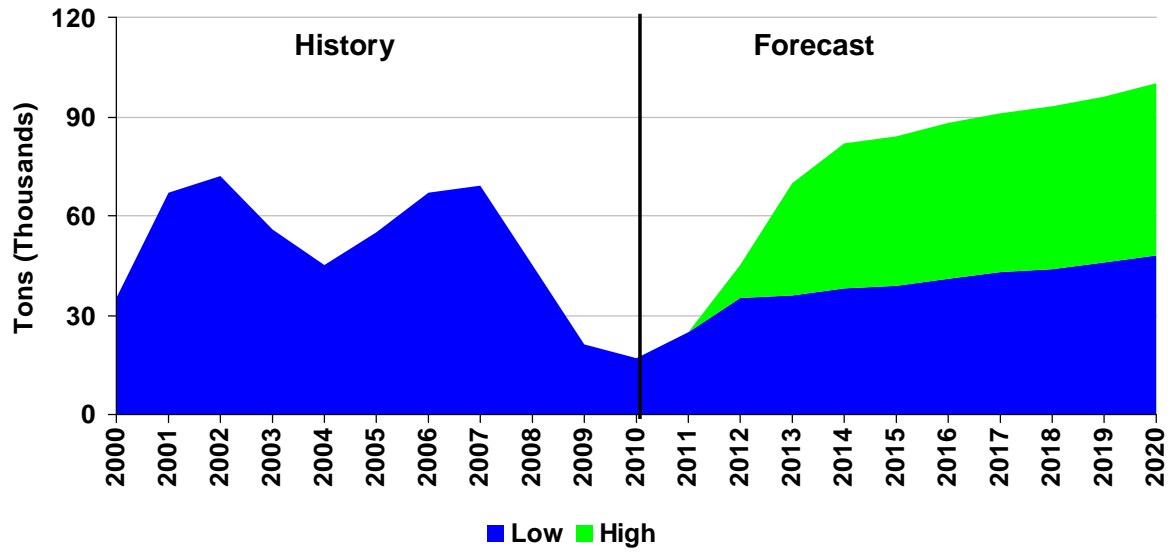
Low Growth Range Scenario

- Modest growth in export vehicle market given economic conditions in Latin American countries, rising oil prices, and protectionism
- Mexican produced vehicles continue to move predominantly by land to Florida
- Vehicle traffic has potential to grow to approximately 48,000 tons in a 2020 timeframe

High Growth Range Scenario

- Modest to strong growth in export vehicle market
- The TPA is successful in attracting a Mexico-Florida import vehicle account
- Vehicle traffic has potential to grow to approximately 100,000 tons in a 2020 timeframe

**Exhibit IV-5-17
TPA Historical and Projected Vehicles Traffic
FY2000-FY2020**



Source: Norbridge, Inc. analysis

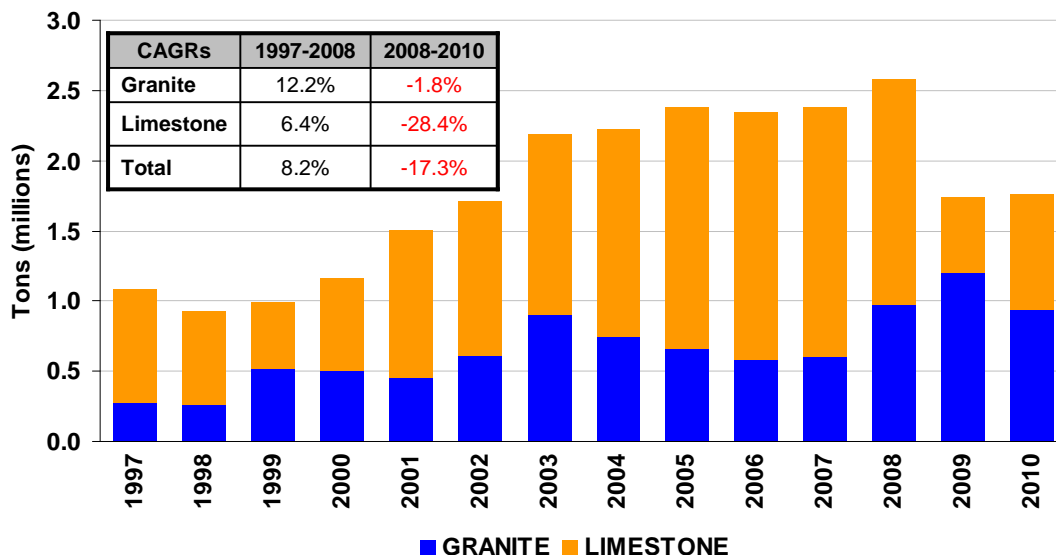
6. Construction Materials

Dry bulk construction materials at the Port include aggregate materials and cement. Aggregate materials have historically been the 3rd leading source of dry bulk volumes through the Port behind phosphate and coal, while cement has been a significantly smaller source of cargo tonnage, representing only 7% of the Port’s dry bulk tonnage at its peak volume of 1.5 million tons in 2006. The volume of both commodities through the port has declined in the face of the economic recession and resulting slowdown in construction activity described in the previous sections of this report.

a) Historical Port of Tampa Aggregates and Cement Traffic

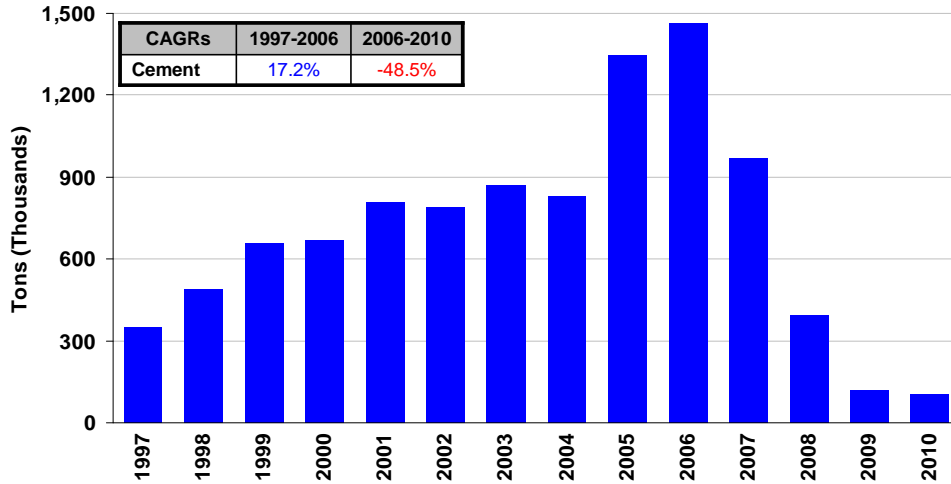
Norbridge considered aggregates as well as cement in its analysis of the Port’s construction materials traffic. Aggregates, defined as granite and limestone, are predominantly handled over Tampa Port Authority berths (minor volumes appear to have been handled over non-TPA berths in 2006-2008 and 2010) while cement has historically been handled over both private and non-private berths (however, in 2010 cement was handled only over TPA berths). As illustrated in Exhibits IV-6-1 and IV-6-2 both aggregate and cement volumes have declined in recent years. Aggregates held up fairly well in the face of the economic downturn, increasing in volume through 2008 and decreasing by a compound annual growth rate of -17.3% between 2008 and 2010. Cement volumes, on the other hand, fell precipitously at a compound annual growth rate of nearly -50% between 2006 and 2010.

**Exhibit IV-6-1
Historical Port of Tampa Aggregates Volume
FY1997-FY2010**



Source: POT Cargo Tonnage Reports 1997-2010

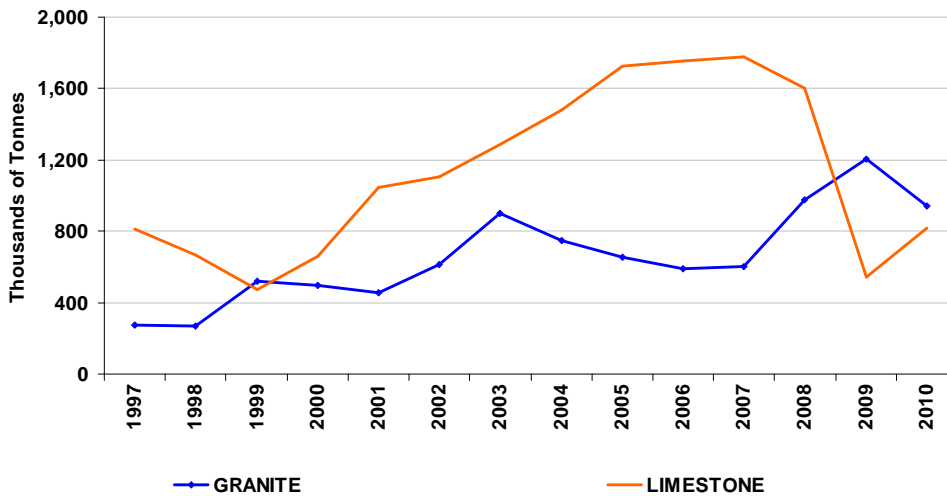
**Exhibit IV-6-2
Historical Port of Tampa Cement Volume
FY1997-FY2010**



Source: POT Cargo Tonnage Reports 1997-2010

As shown in Exhibit IV-6-3, granite volumes through the port increased steadily at the Port of Tampa since 2007. This is partially explained by a shift in the use from limestone to granite due to its stronger structural properties as well as by the periodic halting of limestone mining activity in the Florida Lake Belt Region (discussed later in this section). This is especially true of the highway, road, and bridge construction where construction companies are now using granite more than limestone in the largest districts in Florida according to a 2009 survey (see Exhibit IV-6-4).

**Exhibit IV-6-3
Historical Port of Tampa Limestone and Granite Traffic
FY1997-FY2010**



Source: POT Cargo Tonnage Reports 1997-2010

Exhibit IV-6-4
Survey of Asphalt Plants Highway Construction Sourcing Patterns by District
2009

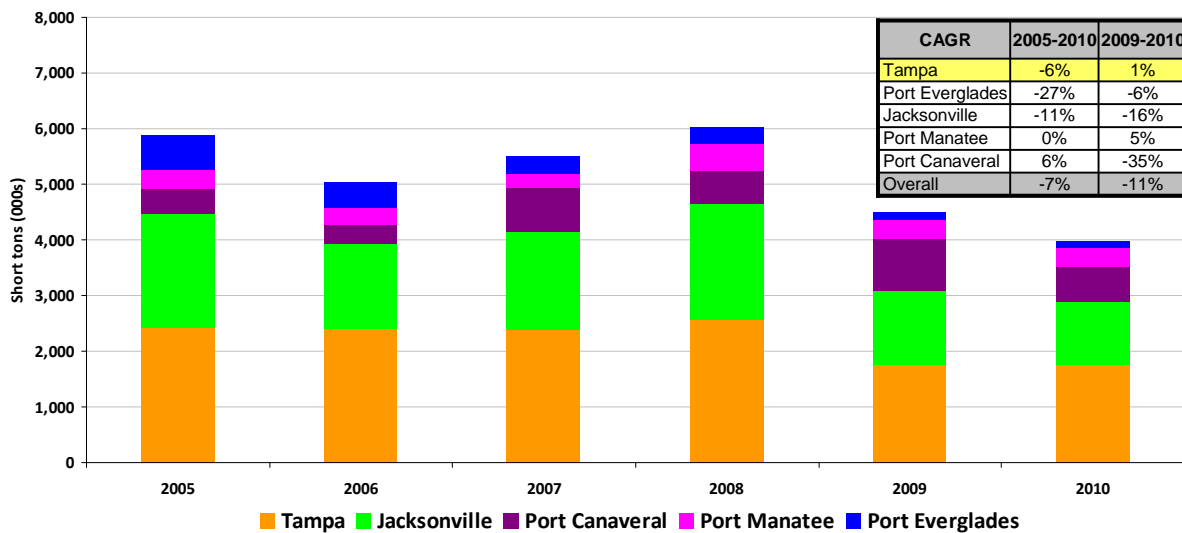
District	% Granite	% Limerock
1	73	28
2	95	5
3	43	57
4	-	100
5	80	20
6	-	100
7	90	10
Total	57	43

Source: 2009 FDOT Strategic Resource Evaluation Study
Note: Districts 2, 5, and 7 comprises the Jacksonville, Tampa, Orlando, and Central Florida areas

b) Florida Ports Aggregates and Cement Traffic

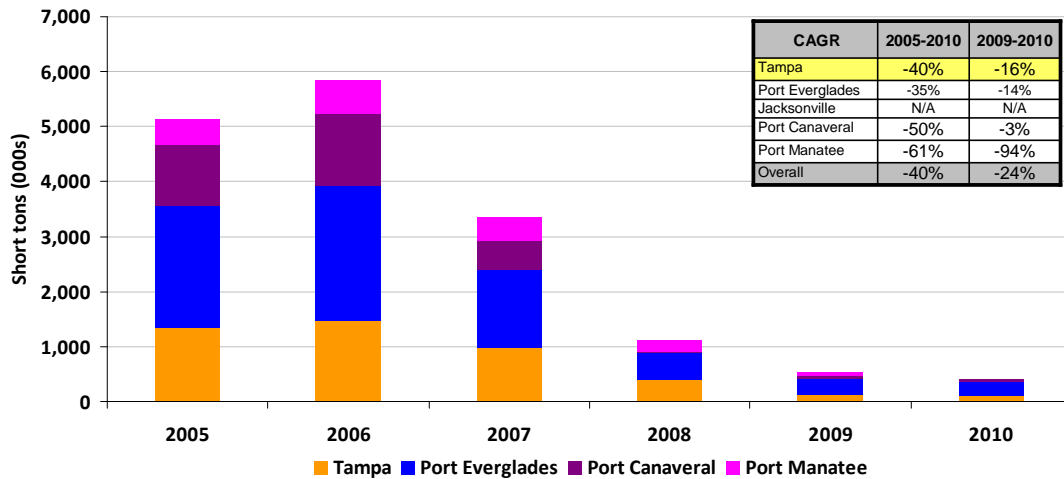
As shown in Exhibit IV-6-5, aggregate volumes fell by a compound annual growth rate of -7% between 2005 and 2010 across Florida Ports. The Port's volumes held up well relative to other Florida ports and total aggregate volume at the Port grew slightly in 2010. Only Port Manatee realized a greater increase in 2010 relative to 2009 volumes and the increase came on a much smaller 2009 base volume.

Exhibit IV-6-5
Florida Ports Aggregates Volumes
FY2005-FY2010



Source: Port Reported Volumes; Norbridge Analysis

**Exhibit IV-6-6
Florida Ports Cement Volumes
FY2005-FY2010**



Source: Port Reported Volumes; Norbridge Analysis

As illustrated in Exhibit IV-6-6, Florida Ports cement volumes fell more precipitously than aggregates volumes, declining by an average annual rate of -40% between 2005 and 2010. The Port of Tampa constituted roughly a quarter of the Florida waterborne cement market in 2010, as it did in 2005, but this share now represents a much smaller volume.

c) Status of Lake Belt Mining

The Lake Belt mining region in Miami-Dade County is Florida’s largest source of limestone (Exhibit-IV-6-7). Historically, it has supplied just under half the limestone used by the Florida construction industry.

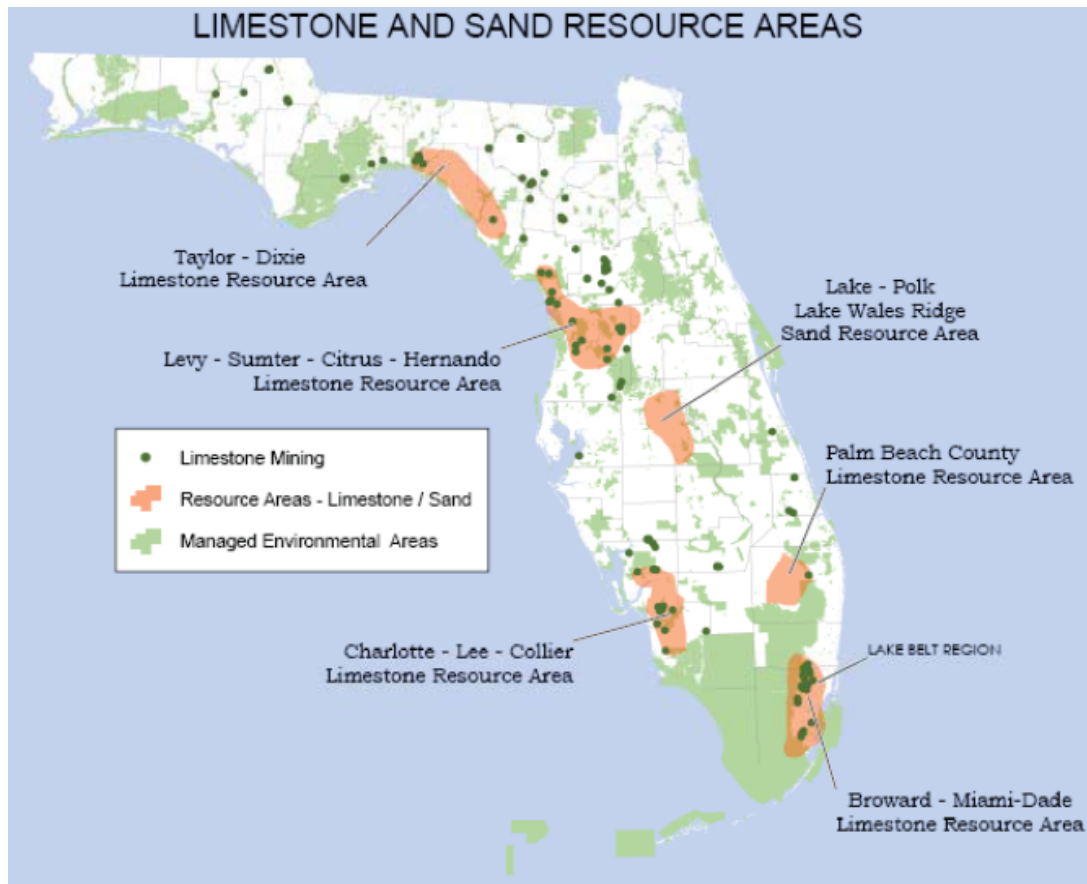
Environmental concerns have resulted in periodic legal injunctions that have halted Lake Belt mining activity since 2006. In 2007, a Miami federal judge halted mining in the Lake Belt area in order to perform studies on the environmental effects of mining on the local water supply. This ruling was successfully appealed and mining was allowed to continue.

In January of 2009, the U.S. Federal District Court for South Florida issued another ruling that canceled all permits for limestone mining in the Lake Belt region until the U.S. Army Corps of Engineers (USACE) completed a Supplemental Environmental Impact Statement (SEIS). In early 2010, the USACE released the SEIS and re-issued permits to Lake Belt mines. The re-issued permits, however, were revised to include greater measures for mitigating seepage and reducing mine footprints.

Lake Belt limestone mining will likely remain susceptible to environmental protests and potential injunctions. Moreover, the most recent USACE regulations may well limit the prospects for expanding mining operations in the future. The continued uncertainty regarding the sustainability of Lake Belt mining has led many Florida mining companies to begin prospecting in the Caribbean and Central America for new sources of limestone and granite. This potential

shift to more foreign-sourced limestone and granite would likely lead to increased aggregate volumes handled across Florida ports in general and the Port in specific.

**Exhibit IV-6-7
Florida Limestone and Sand Resource Areas**



Source: FDOT

d) Demand Drivers

For Florida ports, there are both macroeconomic and microeconomic drivers of future aggregate and cement volumes. Macro-economic growth is largely tied to GDP and its resulting effect on construction within the state of Florida. Aggregates and cement are both used in commercial, residential and road construction. As described in previous sections, the prospects for growth in commercial and road construction appear to be modest. However, growth in residential construction (including home improvements) as well as commercial expenditures is projected to be more robust (see Exhibits IV-3-6 through Exhibits IV-3-9).

In terms of microeconomic factors, two factors could potentially have a significant positive impact on the volume of aggregates handled through Florida ports in the future

- Potential increases in foreign imports as a result of a shift from limestone to granite due to its stronger structural properties

- A shift to more foreign imports of aggregates due to uncertainty surrounding Lake Belt mining in the future

e) Forecast

Based on the foregoing analysis, Norbridge has developed two scenario-based forecasts for aggregates and cement at the Port of Tampa. These forecasts are intended to represent the likely range of future TPA construction materials traffic growth:

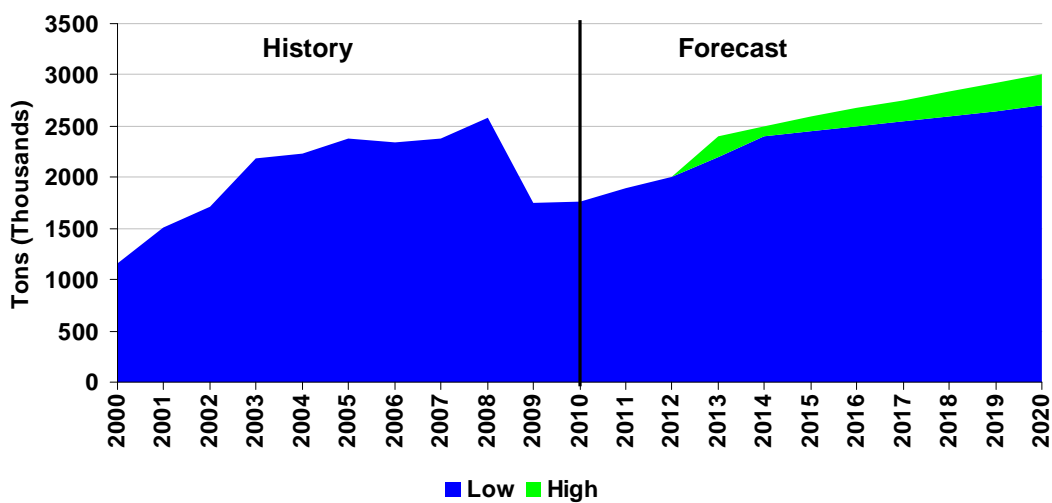
Low Range Growth Scenario

- Slow economic recovery until 2012
- Modest recovery of residential and commercial construction
- Minimal substitution from traditional limestone sources in the Lake Belt Mining region
- TPA cement traffic has the potential to grow aggregates traffic to 2.7 million tons and cement traffic to 800,000 tons

High Range Growth Scenario

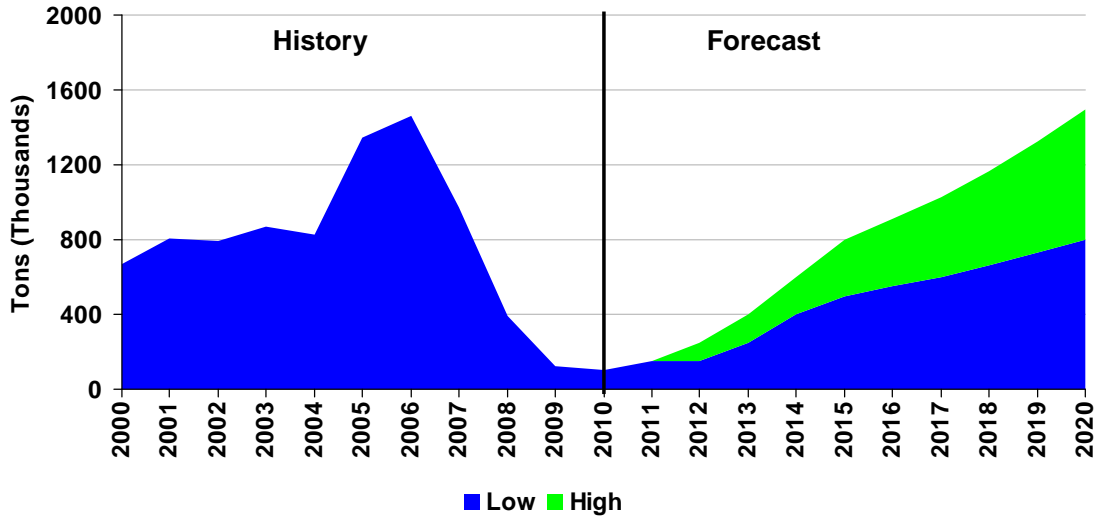
- Slow economic recovery until 2012
- More robust recovery of residential and commercial construction from 2012-2020
- Increased substitution from traditional limestone sources in the Lake Belt Mining region
- TPA cement traffic has the potential to grow aggregates traffic to three million tons and cement traffic to 1.5 million tons

Exhibit IV-6-7
TPA Historical and Projected Aggregates Traffic
2000-2020



Source: Norbridge, Inc. analysis

**Exhibit IV-6-7
TPA Historical and Projected Cement Traffic
2000-2020**

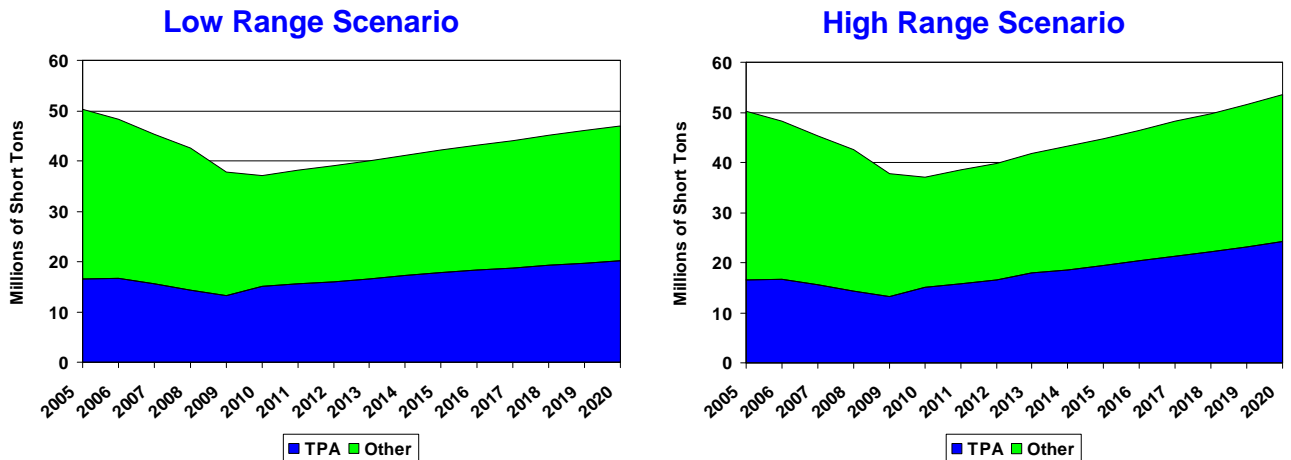


Source: Norbridge, Inc. analysis

7. Market Forecast Summary

Exhibit IV-7-1 below presents a summary of cargo growth potential for the Port and the TPA between 2010 and 2020. Under the low range scenario, which assumes a slower recovery for the Florida economy, waterborne tonnage for the Port has the potential to grow to 47 millions tons. Under the high range scenario, which assumes moderate, sustained recovery for the Florida economy, waterborne tonnage has the potential to grow to approximately 54 millions tons.

**Exhibit IV-7-1
Port of Tampa and TPA Low and High Range Forecasts
2010**



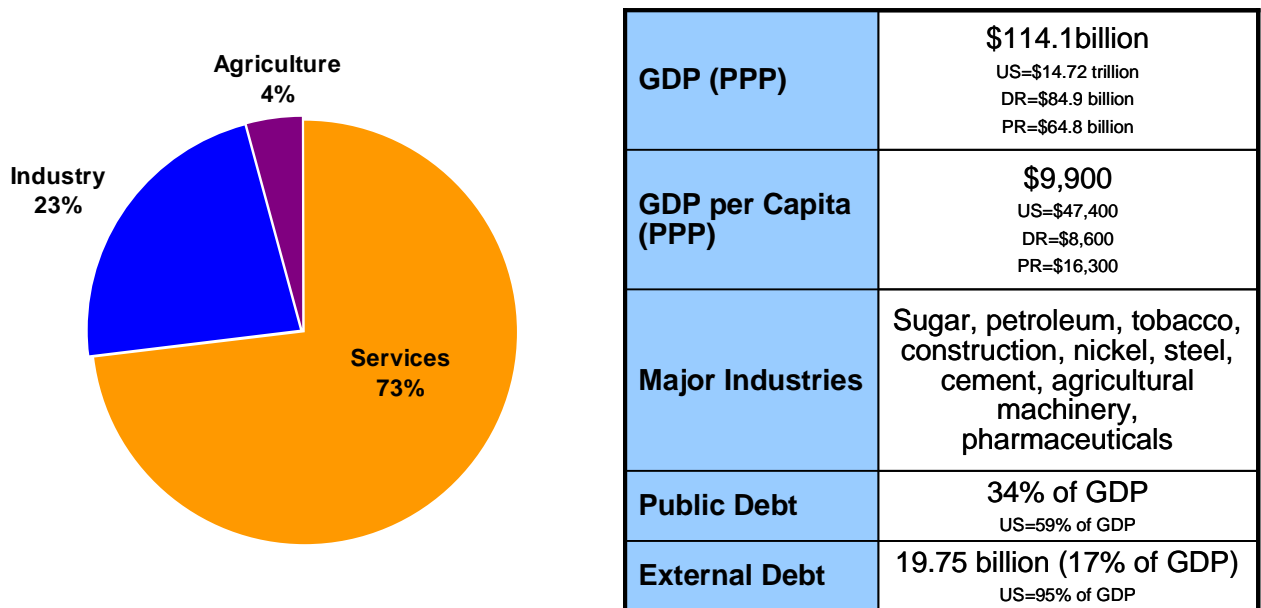
8. Cuba Market Potential

This section provides a brief strategic assessment of the market potential that may develop as a result of a re-opening of trade between the U.S. and Cuba. It begins with an overview of the Cuban economy based on the limited information that is available. It then discusses recent political developments within the two countries. It concludes with a discussion of recent foreign investment in Cuba and what it would mean for the Port given a normalization of relations between the two countries.

a) Overview of the Cuban Economy and International Trade

Cuba's economy was nearly twice as large as the Puerto Rican economy in 2010 and the per capita GDP was between that of Dominican Republic and Puerto Rico (Exhibit IV-8-1). Cuba's main industries are sugar, petroleum, tobacco, construction, nickel, steel, cement, machinery, and pharmaceuticals. Also, the country has a relatively low amount of national debt.

**Exhibit IV-8-1
Cuba GDP and Debt Overview
2010**



Source: CIA World Fact Book

The value of Cuban imports in 2010 was more than triple the value of its exports (Exhibit IV-8-2). Cuba's major import trading partners—Venezuela, China, Spain, and the U.S.—provide petroleum, agricultural products, machinery, and chemicals. Currently, agricultural exports from the U.S. to Cuba are the only trade permitted between the two countries. Cuba exports sugar, nickel, tobacco, fish, medical products, citrus and coffee to various countries including China, Canada, Spain and the Netherlands.

Exhibit IV-8-2
Cuba International Trade Overview
2010

Imports	\$10.25 billion (2010 est.)
Exports	\$3.3 billion (2010 est.)
Trade Deficit	\$6.95 billion (2010 est.)
Major Import Partners	Venezuela 30.5%, China 15.5%, Spain 8.3%, US 6.9% (2009)
Major Import Commodities	Petroleum, food, machinery and equipment, chemicals
Major Export Partners	China 25.7%, Canada 20.3%, Spain 6.8%, Netherlands 4.5% (2009)
Major Export Commodities	Sugar, nickel, tobacco, fish, medical products, citrus, coffee

Source: CIA World Fact Book

b) Recent Political Developments

Recent political developments between Cuba and the U.S. have offered increased optimism for a potential normalization of relations between the two countries. First and foremost, Fidel Castro was replaced in power by his brother Raul in 2008. The next year, Democratic candidate Barack Obama was elected President of the United States and many felt that the Cuban leader's desire for short-term economic growth along with Obama's agenda for improved international relations could potentially lead to a thawing of tensions between the two nations. In fact, since his inauguration, President Obama has eased travel, remittance, and visa regulation regarding Cuba. Currently, church, student, and cultural groups are permitted to travel to Cuba.

However, significant political issues remain:

- **Human Rights Violations:** Since the Cuban Revolution, leadership in the country has imprisoned many writers, politicians, and other citizens for their thoughts and actions regarding the Revolution. President Obama made reference to these prisoners in a speech as recently in 2009. However, Cuba released a large portion of these political prisoners (52 in total) in 2010.
- **Cuban Exile Population in Florida:** Since the revolution's outset, a number of Cuban refugees have taken up residency in Southern Florida. This group constitutes a large and influential voting block within one of the key influential swing states in the United States.

Though the largest portion of this group votes Republican, both parties are fearful of generating resentment among the exile population by resuming trade with Cuba.

- **Cuba's Relationships with Venezuela and China:** Cuba has developed a close working relationship with Venezuela, which began in 2000 when Cuba signed an agreement promising medical supplies for petroleum products. The relationship with Venezuela and its leader, Hugo Chavez, who has often expressed his discontent with U.S. policy, poses challenges for any attempt to normalize relations with the U.S. Cuba has also developed significant trade relations with China. China's ability to supply low cost consumer goods to Cuba potentially reduces the potential benefits of normalizing relations with the U.S.
- **Cuba's Peso Currency:** Currently, monetary policy hinders Cuba's ability to trade easily with other nations. The country operates under a peso system with only the government allowed to exchange currency.

Despite a more positive overall atmosphere between Cuba and the U.S., numerous political and economic challenges remain. There are currently no indications that a significant improvement in political and economic relations between the two countries will occur in the near future. Cuba still faces many basic economic challenges: hard currency, infrastructure, modernization of industry, foreign investment in economic diversification, personal wealth, etc. These economic challenges will require investment and time to successfully address. Consequently, it is unlikely that Cuba is likely to pose significant, short-term trade growth opportunities for Florida's ports or the Port of Tampa.

c) Examples of Increased Foreign Investment in Cuba

Recent investment in Cuba by other nations signals a potential openness to greater foreign involvement in the island nation's economy. The largest example of such foreign investment is the Brazilian government's pledge to lend Cuba \$800 million for the expansion of Mariel, an oil and container port west of Havana. As of March 2011, two tranches of the loan had already been provided and construction is slated to start in June of 2011.

Once completed in 2014, the cargo port will replace the draft-restricted Port of Havana as the center of waterborne commerce for the nation. The new port will be dredged to 55-foot, providing the capability to handle most of the world's largest vessels. The new state of the art container facility will have an annual capacity of one million containers.

**Exhibit IV-8-3
Geographic Relation of Mariel Port**



Source: Norbridge, Inc.

Other selected examples of foreign investment, largely in the tourism industry, are shown in Exhibit IV-8-4. These developments once again illustrate Cuba's goal for short-term economic growth and their willingness to open the nation up to foreign investment in order to achieve it.

**Exhibit IV-8-4
Select Examples of Foreign Investment in Cuba**

Vancouver-based Leisure Canada is planning to develop a **three-course golf resort with marina village** at Jibacoa, 50 miles east of Havana

British company Esencia Hotels & Resorts is building a **\$400 million golf course community**, the Carbonera Country Club Resort, in Varadero.



A British-Spanish group is reportedly developing a **2,000-unit community** near Bahia Honda around **three golf courses** and a **200-slip marina**.

A Vietnamese company, Housing & Urban Development Corp, reportedly is planning to build **two golf course communities**, including one inland, just west of Havana.

Source: Various Publications

d) Implications for the Port of Tampa

As discussed in the 2007 Strategic Plan Update, the primary trade opportunities for the U.S. will likely be in consumer goods, forest and agricultural products and potentially oil and gas exploration and production equipment. The former cargoes will likely move in containers, while the latter will likely move in a combination of breakbulk (including RoRo and refrigerated) and bulk vessels. Assuming in the long run that Cuba's per capita consumption of containerized goods ranged between the average for the U.S. and the average for Puerto Rico (an island economy), Cuba's future container trade could approximate an order of magnitude 2-3+ million TEUs as it reaches maturation.

The technological evolution of open trade between Cuba and the U.S. is uncertain. The short haul nature of the trade would indicate the trade might be based on Roll-On/Roll-Off (RoRo) vessels initially. This would particularly be the case if there was a heavy passenger component to the opening of trade with the U.S. Conversely, the opening of Mariel provides the requisite Lift On/Lift Off (LoLo) capability to sustain efficient container ship operations. The continued expansion of trade with distant trading partners such as China and Spain would most likely favor the use of container vessels. Given the uncertainty associated with both the timing and structure of Cuba-U.S. trade, the TPA's best strategy is to retain its flexibility to accommodate the range (LoLo, RoRo, geared multipurpose vessels, heavy lift, etc.) vessel technologies that might be deployed in the trade. Historically, a key TPA strength has been the diversity of facilities it owns and leases. Sustaining this diversity, particularly to handle RoRo and Ro/Pax (RoRo-passenger ships) could prove to be a significant competitive advantage for the TPA and the Port of Tampa.

V. Update to 2007 Strategic Recommendations

This section presents NBI's selected updates to the 2007 strategic plan recommendations. The updates are based on NBI's research and analysis presented in the foregoing sections. The recommendations focus on the key areas addressed in the 2010 update, namely the TPA's container, petroleum products, selected breakbulk and selected dry bulk lines of business. NBI has also included recommendations related to both vessel access and landside transportation since both these elements are important enablers to the Port's and the TPA's future success.

1. Strategic Overview

Significant changes have occurred in the global, U.S. and Florida international trade markets since the 2007 strategic plan was completed. These changes include:

- A global economic recession, the effects of which continue to affect the pace and structure of the world's economy
- The U.S. housing and financial market crises, which will continue to affect the U.S. economy for several years
- A structural increase in unemployment which may require several years to change
- A growing awareness across the political spectrum that the U.S. debt situation has reached a critical point and that a restructuring of federal government revenue and expense policies and programs is required
- A new level of instability in the Middle East, the repercussions of which may not be fully understood for several years
- Rapidly rising energy prices
- A sustained erosion of the US dollar vs. major world currencies which is likely to continue at least until US fiscal and debt policies change

The likely net effect of these structural changes is a more moderate outlook for U.S. and Florida waterborne trade growth. Whereas the 1990s and first decade of this century witnessed container trade growth in the 6-10+ percent range and bulk trade growth in the 2-3+ percent range, the respective growth rates are more likely to range between 3-5 percent and 1-2 percent respectively. The implications for the U.S. and Florida port industries are slower growth in the demand for port facilities. While the Panama Canal expansion project and the potential (which has been anticipated for 20+ years) opening of Cuba represent upside growth opportunities, overall demand for port facilities and infrastructure is likely to develop more slowly. Consequently, ports may well require more time and effort to develop new business opportunities and comparatively less time to plan and develop the requisite infrastructure. The one caveat to this potential trend is environmental regulation, particularly as it relates to channel deepening and new facility development projects that require fill. The lead time for these major capital projects is likely to become longer and the associated permit processes more complex.

The strategic implications of the foregoing trends for the TPA and the Port include:

- Preserving and enhancing the TPA’s terminal flexibility and landside access (rail in particular) are strategic priorities
- TPA’s significant, diverse asset base provides a solid base for flexibly responding to fundamental and niche growth opportunities as they emerge
- TPA’s container, breakbulk and dry bulk trades will rebound as the West Central Florida economy and construction industries recover
- TPA should continue its Gulf Coast Advantage marketing initiative
- Expanding capability and deep draft berth availability are priorities
- Pursuing niche opportunities in emerging markets provides further diversification opportunities

2. Recommended Strategic Priorities

TPA’s strategic priorities need to focus on five key areas. Each of these areas build on the TPA’s and the Port’s strategic advantages:

a) Sustaining the diversity and flexibility of its asset bases

The diversity and flexibility of the TPA’s and the Port’s asset base is a core strength. The TPA and the Port have the most land and the most land available for development among the major Florida ports. The existing asset base is capable of accommodating every major cargo type that is handled in world trade. The TPA and the Port have the capability to handle a majority of the world’s container, breakbulk, dry bulk and liquid bulk fleets. The TPA and the Port also have the capability to accommodate most of the world’s specialty fleets such as RoRo and RoPax vessels. This capability and flexibility will be important to pursuing niche market developments associated with the evolving Latin American and Mexican trades.

b) Maximizing the efficiency and utilization of its asset bases

The TPA and the Port have significant latent capacity within its asset base. Consequently, the TPA has the flexibility to either tailor existing facilities and infrastructure to meet existing and new customers’ requirements or to develop “build to suit” greenfield sites. The former strategy can be implemented quickly at comparatively low cost. The latter requires longer lead times, involves more complexity and requires significantly greater capital investment. Balancing these two development options against customers’ requirements and the TPA’s’ financial resources will be key. Given the diversity and flexibility of its existing asset base, tailoring existing facilities and infrastructure requirements to meeting customers’ evolving facility requirements should be a priority. The TPA is already pursuing this strategy as evidenced by its phased container terminal development program, its new Hooker’s Point rail yard and its phased approach to rebuilding the REK Pier.

c) Preserving and enhancing landside access

Landside access has been another key strategic advantage. The Port's landside access is in the process of being significantly enhanced through both the I-4 Connector Project and the Hooker's Point rail facility. Each of these projects will significantly improve freight access to/from the Port, reduce freight traffic on local highways and neighborhood streets, and enhance the competitive positioning of the Port. The Hooker's Point rail facility in particular should yield significant benefits including reduced transport costs, reduced truck traffic, and improved air quality. The TPA's roadway improvement program for Hooker's Point and its land acquisition program to preserve and enhance road and rail access to Port Redwing are also critical steps to preserving and enhancing landside access. The TPA will need to continue to work closely with the FDOT, the City of Tampa and the regional MPOs to ensure that sufficient freight transport capacity is preserved and enhanced on the regional road and rail networks. Interstates 4, 75 and 275, in conjunction with Highways 41, 60 and 301 and 589 are critical linkages between the Port and major markets. The rail line and associated right of way connecting the Port to CSX's east Tampa rail yards needs to be preserved. Rail transport will become increasingly important to the nation and the state's economies in the future and this link is critical. The TPA needs to continue to collaborate with CSX to ensure its rail line and infrastructure between the Port, Winter Haven, Orlando and beyond remains capable of accommodating future growth.

d) Prioritizing and optimizing capital investments

The TPA's and the Port's diverse capabilities are core strengths. The TPA's capital investment program needs to focus on sustaining and incrementally enhancing these strengths. The TPA's market-driven strategic investment priorities include:

- Completing the reconstruction and incremental expansion of the REK liquid bulk complex and associated landside (risers, pipelines, etc.) improvements.
- Continuing the phased approach to expanding its container terminal capabilities in response to evolving demand. In particular, the TPA and its partner Ports America need to continue to focus on the waterside capabilities and capacities (berth area, crane capability, vessel productivity) of the existing container facilities in anticipation of the completion of the Panama Canal expansion and the associated introduction of new container services into the U.S. Gulf trades
- Vessel access: continue to identify, evaluate and incrementally enhance vessel access (channel widths, channel depths) capabilities to existing and new (Port Redwing) port facilities. The TPA will need to closely monitor the evolving fleet expansion and network deployment strategies of the global shipping lines and ensure the Port has the capability to accommodate the fleet of vessels that could potentially serve the Port

e) Sustaining the TPA's financial resources

Historically, the TPA's financial performance has been a core strength. This strength reflects the TPA's large, diverse business base and its competitive advantages. Given both the continuing need to reinvest in port and related infrastructure and a slower rate of growth in demand going forward, the TPA will potentially face significant challenges to sustaining its

financial resources. Given that competition among Florida ports is likely to increase in the future, the TPA will need to focus on both revenue enhancement and cost containment strategies to preserve its capital resources. Prioritizing capital investments around core lines of business and projects will also be important. Prioritizing the utilization of existing assets will also be key.

VI. Landside Freight Transportation Strategy

Preserving and enhancing the Port's landside freight transportation access is important to the Port's long-term strategic success. The Port's existing landside transport infrastructure is a source of competitive advantage. As noted above, the I-4 Connector Project and the TPA's Hooker's Point rail terminal are significant enhancements. Incrementally building on the existing regional and local landside freight transportation infrastructure and these two ongoing projects should be a strategic priority.

Regional freight transportation planning involves multiple organizations including the state, the City of Tampa, regional MPOs and multiple counties and municipalities. The TPA, as the leading agency responsible for ensuring competitive access to global markets, must play a key role (leader, advocator, investor, collaborator) in planning for and implementing the requisite strategies for preserving and enhancing regional freight transport. This section highlights the current state of freight transport within the region, identifies the key players and projects, and defines a series of strategic priorities for preserving and enhancing regional freight transport.

1. Strategic Plan Update: Transportation Improvements Analysis

Since the formulation and adoption of the Tampa Port Authority Strategic Plan, there have been a number of plans completed or adopted that will affect the landside transportation system that serves the Port. This section includes a review of these freight infrastructure and operations planning efforts to identify rail and roadway needs on the freight transportation network impacting access to the Port's facilities and infrastructure. The assessment includes projects in the TPA's Capital Improvements Program and Florida Department of Transportation (FDOT) tentative five-year work program. Additional long-term, cost affordable and unfunded needs were identified through the Port Intermodal Transportation and Goods Movement Study, the Hillsborough County 2035 Long Range Transportation Plan, and several statewide and regional freight planning efforts such as the Tampa Bay Regional Goods Movement Study and the 2010 Florida Seaport System Plan. Now that these studies are nearing completion and the needs and priorities can be compiled, the TPA has an opportunity to proactively collaborate with planning and funding partners to insure the regional freight transport network is preserved and its capabilities enhanced in the coming decade.

This section describes the recent, relevant studies and plans that have recently been completed and provides tables and maps of the most essential rail, road, and intersection improvements to enhance landside accessibility and efficiency at the Port of Tampa. Despite a very slow recovery from the 2009 recession, the environment for garnering funds for landside transportation funds is increasingly positive. Freight planning and needs, including the link to economic development, have received increased focus at the federal and state levels. The upcoming update to the federal transportation bill will include new provisions for freight initiatives and ultimately an opportunity for more emphasis on freight priorities as part of the funding allocation process. Consistent with the new federal emphasis on freight, Governor Scott has highlighted the State of Florida's ports as being strategically important to economic recovery and development. The federal and state governments' emphasis on freight provides the TPA with an opportunity to take

a leadership role in proactively advocating for the preservation and enhancement of the regional freight transportation network.

2. Review of Freight Planning Efforts

a) Port Intermodal Transportation and Goods Movement Study (TPA)

The Intermodal Transportation Plan (ITP) documents the Port's short and long-term landside intermodal freight transportation needs based on traffic counts and level of service assessments along corridors and at specific intersections in the vicinity of the Port. The plan addresses access to and from major roadways (including I-4, I-75, and the Selmon Expressway) and CSX's main rail network. It identifies and prioritizes requisite projects for improving access and circulation within the Port as well. The road and rail projects described in the ITP are listed in Table 1 and Table 3, respectively, at the end of this document. Railroad crossing improvements are listed among the specific location projects cataloged in Table 2.

b) 2010 Florida Seaport System Plan (FDOT)

The Florida Seaport System Plan describes the statewide economic impact of Florida's ports, outlines a long-term vision for the State's ports, documents existing conditions at particular ports, lists port-specific needs identified in capital improvements plans and port master plans, and identifies general implementation strategies for FDOT and its partners. A list of long term capital needs for the Port is included in the Seaport System Plan. The list of projects is primarily related to waterside capacity and operations. However, landside railroad improvements are also included in the plan. These are listed in Table 3.

c) Florida Trade and Logistics Study (FDOT/Florida Chamber)

The Florida Trade and Logistics Study, which was completed in 2010, identifies both major emerging opportunities for the growth of the logistics industry in the State of Florida and challenges that will potentially hinder that growth. Strategies are framed within the "Six Pillars" of the State's future economy as described in the document. The six pillars address:

- Talent and education
- Innovation and economic development
- Infrastructure and growth leadership
- Business climate and competitiveness
- Civic and governance systems; and
- Quality of life, quality of places

The study presents broad strategies for enhancing the competitiveness of Florida's ports. The strategies subsumed under the third pillar (infrastructure and growth leadership) are likely to affect transportation decision-making at the state, regional, and local levels and impact landside accessibility to the Port. These strategies include:

- Develop at least one seaport with 48 feet of water and on-dock or near-dock rail
- Support acquisition and redevelopment of new waterfront land or inland locations for seaport operations
- Improve landside connectivity to airports, seaports, and rail terminals
- Maintain and enhance regional distribution networks
- Develop and maintain high capacity, long distance rail, water, and truck corridors
- Expand distribution center capacity at appropriate locations; and
- Adopt land use plans supporting freight intensive activities.

d) Hillsborough County 2035 Long Range Transportation Plan (Hillsborough MPO)

The Hillsborough County Metropolitan Planning Organization (MPO) updated its long range transportation plan (LRTP) in 2009. The LRTP identifies the County’s long-term transportation needs and prioritizes needed improvements to streamline local, state, and federal funding and decision-making. The 2035 LRTP focuses primarily on passenger transport, complete streets, and transportation strategies that support transit-oriented development. However, since trucks and commuter traffic share roads, many of the proposed improvements in the LRTP will affect goods movement within and through the County, especially those in the vicinity of the Port. The LRTP identifies capacity improvement needs of the County’s designated truck routes. The list of projects is provided in Table 1.

e) Tampa Bay Regional Freight Rail Study (FDOT)

In 2009, FDOT District 7 completed the Tampa Bay Regional Freight Rail Study (FRS), which provides an overview of the region’s existing rail infrastructure and operations. The study describes the significance of freight rail to Tampa’s economy and as part of a larger freight transportation system. Opportunities for enhancing the efficiency of freight rail activities and issues constraining rail improvements are documented, along with needed on- and off-system infrastructure improvements and recommended regional rail improvement strategies. FRS potential grade separations at key railroad crossings are identified in Table 2.

f) Tampa Bay Regional Goods Movement Study (FDOT)

The Tampa Bay Regional Goods Movement Study (TBRGMS) is an on-going effort by FDOT District 7 to enhance regional freight mobility, sustain and stimulate the regional economy, preserve neighborhoods and communities, and develop a freight planning framework that builds upon and supports MPO planning processes. A comprehensive set of freight-related roadway needs has been assembled from a variety of sources, including: the Hillsborough LRTP, the TPA’s Port Master Plan and Strategic Plan, the Intermodal Transportation Plan, trucker surveys, freight corridor screenings, and an issues and opportunities analysis conducted as part of the study. The identified needs range from small scale operational improvements in specific locations to system wide capacity enhancements for entire corridors. The highway needs and

intersection improvements documented in Table 1 and Table 2, respectively, are derived primarily from the data assembled for the TBRGMS.

g) I-4/Selmon Expressway Connector (FDOT)

FDOT is building a new north/south toll road linking I-4 with the Selmon Expressway and the Port. The facility provides exclusive truck lanes for direct, high-speed access between the Port and regional expressways and removes trucks from local streets in Ybor City. The enhanced accessibility and mobility provided by the new facility will support long-term growth on Hookers Point, Port Ybor, and the Channelside cruise terminals. The I-4/Selmon Connector is currently under construction and scheduled to open to traffic in 2013.

h) Selmon Expressway Redecking and Widening (THEA)

With the completion of I-4/Selmon Expressway connector, traffic on the Selmon Expressway in the vicinity of downtown Tampa is expected to increase significantly as commuters use the toll facilities to access downtown from the north and east. This will partially alleviate the current traffic load on the I-4/I-275 interchange on the northeast edge of downtown. However, to accommodate the increase in traffic on the Selmon Expressway, additional capacity may be needed. The Tampa-Hillsborough Expressway Authority (THEA) completed a Project Development and Environment (PD&E) study in 2010 to consider improvement options on the expressway viaduct between Florida Avenue and 22nd Street. The PD&E study recommended widening the expressway from four to six lanes. The FDOT is preparing a letting for a design/build request for proposals that is scheduled to be released in the first half of 2011. While the schedule has not been set, the project will most likely commence in the latter half of 2011 and require 18 to 24 months to complete.

i) Hillsborough Area Regional Transit Authority Rail Alternatives Analysis (HART)

The Hillsborough Area Regional Transit Authority is nearing completion of the Alternatives Analysis for transit connecting USF, downtown and Westshore. While there is not yet an adopted locally preferred alternative, there is a recommendation to have the alignment in and adjacent to the right-of-way of I-275. A connection between downtown and Tampa International Airport with a possible extension to Linebaugh Avenue is understood to be under consideration as the first investment. The recommendation specifically moves away from using existing rail corridors, including the potential sharing of rail right of way by transit and freight rail. The I-275 alignment for transit will avoid the potential of competing freight/transit operations and industrial/transit-oriented land uses in the area of Ybor City.

j) Policies and Structures in Transition

(1) National Freight Policy

The policy basis for freight planning and investment at the federal level is built on a foundation of legislation that extends back to the landmark Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. ISTEA established a framework which has been refined and expanded upon by the Transportation Equity Act for the 21st Century (TEA-21) and (most recently) the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

TEA-21 and ISTEA emphasized the importance of freight transportation investment to economic development. SAFETEA-LU builds on this foundation by encouraging coordination between MPOs and other planning officials responsible for planning activities that are affected by transportation. Freight movement is a key element, particularly in the context of economic development. The metropolitan planning process is expected to promote consistency between transportation improvements and state and local planned growth and economic development patterns. SAFETEA-LU identifies three key factors to be considered in metropolitan transportation plans which are pertinent to freight movement:

- Economic vitality, especially by enabling global competitiveness, productivity, and efficiency
- Increasing mobility for people and freight; and
- Enhancing integration and connectivity of the transportation system for people and freight

Specific resources for freight planning and research are provided through two new programs: the Freight Planning and Capacity Building Program and the National Cooperative Freight Transportation Research Program. The goal of these programs is to support enhancements to freight planning to better target investment and strengthen the decision-making capacity of state and local agencies.

(2) Freight Investment Emphasized in Federal Reauthorization

The reauthorization of the federal transportation legislation is expected to strengthen the emphasis on freight transport and investment. Federal transportation proposals for the next six-year funding cycle are centered on recognition of the critical federal role in supporting interstate commerce and the nation's freight transportation system. The latest framework proposes a new core function, known as the Freight Improvement Program (FIP), whose objectives include:

- Establishing a dedicated source of funding for freight-related highway projects
- Requiring states to consider their freight transportation needs in a strategic, statewide context
- Instituting new performance measures to focus state efforts on improving the speed and reliability of freight movement; and
- Requiring states to inventory and assess the condition of secondary freight routes

The FIP is designed to address funding, planning, stakeholder involvement (both public and private), performance measures, and project coordination. For the first time, states would receive formula apportionments from the Highway Trust Fund to support freight planning and improvements. The FIP would elevate freight issues to a more robust standing within the transportation policy framework, supporting the need for a comprehensive and strategic approach to the planning and monitoring of how goods move throughout the nation and within individual states.

(3) Florida's Economic Strategy

Florida's economic strategy, under newly elected Governor Scott, highlights investment in freight infrastructure as a cornerstone to economic prosperity. It proposes increased state funding levels for the state's seaports and supporting transportation infrastructure to create new jobs and position the state to remain competitive in an evolving global containerized trade market. The strategy proposes additional annual funding of at least \$50 million for state seaports. Additionally, the development of bonding capacity at the state level for dredging and on-dock infrastructure improvements for each of the key containerized cargo ports is proposed.

3. TPA Landside Strategic Priorities

There is a clear and growing emphasis on the importance of freight transport and freight transportation planning at all levels of government. The significant work completed at the State of Florida and regional level provides a solid foundation for enhancing and expanding freight mobility within the Port, the City of Tampa, Hillsborough Count and the central/west central Florida freight market. The challenge for the TPA is to proactively formulate and implement a collaborative strategy for enhancing and expanding freight transport within the region. This strategy should maximize the use of the aforementioned existing studies and analyses to identify and promote a prioritized list of landside freight-related transport infrastructure projects that address the TPA's freight transportation imperatives. The TPA's' freight transportation imperatives include:

- Ensuring freight rail access is preserved at existing Port locations and constructed at new port locations, and that freight rail transport capacity is expanded to meet future demand as it develops
- Collaboratively working with the Port's energy community to ensure regional highways will have the capacity to accommodate the trucks that will transport the majority of the region's energy needs over the next 20 years or more. Collaboratively working with the Port's energy community to ensure the existing pipeline network remains efficiency and effective and that incremental, practical opportunities to expand pipeline transport are identified and evaluated
- Collaboratively working with the City of Tampa, the regional MPOs and surrounding counties to ensure the flow of containers between the Port and importers, exporters and the regional distribution center industry is handled safely, efficiently and cost competitively
- Ensuring passengers can travel safely, efficiently and cost-effectively between the Tampa International Airport and regional hotels and the TPA's cruise facilities

The TPA landside access strategy requires a systemic view, i.e. marine terminal access gate to/from the final inland destination. It must consider each link in the system to insure the system is balanced and optimized. It must also involve all decision-makers if it is going to address system challenges. Finally, the strategy needs to consider all practical operational and investment options including establishing incentives for off-peak landside transport operations, load balancing incentives to eliminate the typical peaking that occurs at marine terminals in the early morning, midday and end of day, and the feasibility of dedicated freight lanes and / or corridors.

The following maps and tables provide an independent, strategic assessment of the roadway and rail improvements that are most important to meeting the TPA's recommended strategic objectives as discussed in this chapter. Map 1 and Table 1 portray and list needed roadway improvements affecting port accessibility and/or regional freight mobility. The priority projects are an independent assessment of identified needs relative to port importance and do not reflect priorities in an adopted plan. The Map 2 and Table 2 address needed intersection improvements in the vicinity of the port. Map 3 and Table 3 document needed rail improvements on or near port property.

**Map 1:
Recommended Port Access & Regional Freight Mobility
Related Roadway Improvements**



Source: TPA

**Table 1
Summary of Recommended Port Access & Regional Freight Mobility
Related Roadway Improvements**

Project Number	Roadway	From	To	Documents	Status	Base Year Lane and Type	Future Year Lane and Type	Project Type*
1	US HWY 301	BALM RD	GIBSONTOWN DR	LRTP	EC	2U	6D	CAP,OPS
2	I-4 CONNECTOR	LEE ROY SELMON EXPWY	I-4	LRTP	EC	NA	6F	CAP
3	SR 60 / MEMORIAL HWY	I-275	COURTNEY CAMPBELL CSWY	LRTP	EC	6F	10F	CAP
4	CAUSEWAY BLVD	50TH ST	US 301	LRTP	EC	2U	4D	CAP
5	I-275	MEMORIAL HWY	ASHLEY DR	LRTP	EC	6F	8F	CAP
6	MARITIME BLVD	SOC GATE	B219 ACCESS	TPA CIP	EC	2U	2U	MAINT
7	GATX DR	MARITIME DR	GUY N VERGER BLVD	TPA CIP	EC	2U	4U	CAP
8	EASTPORT DR	MARITIME DR	GUY N VERGER BLVD	TPA CIP	EC	2U	2U	MAINT
9	NEW E/W ROAD SERVING PORT I-75		US 41/PORT REDWING	TPA CIP; TBRGMS	EC	NA	4D	CAP
10	MADISON AVE	US HWY 41	66TH ST	LRTP; TBRGMS	CA	2U	4D	CAP
11	PROGRESS BLVD	FALKENBURG RD	I-75	LRTP; TBRGMS	CA	2U	4D	CAP
12	PROGRESS BLVD	78TH ST	FALKENBURG RD	ITP	NEEDS	4D	6D	CAP
13	BIG BEND RD	COVINGTON GARDEN DR	US 301	LRTP; TBRGMS	CA	4D	6D	CAP,OPS
14	BIG BEND RD	US HWY 41	CONVINGTON GARDEN DR	LRTP; TBRGMS; ITP	NEEDS	4D	6D	CAP,OPS
15	CAUSEWAY BLVD	MARITIME BLVD	50TH ST	LRTP; TBRGMS	CA	4D	6D	CAP
16	MARTIN LUTHER KING JR BLVD	40TH ST	I-4	LRTP; TBRGMS	NEEDS	2U	4D	CAP
17	ORIENT RD	BROADWAY AVE	I-4	LRTP; TBRGMS	NEEDS	2U	4D	CAP
18	US 41	19TH AVE E	MADISON AVE	LRTP; TBRGMS; ITP	NEEDS	4D	6D	CAP,OPS
19	US 41 50TH ST MELBOURNE N 47TH ST		10TH AVE	TBRGMS	NEEDS	6D	6D	OPS
20	I-4	I-275/I-4 INTERCHANGE	US HWY 301	LRTP; TBRGMS	NEEDS	8F	12F	CAP,MGDLN

Source: TPA

Map 2: Recommended Port Access & Regional Freight Mobility Specific Location Projects



Source: TPA

Table 2 Summary of Recommended Port Access & Regional Freight Mobility Specific Location Projects

Number	Location	Project/Issue description	Documents
1	Hookers Point	Replace seven existing asphalt/timber railroad crossings with concrete crossings	TPA CIP; SSP; TBRGMS
2	Guy N. Verger Blvd	Railroad crossing improvement/replacement	TPA CIP; TBRGMS
3	Maritime Blvd	Railroad crossing improvement/replacement	TPA CIP; TBRGMS
4	Causeway Blvd east of US 41	Railroad crossing improvement/replacement - potential grade separation	SSP; TBRGMS; FRS
5	US 41 south of Causeway Blvd	Railroad crossing improvement/replacement - potential grade separation	SSP; TBRGMS; FRS
6	SR 60 east of US 41	Railroad crossing improvement/replacement - potential grade separation	TBRGMS; FRS
7	US 41 south of Broadway Ave	Railroad crossing improvement/replacement - potential grade separation	TBRGMS; FRS
8	US 41 north of Mosaic/Alafia River terminal	Railroad crossing improvement/replacement	TBRGMS
9	Orient Road south of Broadway Ave	Railroad crossing improvement/replacement - potential grade separation	TBRGMS; FRS
10	McClosky Blvd & Maritime Blvd	Maintenance/Resurfacing	TBRGMS
11	CR 672/Big Bend Rd & US 41/301	Maintenance/Resurfacing	TBRGMS
12	Big Bend Rd & I-75 N on ramp	New signalization - add signal for EB to NB movement	TBRGMS
13	US 41 @ Port Sutton Rd	Signal modification - extend protected turns NB to WB	TBRGMS
14	62nd St @ Columbus Dr	Intersection improvements - drainage, signalization	TBRGMS
15	62nd St @ Broadway Ave	Intersection improvements - signalization	TBRGMS
16	US 41 (50th St) @ Causeway Blvd	Intersection improvements - additional/longer turn lanes; potential grade separation	TBRGMS
17	Interbay Blvd @ Westshore Blvd	Intersection improvements - turn radii	TBRGMS
18	22nd St & Causeway Blvd	Signal modification	TBRGMS
19	Causeway Blvd & Sertoma Dr	Signal modification	TBRGMS
20	22nd St & SR 60	Intersection improvements - turn radii	TBRGMS
21	Broadway Ave @ 50th St (US 41)	Intersection improvements - turn radii	TBRGMS
22	US 301 @ Causeway Blvd	Signal modification - extend protected turns EB to NB and NB to WB	TBRGMS
23	SR 60 @ 34th St	Intersection improvements - turn radii	TBRGMS
24	Progress Blvd @ 78th St	Intersection improvements - turn radii	TBRGMS
25	Progress Blvd @ US 301	Signal modification - extend protected turns EB to NB and thru NB/SB green time	TBRGMS
26	Gandy Blvd @ Westshore Blvd	Intersection improvements - dual left turn lanes at all approaches	ITP

Source: TPA

Map 3: Recommended Port Access & Regional Freight Mobility Related Railway Improvements



Source: TPA

Table 3 Summary of Recommended Port Access & Regional Freight Mobility Related Railway Improvements

Project Number	Location	Description	Documents*
1	Hookers Point	Addition of wye/railcar storage capacity at Mosaic Plant	ITP; SSP
2	Hookers Point	Additional storage tracks on or near CF Industries Terminal	ITP; SSP
3	Hookers Point	Additional storage tracks to serve scrap metal facilities	ITP; SSP
4	Hookers Point	Extend rail line to the intermodal container terminal and South Hookers Point	ITP; SSP
5	Hookers Point	Connection of east and west side running tracks at the south end of Hookers Point	ITP; SSP
6	Hookers Point	Ethanol terminal/rail yard expansion	ITP; SSP
7	Port Redwing	Construct new 10,000 feet of mainline track and 2,500 feet extension to existing siding with cross-over track to improve rail access and U.S. 41 traffic movement	ITP; SSP
8	Port Redwing	Construct connecting track from CSX mainline to Port Redwing terminals	ITP; SSP
9	Hookers Point	Switch upgrades to rail serving B202-B209 breakbulk and container terminals	TPA CIP; SSP; TBRGMS
10	Pendola Point	Replace approximately 1 mile of crossties,ballast and upgrade rail on lead track	TPA CIP; SSP; TBRGMS

Source: TPA

VII. Update to the 2007 Capital Investment Plan

1. Introduction

The TPA's capital investment plan (CIP) is an integral part of its overall strategic plan. The CIP addresses the investment component of the strategic plan. It aligns with and directly supports the facilities and infrastructure elements of the TPA's overall strategy. The CIP is a dynamic blueprint for guiding the TPA's future investment strategy. It defines short to medium (1-5 years) investment priorities that support the TPA's strategic priorities and anticipated growth in its core businesses within the framework of its overall mission and objectives. It is subject to ongoing revision and enhancement as priority projects are completed, markets develop, and customers' requirements evolve.

The competitive and market analyses provide a foundation for updating the TPA's 2007-2008 capital investment plan. Specifically, the TPA's strategic capital investment priorities are:

- Complete reconstruction and expansion of the TPA's petroleum berths
- Ensure container vessel capability aligns with evolving demand
- Continue to enhance TPA's landside rail and road access; work to designate and sustain freight corridors
- Continue to expand deep draft berth, uplands and landside access capabilities
- Sustain flexibility to successfully pursue emerging niche cargo opportunities

Based on these priorities, the TPA's facilities and infrastructure strategy focuses on three objectives:

- Preserve and enhance the TPA's and the Port's extensive, diverse and flexible asset base
- Maximize the utilization of existing facilities and infrastructure. This element includes selected modernization and rehabilitation of existing facilities and infrastructure in response to evolving market demand
- Selectively investing in greenfield expansion and landside transportation access to meet those components of future demand not capable of being efficiently and cost effectively accommodated at existing facilities.

The TPA's CIP's market driven priorities center on its liquid bulk, container and dry bulk lines of business (LOBs) and navigation improvements. These LOBs support the continued growth and diversification of the central/west central Florida economy, are core strengths of the TPA and the Port, and have the highest growth potential.

2. Recommended Selected Updates to the TPA CIP

This section summarizes the market driven, recommended updates to the TPA's CIP. The recommendations reflect the market outlook for the TPA's LOBs, the TPA's strategic priorities and the CIP priorities. The timeframe for the recommendations is the next five years.

a) Liquid Bulk Recommendations

Consistent with the 2007-2008 Strategic Plan and CIP, the TPA should complete the rebuilding of the REK liquid bulk and supporting infrastructure. The TPA and the Port are the key gateway for liquid bulk-based energy for the central/west-central Florida economy. The TPA has sustainable competitive advantages in this LOB and a very strong customer base. Liquid bulk-based products will continue to be a key element of the central/west-central Florida economy for the foreseeable future. Consequently, sustaining and enhancing the TPA's and the Port's liquid bulk capability is an investment priority. The project also supports all three CIP objectives:

- **Preserve and enhance diverse, flexible asset base:** the REK complex handles a wide range of liquid bulk products for several of the TPA's and the Port's largest liquid bulk customers. It also provides direct links to the Florida Pipeline which serves the greater Orlando market.
 - **Maximize the utilization of existing facilities and infrastructure:** the rebuilt REK complex and supporting infrastructure will enable several of the TPA's largest liquid bulk tenants to increase throughput at their existing storage and distribution facilities. It will also significantly enhance the safety and efficiency of current liquid bulk operations and enable more and larger vessels to call the facility.
 - **Selectively investing in greenfield expansion and landside transportation access:** the improvements will add an additional petroleum berth, expand the capability of the rebuilt berths vs. current capabilities, and ultimately provide the ability to link most of the Port's liquid bulk storage terminals to the new deepwater berths to be constructed as part of the REK project. The linking of the private facilities located on the northern reaches of Sparkman Channel will be a decision of the private companies that operate these facilities. Long-term, the benefits are compelling:
 - The ability to receive deeper draft vessels which reduce transportation costs and reduce the number of vessel calls required to accommodate increased demand
 - Reduced potential for congestion on the upper reaches of Sparkman Channel which benefits the cruise industry, the ship repair industry and the petroleum industry
 - Enhanced safety due to reduced congestion and concentration of liquid bulk vessel calls to the lower reaches of Sparkman Channel
 - Reduced need to reinvest in multiple, comparatively shallow draft petroleum piers
 - The REK investments are short-term, i.e. they are currently underway and are scheduled to be completed during the next two years. The total current estimated capital investment approximates \$42 million and involves the following elements:
- Berths & dredging: \$19 million
 - Upland improvements: \$19 million
 - Engineering and demolition: \$4 million

- The schedule for the recommended improvements is included in the summary schedule presented at the end of this section.

b) Recommended Container LOB Investments

The U.S. Atlantic and Gulf Coast container industries are entering a particularly dynamic period. The global container operators serving the major U.S. Atlantic and Gulf Coast trade lanes will likely begin making significant changes to their service strategies, network structures, and vessel deployments in the 2012-2015 timeframe leading up to and immediately following the opening of the expanded Panama Canal. These changes have potentially significant implications for the South Atlantic and Gulf Coast port industries. Consequently, it is critical the TPA takes a strategic view on its container related investments to insure they optimally meet customers' future requirements and minimize the risk of over-building.

The TPA is in a very strong position to optimize its future, market-driven container-related investments. Its strong position is based on:

- A deep draft channel and berths that enables the TPA to accommodate approximately 80 percent of the world's container fleet
- Significant, existing berth capability that can be upgraded to accommodate future vessel call requirements
- A significant, existing asset base that can relatively quickly, efficiently and cost-effectively be developed in response to demand
- Planned on-dock rail capability that will be second to none in the state of Florida
- Its terminal management and development partnership with Ports America

The recommended container-related investment strategy has three key components:

- Ensure the TPA's water-side container assets are optimally aligned to meet evolving market-driven demand
- Incrementally enhance and expand the TPA's landside assets to meet evolving, market-driven demand
- Longer-term, optimizing channel and berth drafts to accommodate carriers' evolving draft requirements

The waterside recommendations focus on ensuring berthing and container gantry crane capability. Specifically, the focus on ensuring the TPA's container facilities can simultaneously berth two medium to large size container vessels and that crane capability and capacity is sufficient to meet customers' turn time requirements. The design guidelines for these requirements include a berth length of approximately 1,000 feet, a minimum of three, 100' gauge container gantry cranes with an outreach of 16-20 wide and the ability to work 4-6 tiers of containers on deck per berth. The terminal currently has a berth length of 2,800 feet and is thus capable of handling two large vessels. The two inboard gantry cranes would ideally have flexible

trucks to enable them to traverse between berths 212 and 213 in order to provide the flexibility to assign four cranes to a vessel in response to customers' requirements.

Incremental enhancement of container terminal uplands involves the phased development of additional container storage yard and a gate complex. The phasing needs to be carefully aligned with the waterside improvements to insure throughput capacity is balanced among customers' requirements (vessel call patterns and load/discharge volumes) and berth and crane capacities.

The storage yard should be designed to transition from a wheeled or toppick operation to a medium density RTG operation and ultimately to a high density RTG operation. The cost benefit analysis of alternative paving designs and the optimum timeframe within which to install concrete RTG runways should be determined within the context of evolving market/customer-specific demand. The TPA's current container storage yard capacity should be sufficient to accommodate projected demand for the next 2-4 years. This should provide an ample timeframe for developing market driven plans for future container yard expansion. The TPA has the landside asset base to support incremental build out of up to 100+ acres. The estimated throughput capacity approximates 300,000 TEUs to 700,000 TEUs depending on storage method and dwell times. The completion of the on-terminal rail yard offers the potential to enhance velocity, reduce dwell times and thus contribute to increased storage capacity that approaches the upper end of the aforementioned range.

The ultimate timing and cost of the recommended container-related capital improvements will be a function of evolving demand. Full build out of the recommended improvements, currently anticipated to occur over the next 5-10 years, are estimated to approximate an order-of-magnitude \$65-\$90 million in 2011 dollars. A summary of the recommended capital improvements is provided at the conclusion of this chapter.

c) Recommended Dry Bulk LOB Investments

The TPA/Port's dry bulk LOB has been a strategic strength. The Port's dry bulk LOB is the most diverse, largest volume business in the Florida ports system. Key commodities include fertilizer exports and aggregate and cement imports. The TPA has extensive property that is ideally suited for future development as dry or liquid bulk marine terminals and backlands. The recommended improvements are related to the incremental, market-driven development of additional dry bulk capacity. The developments are concentrated at two sites: Big Bend/Port Redwing and Eastport.

Recommended Big Bend/Port Redwing investments are designed to incrementally expand the TPA's dry bulk capability and capacity in response to evolving market demand. Specifically recommendations include:

- Navigation improvement projects to enable vessel and barge access to the site and dredging of new berths
- Construction of two multipurpose berths
- Upland improvements, rail and road access and utilities

The ultimate timing of these improvements is subject to the evolution of dry bulk market demand.

The recommended improvements for the Eastport site are similar in nature but designed to accommodate growth in aggregates traffic in particular. The recommended improvements, subject to evolving market demand include:

- Bulkheading the site
- Filling the site with dredge spoils from ongoing maintenance dredging projects
- Planning, engineering, and environmental studies, mitigation and dredging

The total estimated cost of the proposed projects approximates an order-of-magnitude \$120 million. The amount and timing of actual expenditures will be a function of growth in market driven demand.

d) Recommended Other Investments

The TPA has significant ongoing investment costs associated with maintaining its extensive marine terminal and related infrastructure. These expenditures fulfill the TPA's strategic mandate to maintain and enhance its existing asset base. Major capital maintenance investment projects include:

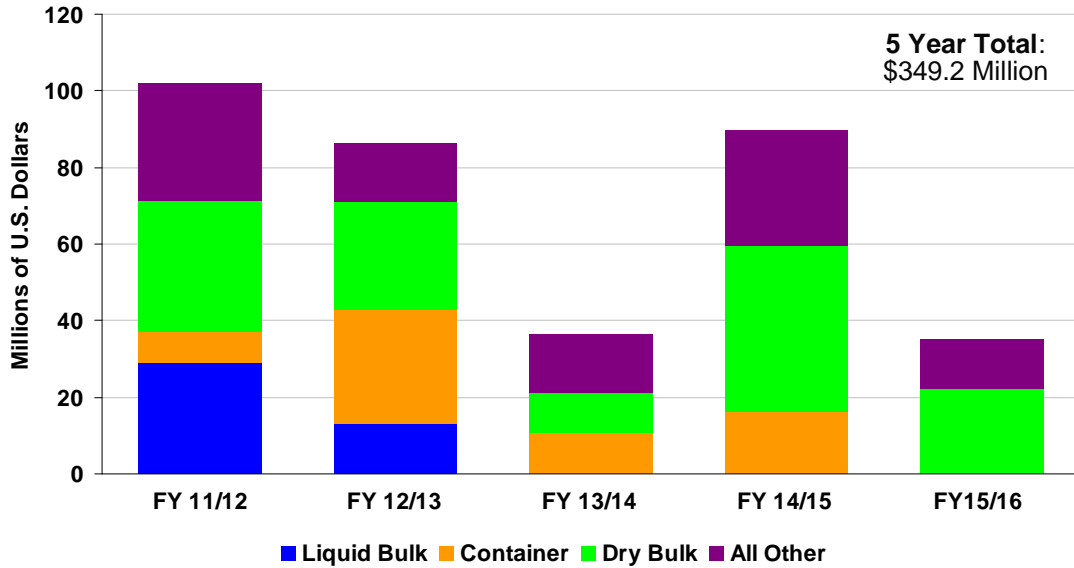
- Maintenance dredging
- Engineering survey and planning studies
- Environmental studies
- Roadway and terminal capital maintenance and paving projects

In addition to these projects, the TPA continues to identify, evaluate and selectively plan investments to fulfill its three investment objectives. Examples of these projects include site evaluation and re-use planning studies, rail expansion and grade separation projects, land acquisition and navigation planning studies. The order-of-magnitude investment in these ongoing recommended investments approximates \$90-100 million dollars over the next five years.

e) Summary CIP Recommendations

The recommended five year TPA CIP totals an order-of-magnitude \$307 million (see Exhibit VII-1). An estimated \$168 million or 55 percent of the plan primarily addresses the TPA's first two strategic capital investment imperatives: preserve and enhance the TPA's and the Port's extensive, diverse and flexible asset base, and maximize the utilization of existing facilities and infrastructure. This element includes selected modernizing and rehabilitation of existing facilities and infrastructure in response to evolving market demand.

**Exhibit VII-1
Recommended TPA Five Year CIP
FY2011-FY2016**



Source: TPA & Norbridge Analysis

The remaining estimated \$139 million is primarily associated with the incremental development of new facilities and infrastructure to meet evolving market-driven demand. As noted in the introduction, the recommended CIP is a blueprint for guiding the TPA’s future investment strategy. It defines short to medium (1-5 years) investment priorities that support the TPA’s strategic priorities and anticipated growth in its core businesses within the framework of its overall mission and objectives. It is subject to ongoing revision and enhancement as priority projects are completed, markets develop, and customers’ requirements evolve.