

ASSESSMENT OF THE IMPACTS OF CONGESTION AT SAN PEDRO BAY PORTS ON MARKET SHARE AND FUTURE UTILIZATION OF ATLANTIC AND GULF COAST U.S. PORTS



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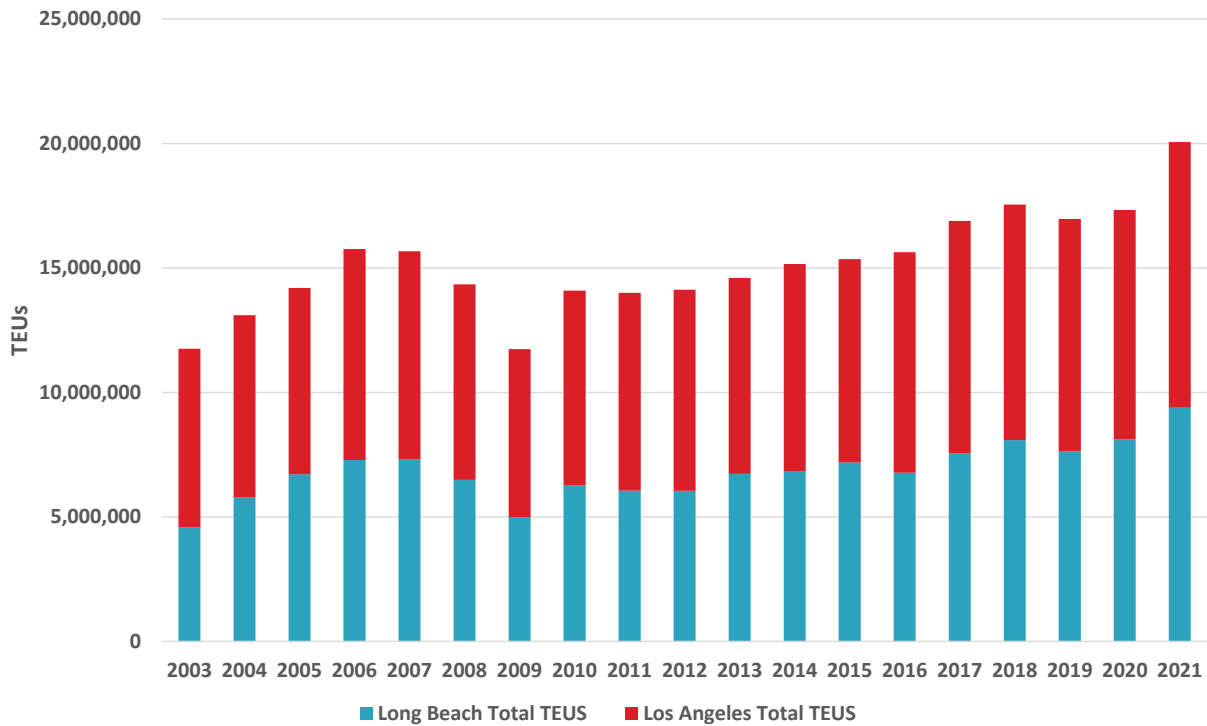
Assessment of the Impacts of Congestion at San Pedro Bay Ports on Market Share and Future Utilization of Atlantic and Gulf Coast U.S. Ports

The purpose of this research report is to document the growth in container volume at the San Pedro Bay ports of Los Angeles and Long Beach, particularly during the COVID-19 Pandemic, assess the impacts of this growth on congestion throughout the logistics supply chain, and to assess the ability of the U.S. Atlantic and Gulf Coast ports and supporting logistics’ supply chain to handle increasing volume of diverted containers activity from the San Pedro Bay ports should these ports reach capacity and be unable to handle a further growth..

In 2021, the volume of containers handled at the San Pedro Bay ports reached a record volume of 20 million twenty-foot equivalent units (TEUs). As indicated by Exhibit 1, from 2017 through 2020, these ports handled an average of about 17.2 million TEUs annually, with little year over year fluctuation in volume.

Between 2020 and 2021, the San Pedro Bay ports experienced a nearly 16% increase in container volume, reflecting the increased import demand during the height of the Pandemic, as consumers curtailed spending on services and travel, and refocused purchases on goods. In addition to the change in the composition of expenditures by consumers, federal and state expenditure programs were widespread, including increases in unemployment benefits, the Federal PPP Loan Program, and rent moratoriums, added to the disposable income of consumers.

Exhibit 1
Container Volume Handled at San Pedro Bay Ports



Source: Ports of Los Angeles and Long Beach

This unprecedented growth in container volume at the San Pedro Bay ports of Los Angeles and Long Beach has led to the widely publicized import supply chain collapse due to the logistics capacity constraints at literally all levels of the import supply chain - including the ship berths at the terminals; container yard handling capacity; capacity at the warehouse and distribution centers handling the containers; the availability of chassis and truck drivers to handle the unprecedented volume of containers; and a shortage of intermodal rail car capacity throughout the rail systems serving the import market, not to mention the restricted labor supply to COVID-19.

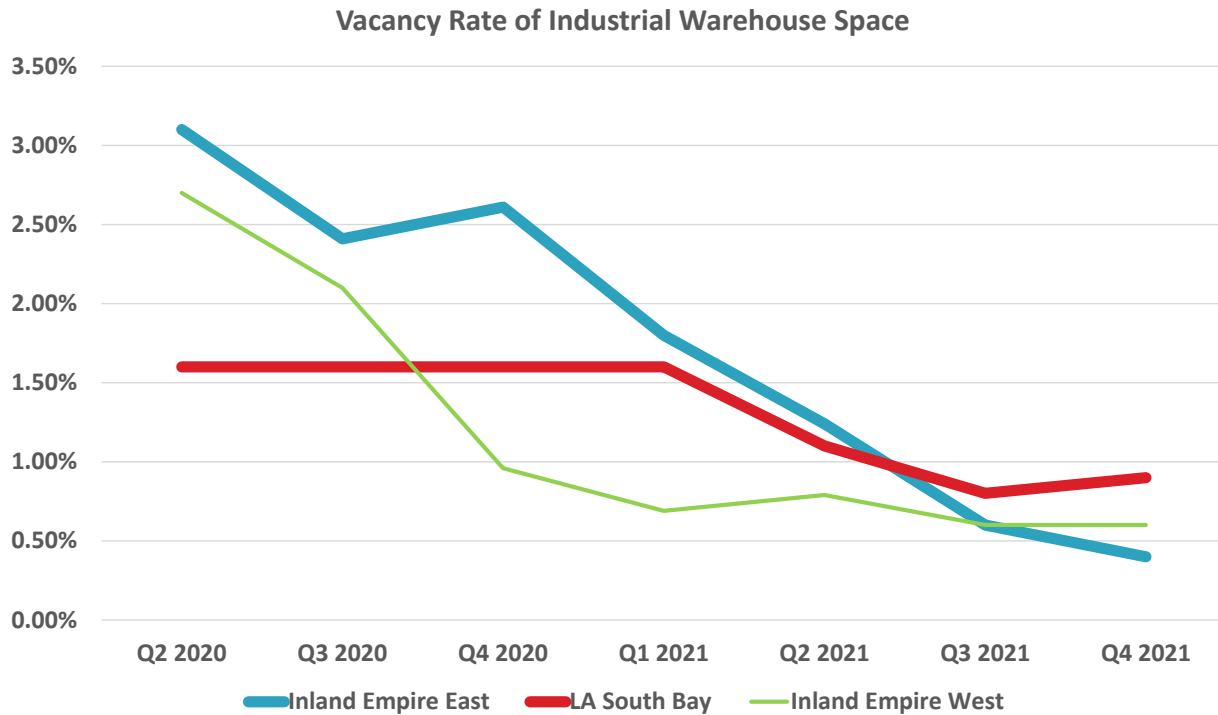
For example, the average dwell time of containers (the length of time of container remains on the terminal after it is discharged) reached 8.4 days in November 2021, well above the historical average of 3.3 days. The street dwell time of containers was about 8 days in December 2021 and about 7 days in January 2022, which compares with the optimal street dwell time as specified by the Pool of Pools as 1-3 days. This more than double street dwell times reflects the congestion at warehouses and transload facilities, which has been and will continue to be a key factor impacting the logistics supply chain and the ability to move the containers from the marine terminals, which has been a major contributing factor to long vessel queues off the coast of Los Angeles/Long Beach.¹ As of February 14, 2022, there were 109 container vessels anchored or slow steaming off the coast of Los Angeles/Long Beach, which has fallen to 56 as of March, 2022.

Warehouse shortage has become an increasingly key bottleneck in the supply chain in Southern California, as vacancy rates have fallen to less than 1% in the last Quarter of 2021, as shown in Exhibit 2. This increase in warehouse utilization in the San Pedro area is the result of several factors, including the growth in E-Commerce as well as the migration of the BCOs to just in case inventory away from just in time inventory. During the Pandemic, a growing share of purchases involved E-Commerce, with a focus on last mile delivery within a limited time period. Total E-Commerce sales for 2021 were estimated at \$870.8 billion, an increase of 14.2 percent ($\pm 0.9\%$) from 2020 and accounted for 13.2 percent of total retail sales in the U.S. Overall, all retail sales grew by 17.2% between 2020 and 2021.² E-commerce requires greater utilization of warehouse space than traditional distribution centers serving brick-and-mortar stores.

¹ *The Anatomy of the Collapse of the Logistics Supply Chain and Resulting Congestion Issues at the San Pedro Bay Ports, by Martin Associates for the Pacific Maritime Exchange, October 2021*

² U.S. Bureau of the Census, Quarterly Retail E-Commerce Sale 4TH Quarter 2021, February 14, 2022.

Exhibit 2
Vacancy Rates in Industrial Warehouse Space in Southern California



Source: Lee & Associates, CRBE

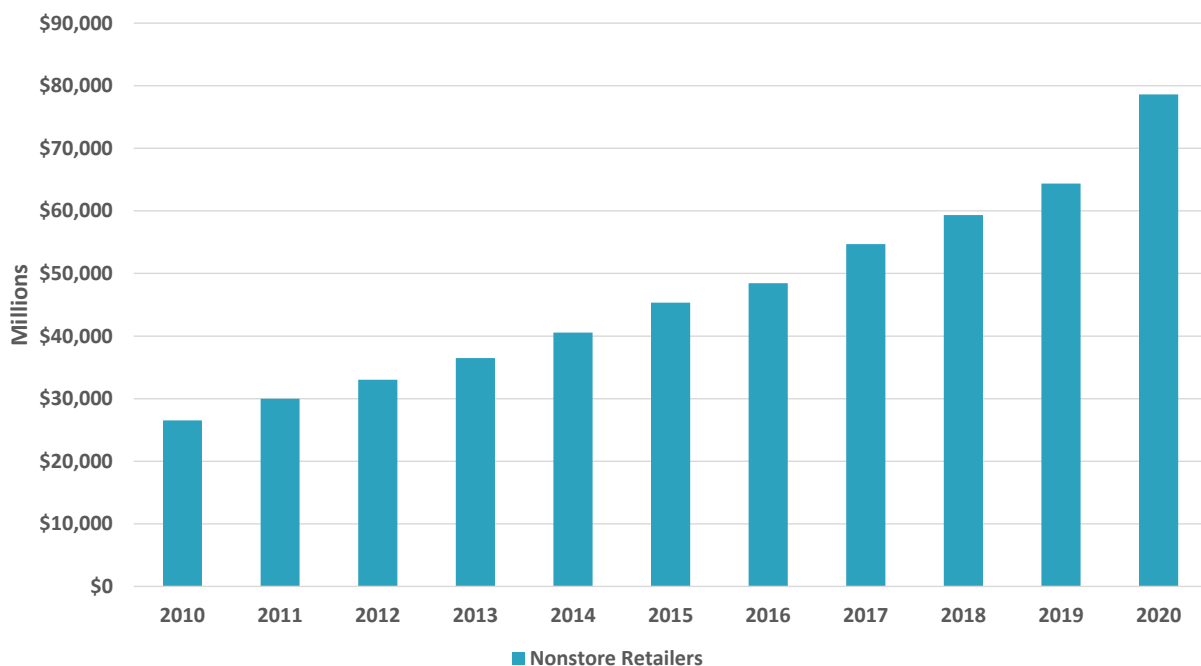
E-Commerce retailers use logistics real estate in ways that require more space. Many activities that were typically carried out within stores are now consolidated into logistics facilities. As a consequence, E-Commerce customers require more logistics space than traditional distribution activities. There are four main drivers:

- Diversity of product - E-Commerce warehouses require more storage space to handle a variety of product lines for fulfillment delivery compared to distribution centers that serve brick-and-mortar stores, as these brick-and-mortar stores also have storage capabilities lacking for direct delivery to consumers. However, direct store pick of E-Commerce ordered goods has increased, reducing the footprint of brick-and-mortar stores that are available for in-store retail sales.
- Inventory levels - As the point of sale shifts from in-store to the logistics facility, greater levels of buffer stocks must be carried within logistics facilities, requiring larger buildings.
- Fulfillment function - Individual order picking, packing, and shipping direct to consumers (B2C shipping) requires more space than store distribution. Instead of efficient palletizing for store distribution, B2C requires an individual box for each order. For every \$1 billion of E-Commerce sales, 1 million square feet (sf) of logistics space is required according to CBRE America’s Industrial and Logistics and Retail division.
- Reverse logistics - Many E-Commerce logistics facilities accept returns, and floor space must be allocated to returns processing and restocking activities. Current data suggest returns account for more than 20% of E-Commerce sales.³

³ <https://www.prologis.com/news-research/global-insights/e-commerce-and-new-demand-model-logistics-real-estate>

The impact of the change from just in time to just in case inventory is reflected in the following exhibit which shows the dramatic growth in the value of inventories held for non-store (E-Commerce) sales. Between 2010 and 2019 the inventory for non-store retail sales grew by an average compound annual growth rate of 10.4%. However, between 2019 and 2020 (the most recent data available) the value of inventory held for non-store retail sales grew by 22%, more than double the average annual growth for the previous 9 years. This increase in inventory held reflects the uncertainty associated with the pandemic in terms of fulfillment of retail orders, as well as the delays and backlog of San Pedro Bay port operations, particularly the more than 30 days the vessels have been held at anchorage prior to berthing at the Ports of Los Angeles and Long Beach.

Exhibit 3
E-Commerce Inventories
Nonstore Retailers



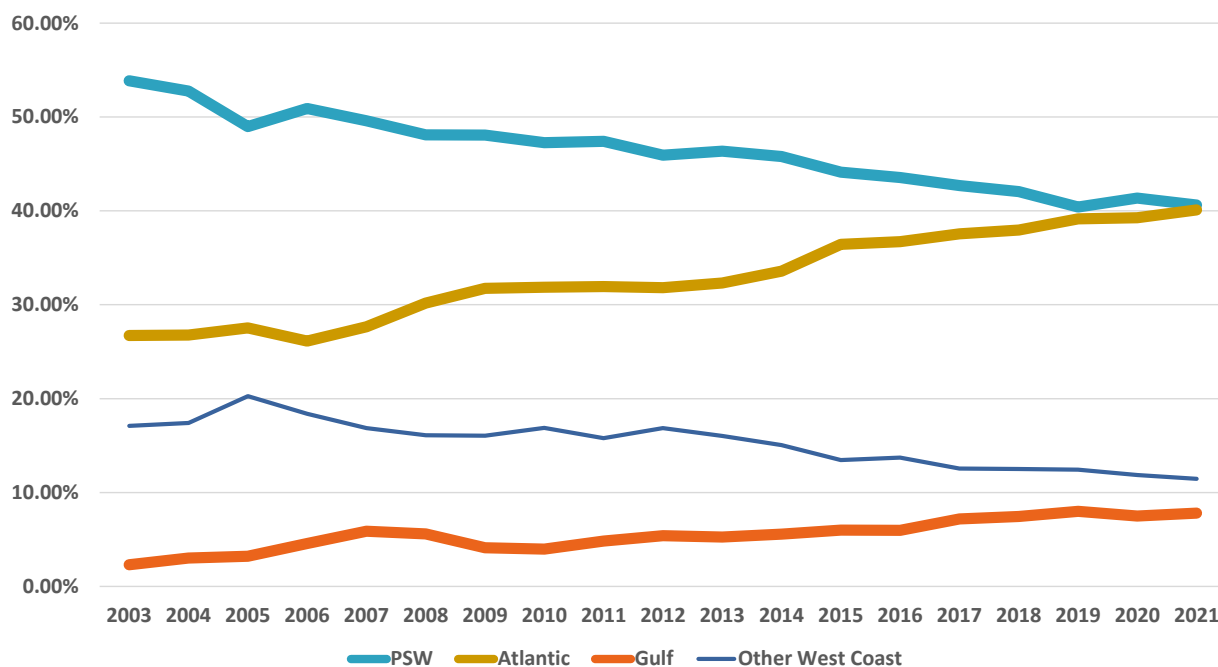
Source: U.S. Bureau of Retail Sales, U.S. Bureau of Census, 2022

Despite the continued, albeit improving, number of container vessels at anchor of the San Pedro Bay ports, the high container dwell times on the terminals, and the lack of warehouse availability in Southern California, the rail dwell time, or the time that a container destined for a rail move to the inland United States, has declined to about 3.5 days; a significant reduction since the April -July 2021 time period when rail dwell times ranged between 8 and 12 days. This reduction in rail dwell times may reflect the increased rail car capacity serving the San Pedro Bay ports in January 2022 as congestion issues at the warehouses near the inland rail yard has declined, or the fact that less containers are using intermodal rail service, as the logistics chains of BCOs have increased the routing of containerized cargo imported from Asia to all water services calling Atlantic and Gulf Coast ports. If this is the case, then the reduction of the eastbound hinterland served via the rail moves from the San Pedro Bay ports may reflect the fact that the majority of discretionary cargo handled at the San Pedro Bay ports that can be diverted to Atlantic and Gulf Coast ports may already been diverted prior to the Pandemic; that near term capacity at the Atlantic and Gulf Coast ports have also been

constrained as the result of the Pandemic and capacity restrictions of the logistics supply chain nationwide, but improvements in capacity supporting the Atlantic and Gulf Coast ports may expand in the near to mid-term, and BCOs will react to that increase in capacity in the near to mid-term by reducing imports through the San Pedro Bay ports in the near future.

Exhibit 4 documents the substantial loss of the Pacific Southwest port range (dominated by the ports of Los Angeles and Long Beach) market share of imported Asian containers. Between 2003 and 2019, the Pacific Southwest Port’s (PSW) market share of imported Asian containers fell from about 50% in 2003 to about 40% in 2019. However, during the surge in imports at the San Pedro Bay ports in 2020 and 2021, the degradation of market share of the San Pedro Bay ports stabilized at about 40%.

Exhibit 4
Market Share by Port Range of Asian Imported Cargo Tonnage into the U.S.
Port Range Market Share of Imported Asian Containerized Cargo



Source: USA Trade OnLine

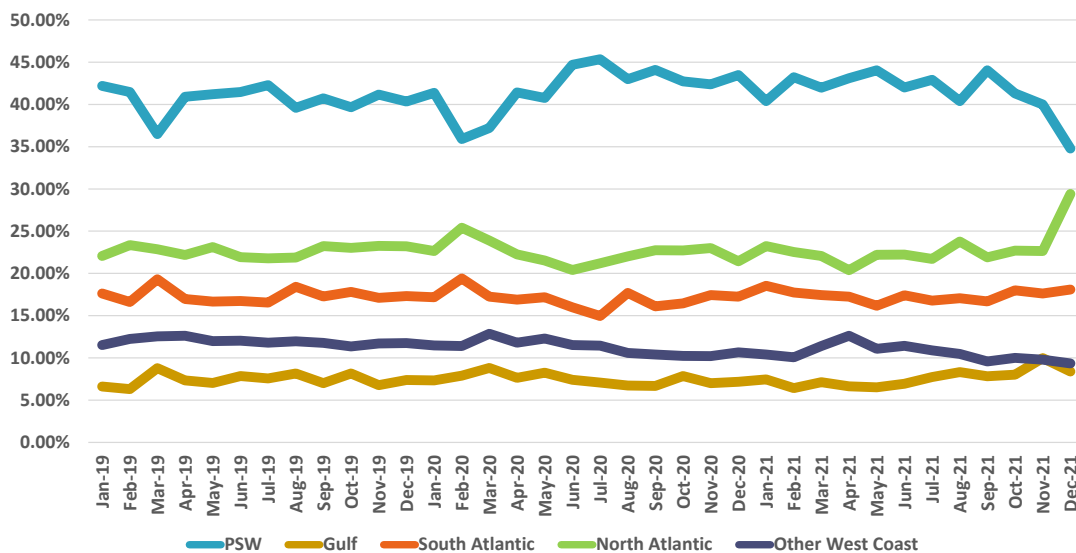
Supporting the possibility that the continued loss of market share of the San Pedro Bay ports to the Atlantic and Gulf Coast ports may have stabilized is the fact that the Intermodal Association of North America (IANA) reported that marine containers moved by rail from the Southwest Region (California, Nevada, and Arizona) to the regions east of the Rockies was down 30 percent versus the prior year in the fourth quarter of 2021.⁴ The decline in intermodal marine containers (known as inland intermodal points or IPI containers) may also reflect the fact that the more imported containers

⁴ Increased Transloading Not Main Reason for SoCal IPI Slump: analyst Larry Gross, president and founder, Gross Transportation Consulting, and JOC analyst | Feb 10, 2022, 10:37AM EST, Journal of Commerce

moving via rail from the San Pedro Bay ports are actually transloaded in Southern California, whereby the marine container is stripped near the port and the contents then loaded into domestic 53 ft. containers for the rail move to points east of the Rockies. However, further evidence suggests that the transload share of intermodal cargo moving from the Southwest region has remained at about 60% during the 2020-2021 period. As a result, it appears that the share of containers imported via the San Pedro Bay ports that can be diverted to the Atlantic and Gulf Coast ports may have stabilized, at least in the short term. In addition, the stabilization of the loss of Asian imported container market share of the San Pedro Bay ports could also reflect the fact that the Atlantic and Gulf Coast ports also experienced congestion during the Pandemic, and BCOs and carriers could not logistically increase all water sailings to the leading container ports on the Atlantic and Gulf Coast regions. As the supply chain congestion supporting the Atlantic and Gulf Coast ports improves, more all-water services will be deployed at these ports.

A closer look at the actual monthly imported container shares (during the Pandemic) of the various coastal ranges regarding Asian import containerized cargo indicates that beginning in the third quarter of 2021, the Asian container import share fell rapidly at the PSW ports, and increased at the North Atlantic ports, primarily at the marine terminals owned by the Port Authority of New York/New Jersey.

Exhibit 5
Monthly Port Range Share of Asian Imported Containerized Tonnage
Port Range Market Share of Imported Asian Containerized Cargo
During the Pandemic



Source: USA Trade OnLine

This loss of PSW market share to the North Atlantic port range in the last quarter of 2021 may reflect several factors

1. Containerized cargo moving through the East Coast ports, primarily New York and New Jersey was more fluid than at the San Pedro Bay ports.
2. The growth in the number of vessels waiting to call the San Pedro Bay ports, including the slow sailing in the air quality zone off the coast of Southern California and the associated wait

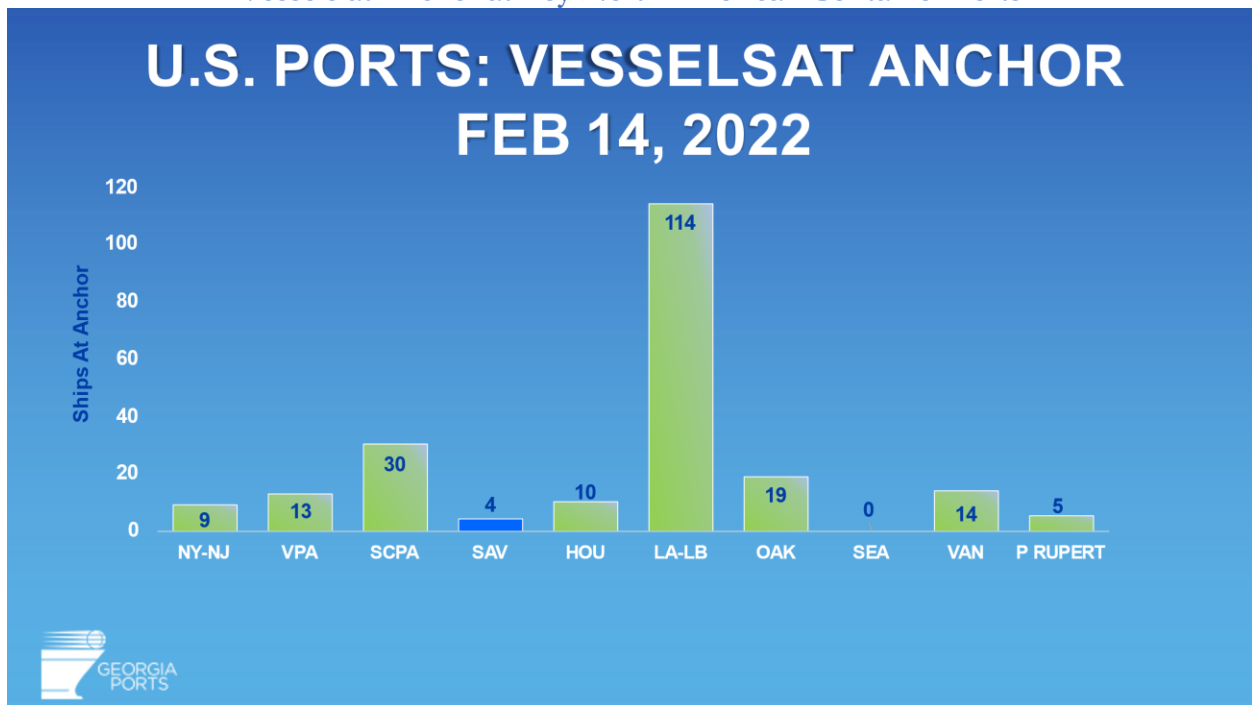
times of container vessels to dock at berth at the West Coast ports, resulted in a faster service time between Asia and New York compared to Asia and the PSW, and the need for speed to market became critical in the months leading up to the holiday season.

3. BCOs began adjusting their inventory at East Coast distribution centers and warehouses in preparation of last-minute E-commerce holiday purchases by the large concentration of consumers in the northeastern U.S.
4. BCOs and carriers are increasingly diverting Asian imports away from Southern California ports in anticipation of port disruptions that may accompany the contract negotiations to take place in July 2022 between the International Longshore and Warehouse Union (ILWU) and the Pacific Maritime Association (PMA) representing terminals and carrier management.

Container Fluidity at the Atlantic Coast Ports vs the West Coast Ports

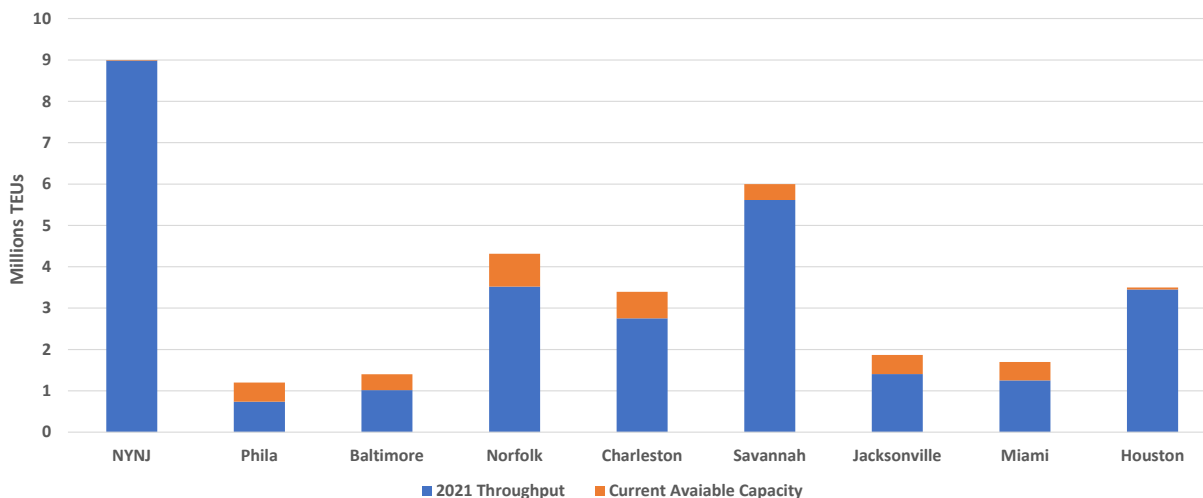
A recent analysis by the Georgia Ports Authority captured the number of vessels waiting at anchor for the major container ports in North America for February 14, 2022. While this chart shows all ships at anchor, it can be used as an indicator of the port fluidity at the different ports. It is clear from this chart that the major vessel congestion is clearly at the Ports of Los Angeles and Long Beach, while the only Atlantic Coast port with a significant queue is the Port of Charleston (South Carolina State Port Authority (SCSPA)). This relatively large queue at Charleston is due to the fact that the new container terminal opened at Charleston, the Hugh Leatherman Terminal, has not been used by carriers due to current jurisdictional disputes regarding terminal employees and crane operators between the International Longshoremen’s Association (ILA) and the Port of Charleston. Otherwise, vessel queues at the other key Atlantic and Gulf Coast ports are relatively small in comparison to the number of vessels at anchor (or slow steaming within the Safety and Air Quality area) off the coast of San Pedro Bay.

Exhibit 6
Vessels at Anchor at Key North American Container Ports



A review of the literature regarding how the Atlantic and Gulf coast ports have performed during the pandemic and the current capacity available at these ports provides important insight as to how these ports were able to manage the vessel queues that affected the San Pedro Bay ports. The following exhibit summarizes current throughput at the key Atlantic and Gulf Coast container ports and summarizes existing current capacity or capacity coming online within the next 4 months.

Exhibit 7
Container Throughput and Existing and Newer Term Capacity at Key Container Ports



Source: Martin Associates, individual port statistics and master plan documents

While the San Pedro Bay ports have been operating at full capacity during the Pandemic and facing supply chain issues in the supporting warehouse sector, this has not been felt to the same degree at the Atlantic and Gulf Coast ports. As indicated in Exhibit 7, some of the key Atlantic Coast and Gulf Coast ports have current capacity available, while others have made available off-dock container storage terminals to provide storage space for empty containers, as well as the development of peel off yards which provide areas by which containers can be retrieved efficiently by truckers for specific BCOs 24/7, as well as avoid actual marine terminal retrievals.

For example, the development of these pop-up and peel-off yards have been key in improving the fluidity of container flows through the marine terminals at the Port Authority of New York and New Jersey. In addition, the Port Authority recently completed several rail enhancements programs that improve the flow of intermodal cargo. Finally, the Port Authority 2050 Master Plan has outlined key expansion plans at the Ports container terminals which will now be accelerated to handle the growing volume of container trade.⁵

The Port of Virginia has minimized terminal congestion as a result of the recent completion of capacity enhancements of more than \$800 million that delivered more than 1 million TEUs of additional annual capacity between July 2019 and November 2020. Currently, the Port of Virginia is using two berths and six ship-to-shore cranes in a little-used portion of Norfolk International

⁵ <https://ajot.com/premium/ajot-port-of-ny-nj-proactive-investments-helped-deal-with-covid-cargo-spike>

Terminals (NIT) to help clear the vessel backlog. Known as “NIT North,” this section of the container terminal was only used for about two or three ships per week in 2021.⁶

The Port of Savannah has been pursuing the development of off-terminal pop-up yards that have increased capacity by another half-million TEUs currently. In addition, the Georgia Ports Authority is completing a 1.6 million TEU annual capacity expansion which will come online by June 2022 (not included in the available capacity in Exhibit 7). The addition of nine new Mason Mega Rail Tracks in November 2021 is also playing a key role in alleviating the container stockpile by increasing intermodal capacity to and from the Savannah container terminals.⁷

The fact that the Atlantic and Gulf Coast ports have been able to access off-site areas for pop-up yards and peel-off yards, as well as have just completed key expansion projects, has resulted in a more fluid movement of containers through the terminals than has been the case at the San Pedro Bay ports. This fluidity has improved the competitive edge of the Atlantic and Gulf Coast ports in terms of time of transit of containers, which is a key logistics metric in the routing decisions of BCOs and ocean carriers.

It is to be further emphasized that longer term marine terminal capacity enhancements are underway at the major Atlantic and Gulf Coast container ports, and further, the development of increased capacity for intermodal rail operations to serve the midwestern U.S. consumer and production markets is a key priority at the ports of Baltimore, New York, Savannah, and Charleston.

Competitive Transit Time between Asia and Atlantic Coast Ports

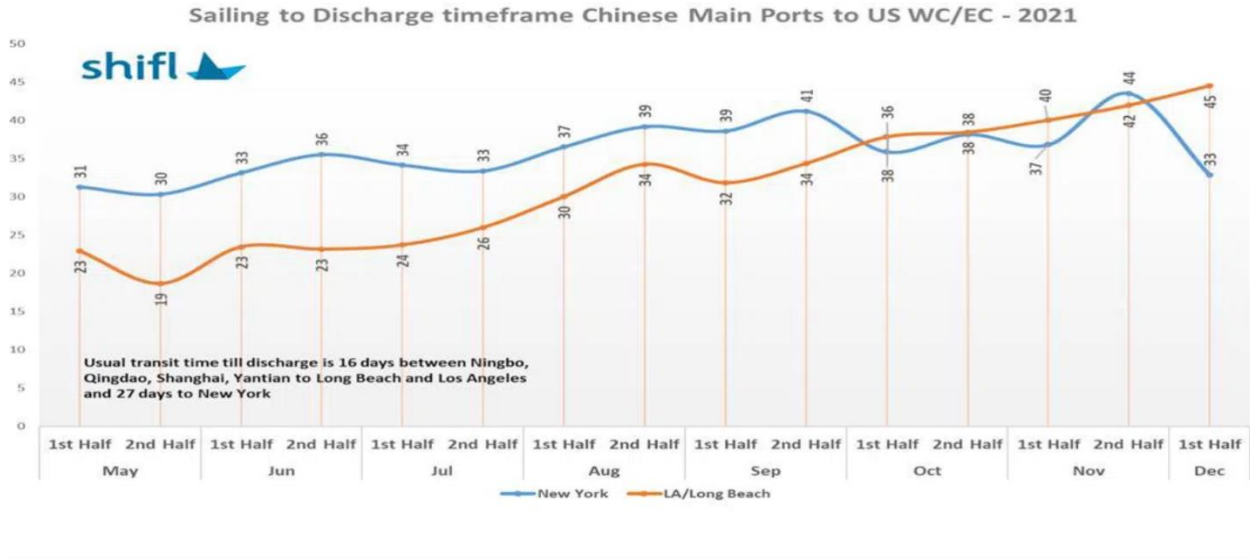
Reflective of the large queue of vessels anchored off the San Pedro Bay Coast is the fact that the average transit time for a container from the departure from major Chinese ports to the discharge of the container at New York/New Jersey is now faster than the same metric between major Chinese ports and the container discharge at San Pedro Bay ports. The following Exhibit 8 shows that beginning in October 2021, the transit time between a Chinese port and a container discharge at the San Pedro ports was about equal to the transit time of a container between the Chinese port and the discharge at the New York/New Jersey container terminals. In fact, by the end of 2021, the use of the marine terminals at the Port of New York/New Jersey Port Authority provided a transit time savings of 12 days compared to using the San Pedro Bay ports container terminals. This suggests that in order to regain market share, it is critical that the capacity crunch and resulting vessel delays and queueing at the San Pedro Bay ports be improved dramatically, or more cargo will flow via the Atlantic and Gulf Coast ports.

⁶https://www.joc.com/port-news/us-ports/port-virginia/port-congestion-builds-virginia-after-weather-closures_20220211.html

⁷ https://www.joc.com/port-news/us-ports/port-savannah/new-container-slots-pop-storage-help-savannah-navigate-rising-dwells_20220207.html

Exhibit 8

Transit Time Between Leaving a Chinese Port and Discharging the Container at the Port Authority of New York and New Jersey Terminals and Los Angeles/Long Beach Container Terminals



BCOs have been increasing their use of Atlantic and Gulf Coast distribution centers and warehouses, and capacity while vacancy rates have been declining capacity still exists at these facilities.

As noted previously in this report, the warehouse vacancy rate in the areas surrounding the San Pedro Bay ports is now less than 1%, which has been a major factor leading to increased container dwell times on the terminals as well as street dwell times of the containers still on chassis waiting for space in the local warehouse and transload centers. The following Exhibit 9 presents the vacancy rates of industrial warehouse space at the key Atlantic and Gulf Coast ports over the period of Pandemic, and also shows the planned warehouse capacity at these port areas.

Exhibit 9 Vacancy Rates and Warehouse Capacity Under Construction

	Q4 2021		Q3 2021		Q2 2021		Q1 2021		Q4 2020	
	Vacancy Rate	SF Under Construction	Vacancy Rate	SF Under Construction	Vacancy Rate	SF Under Construction	Vacancy Rate	SF Under Construction	Vacancy Rate	SF Under Construction
Inland Empire East	0.4%	17,182,301	0.6%	16,071,753	1.2%	14,260,772	1.8%	13,762,784	2.6%	10,577,449
Inland Empire West	0.6%	6,174,633	0.6%	6,950,489	0.8%	8,168,618	0.7%	8,534,952	1.0%	8,849,513
LA - South Bay	0.9%	1,616,203	0.8%	1,160,757	1.1%	1,107,072	1.6%	1,029,763	1.6%	883,923
Atlanta	3.5%	43,015,943	4.4%	34,581,262	4.9%	29,320,653	5.6%	26,253,868	6.4%	21,487,168
Boston	4.2%	5,541,497	4.4%	4,192,164	4.4%	4,167,017	4.6%	3,449,346	4.6%	3,527,377
Charleston	3.8%	4,593,456	3.6%	3,536,162	5.5%	2,634,052	6.0%	1,969,210	7.3%	1,005,962
Greater Baltimore	3.4%	12,000,273	4.5%	11,961,189	5.3%	10,591,200	5.2%	7,092,081	6.1%	6,524,577
Hampton Roads	1.5%	5,359,014	1.1%	891,000	1.5%	5,566,490	2.8%	4,889,430	2.7%	5,599,336
Houston	6.8%	16,484,213	7.5%	15,822,871	8.5%	17,976,745	8.6%	17,926,468	8.3%	14,206,826
Jacksonville	3.6%	4,352,509	20.8%	-	19.2%	-	18.1%	-	17.0%	-
Memphis	4.8%	10,947,470	5.1%	13,651,170	5.2%	13,277,384	5.0%	16,193,809	6.3%	12,467,340
Miami-Dade	2.7%	4,594,425	3.3%	5,145,730	3.4%	4,443,040	5.2%	3,169,375	4.8%	2,658,761
Northern & Central, NJ	2.6%	14,577,515	2.9%	16,898,454	3.3%	16,900,081	3.7%	14,843,724	3.9%	12,156,243
Orlando	5.7%	2,822,953	5.7%	4,488,820	6.3%	1,909,914	7.3%	1,461,071	7.5%	1,902,274
Philadelphia Region	4.4%	42,462,231	4.7%	43,330,987	5.5%	45,830,102	5.9%	41,654,071	5.9%	34,373,309
Savannah	3.3%	21,662,242	5.1%	17,703,670	8.3%	14,663,397	7.7%	7,306,426	7.8%	6,033,593
South Florida	3.0%	7,131,933	3.6%	6,890,765	4.1%	7,415,469	4.4%	6,921,306	4.5%	9,102,325
Tampa Bay	5.4%	3,916,572	4.9%	4,778,521	5.9%	4,451,305	7.1%	3,369,977	7.3%	3,355,020

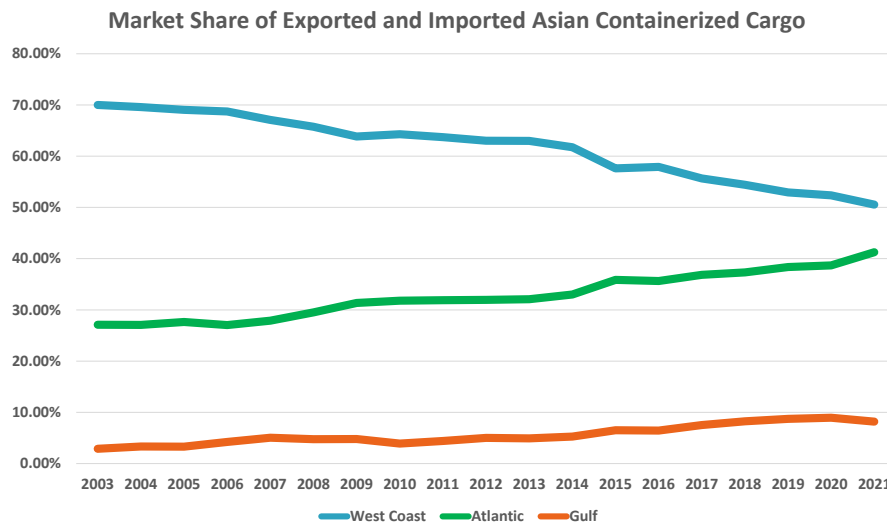
Source: Lee & Associates, JLL, Colliers, Cushman & Wakefield

With the exception of the Hampton Roads (Virginia), warehouse vacancy rates were greater than 2% and are all significantly greater than in Southern California. However, in all cases, the vacancy rates declined significantly between 2020 and 2021. The warehouse space under construction is very significant in port areas of Savannah, Philadelphia (supporting the Port of New York/New Jersey container operations as well as the growth in containerized cargo along the Delaware River), New York and Northern New Jersey, Houston, and Baltimore. As this warehouse capacity comes online, the ability for BCOs to increase the use of Atlantic Coast and Gulf Coast ports will continue to increase and provide greater fluidity for the containers through the container terminals and minimizing vessel queues at anchor. It is to be noted that significant warehouse space is also coming on-line in Southern California.

Anticipation of Labor Disruption

Disruptions surrounding the more recent contract negotiations between the ILWU and the Pacific Maritime Association have been common since 2002, when the West Coast ports shut down for a period of 10 days, as well as during the 2013-2014 labor negotiations. Exhibit 10 shows the change in market share of the West Coast ports share of total containerized exports and import tonnage with Asian compared to the market share for the Atlantic and Gulf Coast ports.

Exhibit 10
Port Range Market Share of Asian Containerized Tonnage



Source: U.S. Bureau of Census, USA Trade OnLine

The West Coast market share decline from 2003 to 2021 demonstrates the long-term impact of the West Coast shutdown in 2002, that resulted in a massive retool of the U.S. international logistics supply chain as importers diversified away from the use of the West Coast ports as the sole gateway for containerized trade with Asia. Carriers introduced all-water services between Asia and the U.S., BCOs established key distribution centers along the Atlantic and Gulf Coasts, the Atlantic and Gulf coast ports increased infrastructure development and in particular deepened the channels and harbors to 50 ft. to enable the larger container ships to serve these ports. Finally, the expanded locks of the Panama Canal were opened in 2016 to facilitate the transit of the larger container ships calling the Asian ports to now be deployed through the Panama Canal. In addition, trade patterns shifted as more import services moved to areas such as Vietnam, Thailand, Micronesia, and India over time.

Exhibit 10 also indicates the increased loss in market share of the West Coast ports that occurred in 2014, as the result of the disruptions in terminal operations that occurred on the West Coast during the late 2013-2014 period leading up to the contract negotiations. As a result of these supply chain disruptions that accompanied the labor disruption at the West Coast ports, the loss of discretionary cargo tonnage from the West Coast ports to the Atlantic and Gulf Coast ports accelerated. As noted, despite the stabilization of the loss of market share in 2019 and 2020, the noted significant loss of market share of the PSW ports in the last quarter of 2021 may also reflect the desire of the BCOs and carriers to establish in advance additional vessels capacity and port calls at the Atlantic and Gulf Coast ports to avoid further supply chain disruptions that could occur preceding and during the July 2022 contract negotiations. It is important to note, that due to the Pandemic induced logistics supply chain disruptions, the BCOs have moved to a just in case inventory from a just in time, and as demonstrated are holding larger inventories than in the past.

Summary

Should the capacity constraint situation at the West Coast ports continue in the future, and given the fact that land for expansion of marine terminals in Southern California is limited compared to the situation at the Atlantic and Gulf Coast ports, the inability for the container terminals, especially in San Pedro Bay, to handle additional container throughput will result in significant loss of the potential economic impact of these ports to the West Coast economies, as the BCOs will continue to establish logistics supply chains that can be served via the Atlantic and Gulf Coasts, as well as the West Coast, which will further serve the growing population of the Southeastern U.S. As the move to near shore manufacturing continues, as well as the trend to move away from the dependence on the Chinese import sources to Southeast and Southwest Asia, the routings of Asian cargo from Southeast and Southwest Asia will use the Suez Canal to serve the Atlantic and Gulf Coast ports to a greater degree, and it is this Suez routing that further favors an Atlantic Coast routing from a cost and time perspective over a West Coast routing to serve midwestern states.

Therefore, in order to avoid a continual loss of market share to the Atlantic and Gulf Coast ports it is critical that San Pedro Bay port terminal capacity be expanded to handle future growth, which can be accomplished through increased densification and efficiencies, given the limited availability of land for terminal footprint expansion, and disruptions to terminal operations leading up to and during the 2022 contract negotiations be minimized.