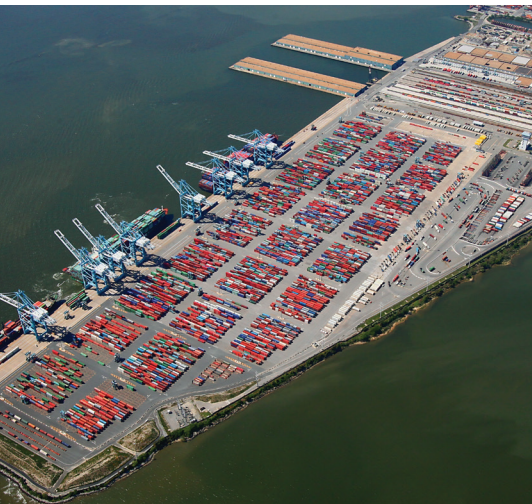


Select U.S. Ports Prepare For Panama Canal Expansion

Port of Virginia



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“Virginia is already big-ship ready. It’s going to be very modest when it comes down to the gains a new Panama Canal will bring to Virginia.”

– John Reinhart, CEO and executive director, the Virginia Port Authority¹

Port of Virginia

The Port of Virginia is made up of six container and general cargo terminals that moved more than 2.2 million TEUs in calendar year 2013, making it the sixth-largest container port in the U.S. In addition to the state-owned general cargo terminals, the Port of Virginia harbor is also home to many privately owned facilities that handle primarily bulk cargo. All terminals in the Port of Virginia harbor collectively handled a total of 66.68 million metric tons of container, break bulk and bulk cargo in 2013, ranking it as the fourth-largest U.S. port based on total cargo. The port has deep channels (currently 50 feet and authorized to go to 55 feet) and berths that are already receiving Super Post-Panamax ships. It has high levels of automation and is one of the most technologically advanced ports on the East Coast. The port generates employment for more than 343,000 Virginians as well as \$41.1 billion in revenue.²

With 9.8 percent growth in 2012 and 5.6 percent increase in 2013, the port is one of the fastest-growing East Coast container ports. Its relationships with international trading partners undergird this growth; its largest trading partner is China. With an existing terminal (APM Terminals Virginia) that currently handles 1.2 million TEUs and has the capacity to handle 2.3 million TEUs, as well as an aggressive plan to add a new terminal (the Craney Island Eastward Expansion) that will more than double its TEU capacity, the port is well positioned to handle more cargo and the bigger ships that will be seeking to call on the East Coast after the Panama Canal expansion.³

Location, Size and Terminals

The majority of the Port of Virginia is located in Hampton Roads in the southeastern part of Virginia. It is well situated in relation to growing population areas on the East Coast. The port handles cargo in several geographically separate areas. Hampton Roads, the area that includes Portsmouth, Newport News and Norfolk, Virginia, has four terminals: Norfolk International Terminals, APM Terminals Virginia, Portsmouth Marine Terminal and Newport News Marine Terminal. While APM Terminals Virginia is owned by APM Terminals, all four terminals are operated by the Virginia Port Authority (VPA).

The Port of Richmond, also managed by the VPA, is located on the James River in Richmond, Virginia, and provides easy access to Interstate 95, the East Coast's principal north-south transportation artery. The Virginia Inland Port, located just west of Washington, D.C., in Warren County, is connected to Port of Virginia marine terminals via five-day-a-week rail service, bringing cargo 220 miles closer to inland U.S. markets.

Operating Status

According to the VPA's 2013 Financial Report, the Port of Virginia (including the Port of Richmond) handled 2.17 million TEUs that year, representing “an increase of 9.98 percent from fiscal year 2012.”⁴ As shown in Figure 1, operating revenue has been steadily increasing, as have operating expenses. The VPA has run a deficit in operating income since 2009. Virginia International Terminals LLC, a not-for-

profit entity that is held by the VPA, operates the terminals on VPA's behalf.⁵ This corporate structure allows the VPA to be competitive by providing flexibility in how it works with labor unions and individuals. However, several consulting firms have noted that there may be other ways for the VPA to increase its competitiveness and efficiency in this highly competitive field.⁶

Cargo

In 2013, marine terminals in the Port of Virginia harbor handled 66.68 million metric tons of cargo.⁷ This includes containers, roll-on/roll-off (Ro/Ro), break bulk and bulk cargo. According to the VPA, the port “receives 94 percent of operating revenues from handling containerized cargo.”⁸ In 2013, it handled 13 percent of the TEU volume on the East Coast, placing it behind only the ports of New York and New Jersey and Savannah.⁹

China is the port's main trading partner for exports and imports. In terms of total volume, including container, break bulk and bulk cargo, the port is ranked fourth in the U.S. The port's container trade is balanced with exports and imports, representing roughly equal amounts based on TEUs.

Figure 1

Operating Status

Year	Operating Revenue (in thousands of dollars)	Operating Expenses (in thousands of dollars)	Operating Income (in thousands of dollars)
2013	\$103,146	\$120,632	\$(17,486)
2012	101,261	116,438	(15,177)
2011	91,219	108,404	(17,185)
2010	51,958	72,347	(20,389)
2009	53,155	66,851	(13,696)
2008	77,419	65,200	\$12,219
2007	72,346	61,084	\$11,262
2006	59,327	54,612	\$4,715
2005	43,917	45,035	(1,118)
2004	39,394	42,176	(2,782)
Average Growth Rate (2004 to 2013)	10%	11%	

*2013 estimates are based on 2003 to 2012 growth rate.

Source: Virginia Port Authority

Facilities: Cargo Terminals

The Port of Virginia's largest state-owned terminal is Norfolk International Terminal. It is able to handle more than 1.2 million TEUs annually.¹⁰ It has direct truck and on-dock rail loading access.¹¹

APM Terminals Virginia is one of the most technologically advanced terminals in the U.S.¹² According to the VPA, it is “a semi-automated operation, with a mix of manual and automated container handling equipment”.¹³ One of the largest privately owned container ports in the U.S., it is currently able to handle 1 million TEUs annually. A planned expansion will enable it to handle 2 million TEUs annually.¹⁴ It has 115 acres dedicated to stacked containers, more than half of which is semi-automated. With eight Post-Panamax cranes, it is already serving the larger ships, a situation that will increase after the expansion of the Panama Canal.

Portsmouth Marine Terminal ceased operations in 2011. All of its customers transferred to APM Terminals Virginia. Forty-four acres at the terminal are now used for empty container storage. Portsmouth Marine Terminal has available space to handle a variety of cargo, including roll-on/roll-off, specialized break bulk and project cargo as well as bulk cargo.

Figure 2

Cargo Summary

Year	Container Volume (in thousands of TEUs)	Container and Break Bulk Ship Calls	Outbound Tonnage Value (in thousands of dollars)	Inbound Tonnage Value (in thousands of dollars)	Total Tonnage Value (in thousands of dollars)
2013	2,224	1865	\$29,566	\$37,380	\$66,946
2012	2,106	1966	27,352	35,730	63,082
2011	1,918	1828	23,983	30,828	54,811
2010	1,895	1841	20,481	28,361	48,842
2009	1,745	1758	19,194	25,774	44,968
2008	2,083	1833	24,684	33,466	58,150
2007	2,128	2289	21,072	31,466	52,538
2006	2,046	2338	NA	NA	NA
2005	1,981	2178	NA	NA	NA
Average Growth Rate (2005 to 2013)	1.3%	-1.7%	5.0%	2.5%	3.5%

Source: Port of Virginia Key Performance Indicators 2014 to 2018

Figure 3

Top 10 Commodities, Container, Break Bulk and Bulk Cargo Combined

Exports		Imports	
Type	Tonnage (in thousands of tons)	Type	Tonnage (in thousands of tons)
Mineral fuel, oil, etc.	49,858.79	Machinery	755.23
Misc. grain, seed, fruit	1,888.46	Furniture, bedding	582.99
Wood	1,704.79	Salt, sulfur, earth, stone	514.44
Woodpulp, etc.	15,588.79	Mineral fuel, oil, etc.	512.99
Food waste, animal feed	1,242.56	Beverages	464.63
Cereals	955.18	Wood	424.33
Plastic	627.36	Vehicles, not railway	418.59
Paper, paperboard	605.66	Plastic	412.16
Iron and steel	504.75	Rubber	384.45
Machinery	444.08	Fertilizers	376.18

Source: 2013 Key Economic Indicators¹⁵

Newport News Marine Terminal focuses on more labor-intensive cargo, such as break bulk and roll-on/roll-off cargo. It features a new warehouse for break bulk storage, and has room for additional construction and storage facilities to be built in the future.¹⁶

The Port of Richmond is a privately operated terminal owned by the city of Richmond and leased by the VPA. It can handle container, break bulk and other forms of cargo. It serves as an off-road, off-rail connection between the coastal terminals and Richmond.¹⁷

Facilities: Cranes

The Port of Virginia has a total of 65 cranes (including the Port of Richmond's one crane). Because Portsmouth Marine Terminal is no longer operational, there are 56 operating cranes.

Facilities: Passenger Terminals

Norfolk's Half Moone Cruise and Celebration Center works with a variety of cruise lines, including Carnival Cruise Lines, Oceania Cruises, Regent Seven Seas Cruises, Phoenix Reisen, Pearl Seas Cruises, AIDA Cruises, Crystal Cruises and Silversea. In 2015, the Carnival Splendor will begin sailing from Norfolk. In addition to the Splendor calls, 20 stop-over cruises are scheduled to visit Norfolk in 2014 and 2015.¹⁹

Figure 4

Facilities: Terminals

Terminal	Total Acreage	Type of Cargo	Number of Cranes	Channel Depth (in feet)	Berth Length (in linear feet)
Newport News	140	Break bulk, Ro/Ro	1	41	3,480
Norfolk International	693	TEUs, break bulk, Ro/Ro	14	50	7,300
Portsmouth	219	Break bulk, Ro/Ro	9	45	4,515
APM Terminals Virginia	230	TEUs, break bulk, Ro/Ro	40	50	4,000
Port of Richmond	121	TEUs, break bulk	2	22	1,584

Figure 5

Type and Number of Cranes

Type	Number	Outreach
Newport News Marine Terminal		
Heavy-lift Crane	1	114.15 ft.
Norfolk International Terminal		
ZPMC Suez Class	14	176-208 ft.
Portsmouth Marine Terminal		
ZPMC	3	155.53-157.93 ft.
Kone	4	127.54-151.18 ft.
Deer Park	1	139.77 ft.
CEMCO	1	139.73 ft.
APM Terminals Virginia		
Super Post-Panamax	8	176 ft.
Semi-automated Rail-mounted Gantry Crane	30	176 ft.
Rubber-tired Gantry Crane with Electric Spreader Bars	2	176 ft.
Port of Richmond Terminal		
M-2250 Manitowoc	1	N/A

Source: "VIT Crane Specifications & Berth & Channel Conditions," www.portofvirginia.com/facilities/port-of-richmond.aspx¹⁸

Vessels Accommodated

A total of 1,865, 1,966 and 1,828 vessels called on the Port of Virginia in 2013, 2012 and 2011, respectively.^{20, 21} This includes larger ships traversing the Suez Canal that cannot currently pass through the Panama Canal. Located just 2.5 hours from open seas, the port has 50-foot-deep waterways and berths that allow Super Post-Panamax ships to call. In addition, the port is federally authorized to dredge harbor channels to 55 feet. This, coupled with the current technology available at the port, positions it as the East Coast port with the largest capacity for Super Post-Panamax ships.

Foreign Trade Zone

The Port of Virginia's Foreign Trade Zone No. 20 is spread over more than 10,000 acres in nine counties, making it one of the largest in the U.S.²² The port recently received approval to create Alternative Site Framework sites within FTZ No. 20, which will streamline the process for companies applying for FTZ status.²³ This suggests that the amount of businesses, jobs and volume of cargo at the FTZ will increase.

Transportation and Access

All Port of Virginia terminals have highway and rail access. The Norfolk International Terminal focuses on its direct rail connection, with 23,000 feet of on-dock working rail track where trains are loaded and unloaded. APM Terminals Virginia has direct road access via highways and automated service for trucks. It also has on-dock rail access with CSX Transportation and Norfolk Southern Corp.²⁴ The Newport News Marine Terminal has direct rail access with CSX break bulk rail service and highway access via three Virginia highways.²⁵ Portsmouth Marine Terminal currently has direct access to CSX and Norfolk Southern railways, roadway access via U.S. Route 58 to I-95, I-64 and I-664. The Virginia Inland Port (VIP) extends the capacity of the Port of Virginia via five-day-a-week service on the Norfolk Southern railway. The VIP is connected to I-66 and is located just five miles from I-81.

Employment

According to a 2008 study by the College of William and Mary's Mason School of Business, total Virginia economic activity generated by the Virginia Port

Authority's port operations included \$41.1 billion in revenue and 343,000 jobs.²⁶

Current and Future Port Projects

The Port of Virginia's "VPA 2040 Master Plan" describes where the port is today and provides a vision for how it will position itself in the future. The master plan includes a capital investment plan that "determines the best use of the available capital that will allow the port to capture cargo growth."²⁷ It includes the maintenance of current terminals, the purchasing of new equipment such as cranes and the construction of a new terminal. As previously mentioned, this includes shorter-term projects to expand the capacity of Norfolk International Terminals and double the TEU capacity of APM Terminals Virginia to 2.3 million TEUs.²⁸

Expansion of the port at the future Craney Island Marine Terminal accounts for 60 percent of the capital investment plan. This is a long-term project; its timeline calls for the first phase of the terminal to open in the 2025-2028 timeframe. The Craney terminal will eventually have a capacity of 5 million TEUs annually.^{29, 30} Construction of the terminal is underway; the area upon which it is being built was dredged and diked in 2013. Plans for the terminal area include distribution centers, which are expected to create almost 26,000 new jobs for the area.

Outlook

Given the Port of Virginia's current competitiveness and aggressive plans for the future, the outlook for the port is good. Virginia Port Authority officials agree: "We have been steadily growing. We are looking 50, 60, 70 years ahead to make sure we are growing and preparing for the future."³¹ In addition to creating plans that are funded by several different funding streams, the VPA is maintaining and improving the port's profile as one of the most important ports on the East Coast.

Because it is already receiving Post-Panamax ships, it is well prepared for the expansion of the Panama Canal. The VPA is well aware of the competition it faces from other East Coast ports and takes that into account when planning for its future: "VPA's planned projects are expected to increase its container handling capacity from 3.5 million TEUs to 9.65 million TEUs by 2039. The three other largest East Coast ports are planning similar large projects that would keep pace with and possibly exceed VPA's capacity."³²

Endnotes

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