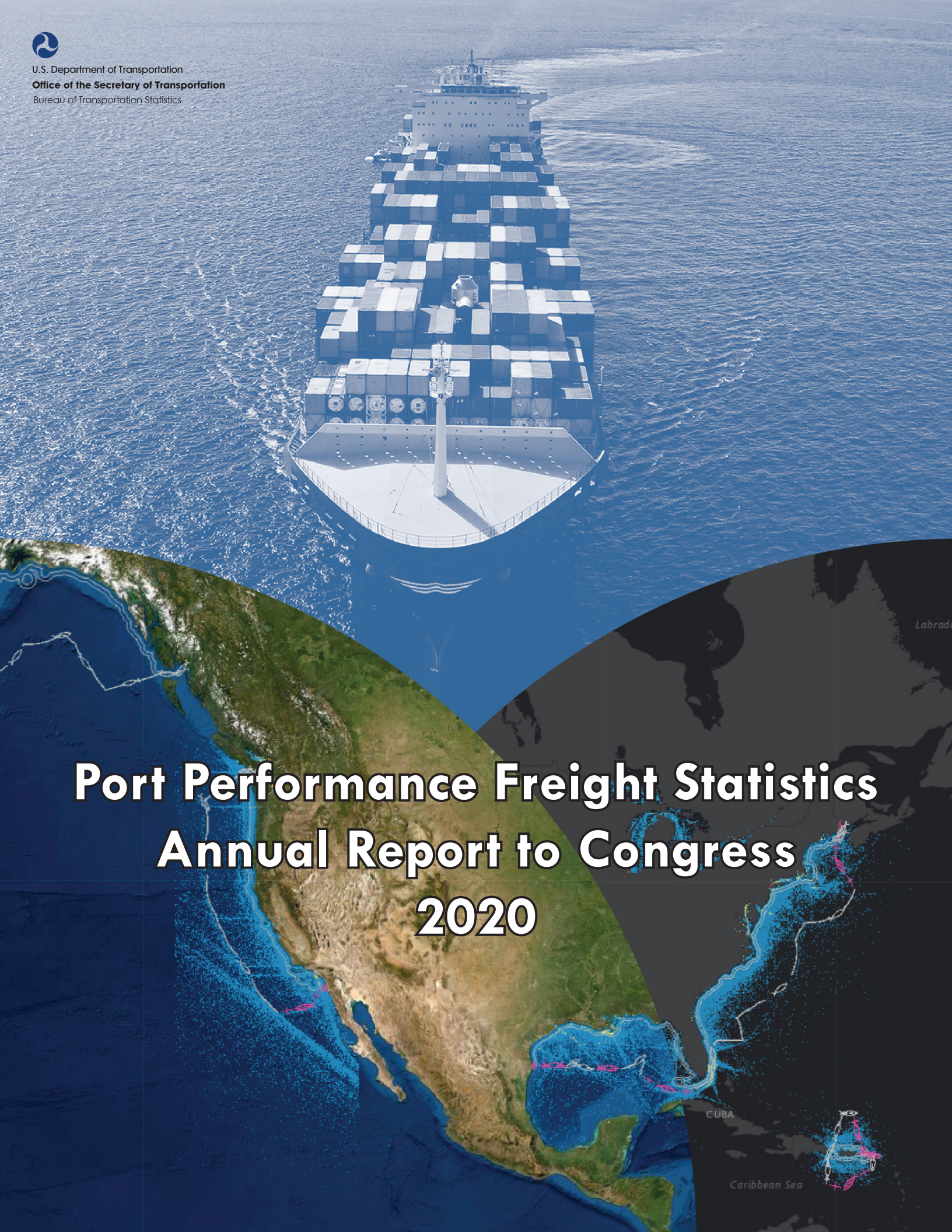
U.S. Department of Transportation
Office of the Secretary of Transportation
Bureau of Transportation Statistics



Port Performance Freight Statistics Annual Report to Congress 2020

U.S. Department of Transportation
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Port Performance Freight Statistics Annual Report to Congress 2020

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Executive Summary

Waterborne vessels are the leading transportation mode for international freight, moving 41 percent of freight value in 2019—over $1.7 trillion. Nearly $1.1 trillion of this amount was containerized, which is the primary means for moving intermodal cargo. Of the top 25 U.S. international freight gateways (airports, land border crossings, and maritime ports) by value, 10 were maritime ports, including the ports of New York and New Jersey, Los Angeles, Long Beach, Houston, Savannah, Virginia, Charleston, Baltimore, Oakland, and Tacoma.

The *Fixing America's Surface Transportation* (FAST) Act requires the Bureau of Transportation Statistics to report on the top 25 ports as measured by 1) overall cargo tonnage, 2) dry bulk cargo tonnage, or 3) by twenty-foot equivalent unit (TEU) of containerized cargo.[1] The top 25 ports for each category (tonnage, container, and dry bulk) in 2019 totaled to 50 ports because many ports appear in more than one category. The Port Performance Freight Statistics Program provides nationally consistent capacity and throughput performance measures for these ports.

Of the 50 ports profiled in 2019, 47 are located within the contiguous United States, plus 1 each in Alaska, Hawaii, and Puerto Rico. The ports of Baltimore, Houston, Mobile, New Orleans, New York and New Jersey, and Virginia are in the top 25 for all 3 cargo categories. From 2015 to 2019, tonnage handled at the top 25 ports increased by 4.4 percent and the number of TEU by 18.6 percent, while the tonnage handled by the top 25 dry bulk ports decreased by 4.9 percent.

[1] 49 USC § 6314.

Top 25 Tonnage Ports in 2019

In 2019 the top 25 tonnage ports handled a total of 1.82 billion tons of cargo, accounting for 77 percent of the total tons in 2019. The highest tonnage figures are associated with ports that handle large quantities of both liquid bulk cargo (e.g., petroleum or chemicals) and dry bulk cargo (e.g., coal or grain), such as the ports of Houston and South Louisiana. The top 25 ports have remained relatively consistent over the past few years. Freeport replaced Philadelphia as one of the top 25 ports by tonnage in 2019.

Top 25 Dry Bulk Ports in 2019

The top 25 dry bulk ports handled a total of 667.7 million tons of cargo in 2019, accounting for 28 percent of the total tons in 2019. The Port of South Louisiana remained in the top spot and handled by far the greatest volume of dry bulk cargo, almost 3 times the amount handled by the number two ranked Port of New Orleans and almost 4 times more than the number three ranked Port of Virginia. The Port of South Louisiana is a major export hub not only for dry bulk cargo but also for liquid bulk cargo (e.g., petroleum and chemicals). Corpus Christi, Vancouver, and the Mid-America Port Commission replaced Chicago, Longview, and Long Beach on the list of top 25 ports by dry bulk tonnage.

Top 25 Container Ports in 2019

In 2019, accounting for 96 percent of the loaded TEU handled, the top 25 container ports handled a total of 55.5 million TEU. The highest TEU volumes are associated with coastal container ports, such as the ports of Long Beach, Los Angeles, and New York and New Jersey. In 2019 Camden-Gloucester was on the top 25 container port list, replacing Palm Beach.

Nationally, container and tanker vessel dwell times were stable in 2019, with little variation from 2018. The average 2019 dwell time of container vessels at the top 25 U.S. container ports was estimated at 28.2 hours, up from 27.3 hours in 2018.

The record-breaking 2020 hurricane season witnessed 30 named storms, 13 hurricanes, and 6 major hurricanes, far above the average hurricane season production of 12 named storms, 6 hurricanes, and 3 major hurricanes. Hurricanes can cause numerous port closures and power outages, which may have a ripple effect on vessel schedules and dwell times.

Many factors influence port capacity, including the amount and type of cargo handling equipment (e.g., container cranes) and the availability of on-dock rail transfer facilities. Most container ports use ship-to-shore gantry cranes mounted on rails that run alongside the waterway to load and unload container vessels. Ports have replaced smaller panamax ship-to-shore gantry cranes with faster, more capable super post-panamax ship-to-shore gantry cranes. The top 25 container ports operated a total of 504 ship-to-shore gantry cranes in 2019. Many container ports use on-dock rail to move intermodal shipping containers directly onto waiting railcars. A total of 44 out of the 88 active container terminals (50 percent) at these ports had on-dock rail access. Alternatively, containers can be drayed by truck to a nearby railyard.

In the next edition, BTS will be able to examine the extent to which maritime trade and transportation have rebounded from the impacts of the COVID-19 pandemic. More specifically, BTS will have a full year's data on U.S-international freight flow transported by vessel and the tonnage and number of TEU handled by the ports. In addition, BTS will examine whether and how vessel dwell times have been impacted by the COVID-19 pandemic and the unprecedented 2020 hurricane season.

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Introduction

The Marine Transportation System (MTS) consists of waterways, ports, terminals, and intermodal landside connections that allow the movement of people and goods to, from, and on the water. As part of the MTS, the Nation's ports provide critical connections between waterways, highways, pipelines, and railroads.

Table 1 shows the value of international freight transported to and from the United States by mode and trade region. In 2018 international freight accounted for nearly 22 percent of freight moved by the U.S. freight transportation system.[2] Waterborne vessels are the leading transportation mode for international freight, moving 41 percent of freight value in 2019—over $1.7 trillion, of which nearly $1.1 trillion comprised containerized cargo. Containerized cargo includes most consumer goods imported into the United States and has been one of the primary focal points of port performance in recent years.

In 2019 vessels transported 59 percent (nearly $916 million worth) of the cargo between the United States and Asia, and 42 percent (over $418 million worth) between the United States and Europe. Of the top 25 U.S. international freight gateways (airports, land border crossings, and maritime ports) by value (as shown in table 2), 10 are maritime ports.

[2] U.S. Department of Transportation, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, version 4.5.1., available at https://faf.ornl.gov/fafweb/ as of December 2020.

Table 1 Value of U.S.-International Freight Flows by Geography and Mode: 2019

Billions of dollars

	Geography						
Mode	**Canada**	**Mexico**	**Asia**	**Europe**	**Other**	**Total**	**Percent**
Vessel	31	65	916	418	275	1,705	41.2
Containerized [1]	NA	NA	NA	NA	NA	(1,084)	(26.2)
Air	33	16	545	494	80	1,168	28.2
Truck	343	429	NA	NA	NA	772	18.7
Other (e.g., intermodal [2])	41	17	93	74	19	245	5.9
Rail	96	82	NA	NA	NA	179	4.3
Pipeline	67	5	NA	NA	NA	72	1.7
Total	**612**	**615**	**1,554**	**986**	**374**	**4,140**	

[1] *Containerized* is a subset of *Vessel*.
[2] *Intermodal* refers to the movement of cargo between multiple modes of transportation (e.g., truck, rail, water, and air).

KEY: NA = Not Applicable.

NOTES: Transportation mode in this table represents the mode by which freight arrived to or departed from the United States, therefore truck, rail, and pipeline are applicable only to U.S. freight flows with Canada and Mexico.

SOURCES: **Truck, Rail, and Pipeline**—U.S. Department of Transportation, Bureau of Transportation Statistics, TransBorder Freight Data, available at www.bts.gov/transborder; **Air, Vessel, and Other**—U.S. Department of Commerce, Census Bureau, USA Trade Online, https://usatrade.census.gov/ as of October 2020.

Table 2 Top 25 U.S. Foreign Trade Freight Gateways by Value of Shipments: 2019

Billions of current dollars

Gateway	Type	2019			
		Rank	Exports	Imports	Total
Laredo, TX	Land	1	94.5	132.3	226.8
New York, NY	Water	2	42.4	162.3	204.8
Los Angeles, CA	Water	3	31.0	173.6	204.6
John F. Kennedy International Airport, NY	Air	4	84.1	100.2	184.3
Chicago, IL	Air	5	49.3	134.5	183.8
Long Beach, CA	Water	6	31.9	129.7	161.5
Houston, TX	Water	7	92.3	63.1	155.4
Detroit, MI	Land	8	75.5	57.2	132.7
Los Angeles International Airport, CA	Air	9	54.0	63.1	117.1
Savannah, GA	Water	10	28.6	77.5	106.1
Port Huron, MI	Land	11	39.7	46.7	86.4
New Orleans, LA	Air	12	38.6	46.0	84.6
Norfolk, VA	Water	13	28.9	49.9	78.8
El Paso, TX	Land	14	31.6	43.4	75.0
Charleston, SC	Water	15	27.3	47.5	74.8
Buffalo-Niagara Falls, NY	Land	16	35.1	33.9	69.0
Cleveland, OH	Air	17	39.8	24.4	64.2
San Francisco International Airport, CA	Air	18	29.6	31.9	61.5
Atlanta, GA	Air	19	21.2	37.4	58.6
Baltimore, MD	Water	20	15.0	43.4	58.4
Dallas-Fort Worth, TX	Air	21	23.3	34.1	57.5
Miami International Airport, FL	Air	22	34.7	22.5	57.2
Oakland, CA	Water	23	20.1	31.5	51.6
Anchorage, AK	Air	24	15.4	35.5	50.9
Tacoma, WA	Water	25	8.0	40.2	48.2

NOTES: Numbers may not add to totals due to rounding. For additional information and notes, see U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 1-51, available at https://www.bts.gov/ as of December 2020.

SOURCES: **Air**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, USA Trade Online, available at https://usatrade.census.gov/ as of Nov. 13, 2020. **Land**—U.S. Department of Transportation, Bureau of Transportation Statistics, North American Transborder Freight Data, available at https://www.bts.gov/transborder/ as of Nov. 13, 2020. **Water**—U.S. Army Corps of Engineers, Navigation Data Center, personal communication, special tabulation, Dec. 9, 2019 and Nov. 12, 2020, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 1-51, available at https://www.bts.gov/ as of December 2020.

Table 3 shows the overall growth in cargo handled by the top 25 maritime ports between 2015 and 2019. The tonnage handled at the top 25 ports increased by 4.4 percent and the number of TEU by 18.6 percent, while the tonnage handled by the top 25 dry bulk ports decreased by 4.9 percent. Growth in freight movement is supported by increased port capacity from expanded marine terminals at ports across the country.

Recognizing the significance of ports, the *Fixing America's Surface Transportation* (FAST) *Act* established the Port Performance Freight Statistics Program (PPFSP) in the Bureau of Transportation Statistics (BTS) of the U.S. Department of Transportation (USDOT). The FAST Act requires an annual report to Congress that includes statistics on capacity and throughput for the top maritime ports.[3] This annual report builds on trends reported in previous editions and provides new data and performance metrics.

The PPFSP covers five major categories of waterborne cargo:

1. containerized,
2. dry bulk,
3. liquid bulk,
4. break bulk, and
5. roll-on/roll-off (Ro/Ro).

Commodities transported in maritime commerce vary greatly, affecting the types of vessels, ports, and terminals used. For example, one terminal may be equipped with elevators to load and unload dry bulk commodities, such as coal and grains, while another uses ship-to-shore gantry cranes to load and unload containers or pipelines to load and unload liquid bulk commodities, such as natural gas and oil.

[3] 49 USC § 6314.

Table 3 Tonnage, Dry Bulk, and Container Cargo Handled by Maritime Ports: 2015–2019

Year	Total tonnage handled at top 25 ports (billion)		Total tonnage handled at top 25 dry bulk ports (million)		Total TEU handled at the top 25 container ports (million TEU)	
2015	1.75		702		46.8	
2016	1.75	▲	684	▼	47.6	▲
2017	1.83	▲	729	▲	51.1	▲
2018	1.88	▲	732	▲	54.0	▲
2019	1.82	▼	668	▼	55.5	▲
Percent growth since 2015	4.4%	▲	-4.9%	▼	18.6%	▲

KEY: TEU = twenty-foot equivalent unit.

NOTES: Totals include domestic and international tonnage.

SOURCES: **Total and dry bulk tonnage**—U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation, as of November 2019. **TEU**—American Association of Port Authorities, Port Industry Statistics (series), available at www.aapa-ports.org/ as of November 2020 and Port Authorities. U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation, as of November 2020.

I. Introduction

The statistics in this report measure total port capacity and throughput for the Nation's top ports. The report also shows changes in throughput from previous years to illustrate the extent of changes in cargo handled. BTS used the following criteria to select throughput and capacity measures for this report:

- **Data availability**—The chosen measures must be readily available for almost all ports to identify the top 25 ports to which they apply (e.g., tonnage, vessel calls and sizes for all ports, TEU for container ports).

- **National consistency**—Measures must be based on a nationally consistent definition and collection methodology. Ideally, a measure should be available from a single, authoritative source. If not, BTS reconciled and validated multiple sources to ensure consistency.

- **Timeliness**—The most recent information is sought, with a goal of data no more than 2 years old for key measures.

- **Relevance and clarity**—Measures should be closely connected to the throughput and capacity of ports, terminals, and port infrastructure and be understandable to readers unfamiliar with ports or shipping terminology.

- **Accuracy and transparency**—Measures should be accurate within defined data quality standards and should come from authoritative sources, as outlined in the detailed technical documentation found on the BTS website.[4]

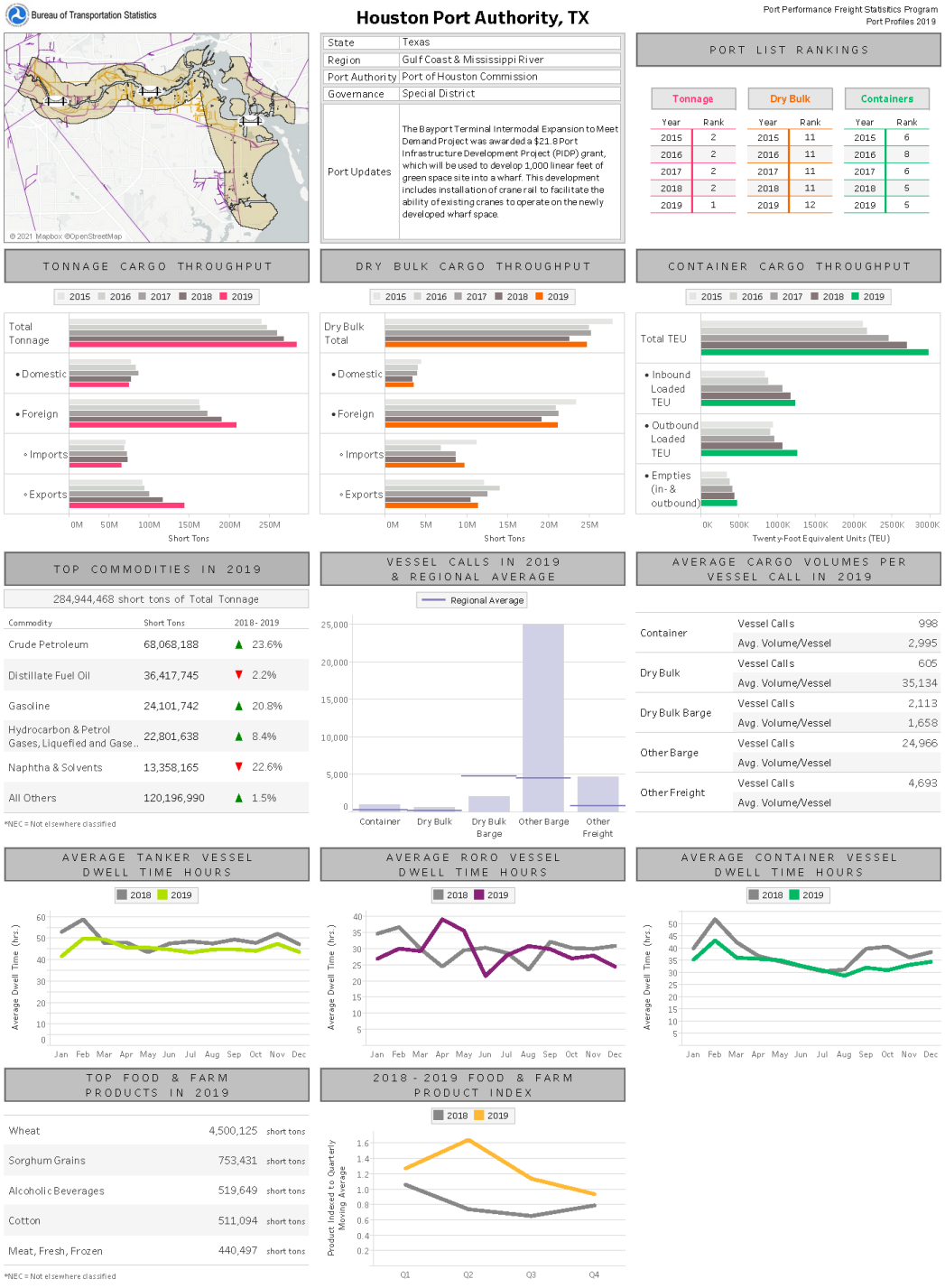
This report contains statistics for 2019 and highlights events in 2020 that have impacted port performance. The complete impacts will be reported in the next edition of this report.

In addition to the summary statistics in this report, a complete set of interactive *Port Profiles* that provide capacity and throughput data from 2015 through 2019 are available online. The online *Port Profiles* include port characteristics, such as vessel calls by type; port dwell times for container, tanker, and Ro/Ro vessels; contextual information; and updates specific to each port. Figure 1 shows an example of an individual Port Profile (Houston) available on the BTS website at www.bts.gov/ports. Appendix A includes a list of ports profiled.

BTS is continuously making enhancements in response to our data users and has improved the usability of its *Port Profiles*. BTS welcomes data user feedback. Please send questions and comments on the *Port Profiles* to PortStatistics@dot.gov.

[4] The technical documentation is available at https://www.bts.gov/ports.

Figure 1 Houston Port Profile



SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Port Profiles*, available at https://www.bts.gov/ports as of January 2021

Events Impacting Port Performance Since 2019

The trends documented through 2019 in this report and the online *Port Profiles* are likely to change in 2020 due to the COVID-19 pandemic and an unprecedented hurricane season. Port throughput and capacity statistics will also be affected by updates to statistical boundaries of ports being designed by the U.S. Army Corps of Engineers.

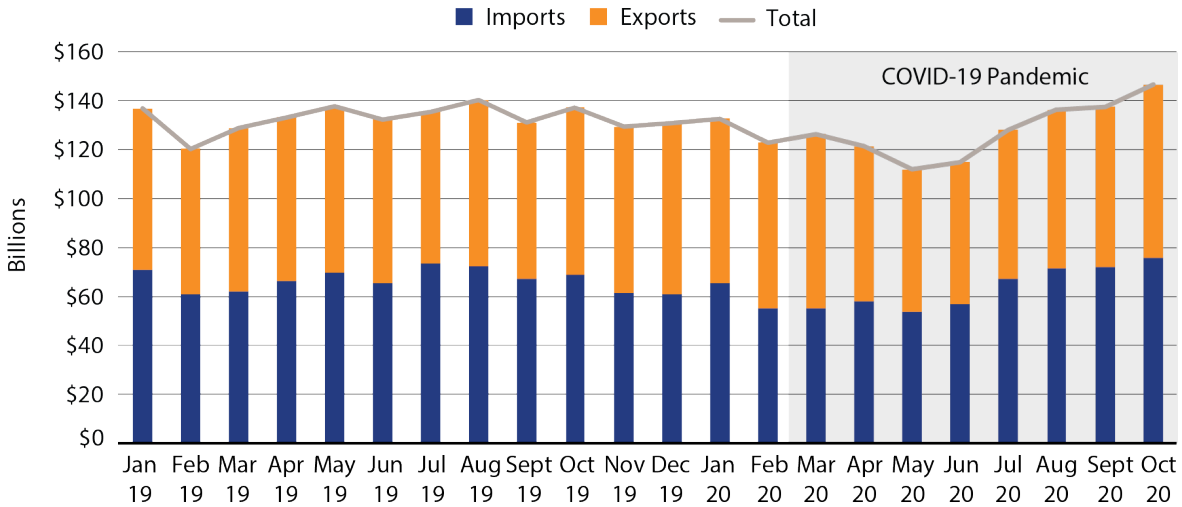
The COVID-19 Pandemic and 2020 Hurricane Season

On March 13, 2020, the President of the United States declared a national emergency due to the novel coronavirus disease (COVID-19) outbreak, which has had an unprecedented impact on global maritime trade and domestic port activity. The values of U.S. vessel and container imports were down as much as 33 percent (about $33 billion) and 23 percent (about $16 billion), respectively, in May 2020 compared to May 2019, while the values of U.S. vessel exports and container exports were down 34 percent (about $17 billion) and 19 percent (about $5 billion), respectively.[5] The subsequent rebound in cargo volume that occurred in the second half of 2020 resulted in record high monthly levels of container imports at multiple U.S. ports. Figure 2 shows the value of the U.S.-international freight flow transported by vessel, which also reflects the effects of the pandemic and subsequent rebound.

The pandemic's affects range from widespread to unique for each port, depending on factors, such as the types of commodities handled and vessel activity. According to the Federal Maritime Commission, vessel operators responded to decreased consumer demand and disruptions in the supply chain with

[5] U.S. Department of Commerce, Census Bureau, USA Trade Online, available at https://usatrade.census.gov/ as of November 2020.

Figure 2 Value of U.S.-International Freight Flow Transported by Vessel: January 2019-October 2020



SOURCE: U.S. Department of Commerce, Census Bureau, USA Trade Online, available at https://usatrade.census.gov/ as of November 2020.

"blanked" (also known as "void") sailings, where either a vessel skips a port or the entire service string is canceled, allowing operators to reduce the supply of vessel capacity to better match decreased vessel capacity demand.[6]

The top 10 container ports in 2019 handled 9 and 15 percent, respectively, fewer TEU in the 1st quarter and 2nd quarter of 2020 than in 2019. Several of these ports (e.g., Long Beach, Los Angeles, and Northwest Seaport Alliance) reported numerous blanked sailings in 2020. Early indications are that TEU volumes have rebounded, particularly at ports along the Pacific coast, requiring vessel operators to add capacity by utilizing larger vessels on previously scheduled voyages or providing previously unscheduled extra voyages (also known as "extra loaders").[7]

In addition, the combined effects of the COVID-19 pandemic and port closures due to an active hurricane season further disrupted port operation. The 2020 Atlantic hurricane season was the most active on record, with September 2020 the most active month on record. At the time of this writing, there have been 30 named storms, 13 hurricanes, and 6 major hurricanes—and the 2020 hurricane season had not officially ended.[8] An average hurricane season produces 12 named storms, 6 hurricanes, and 3 major hurricanes.[9] Hurricane disruptions may have a ripple effect on vessel schedules and dwell times, especially as vessels adjust port arrivals or departures, or even skip closed ports to avoid extreme weather at sea. As shown in figure 3, Hurricanes Dorian, Florence, and Michael resulted in more than 30 days of profiled ports under condition Zulu during the 2018 and 2019 hurricane seasons, with most ports closed for 2 days but with, at least, one port (the port of Wilmington, NC) closed for about 6 days.[10] Under condition Zulu, a port is closed and all port operations have been suspended by the Captain of the Port.

BTS has closely monitored the effects of COVID-19 pandemic on all modes of transportation. It provides a wide range of transportation statistics online, showing the COVID-19 pandemic's effects on passenger travel and freight shipments. These measures are available at https://www.bts.gov/covid-19. This report includes the latest annual port data available. It remains too early to determine the full effect of COVID-19 and the 2020 hurricane season on port performance as both were still ongoing at the time of this writing, but the full year data for 2020 will be analyzed in the next edition of this report.

[6] U.S. Federal Maritime Commission, *Statement of Chairman Michael A. Khouri on FMC Monitoring of Blanked Sailings*, available at https://www.fmc.gov/ as of November 2020.

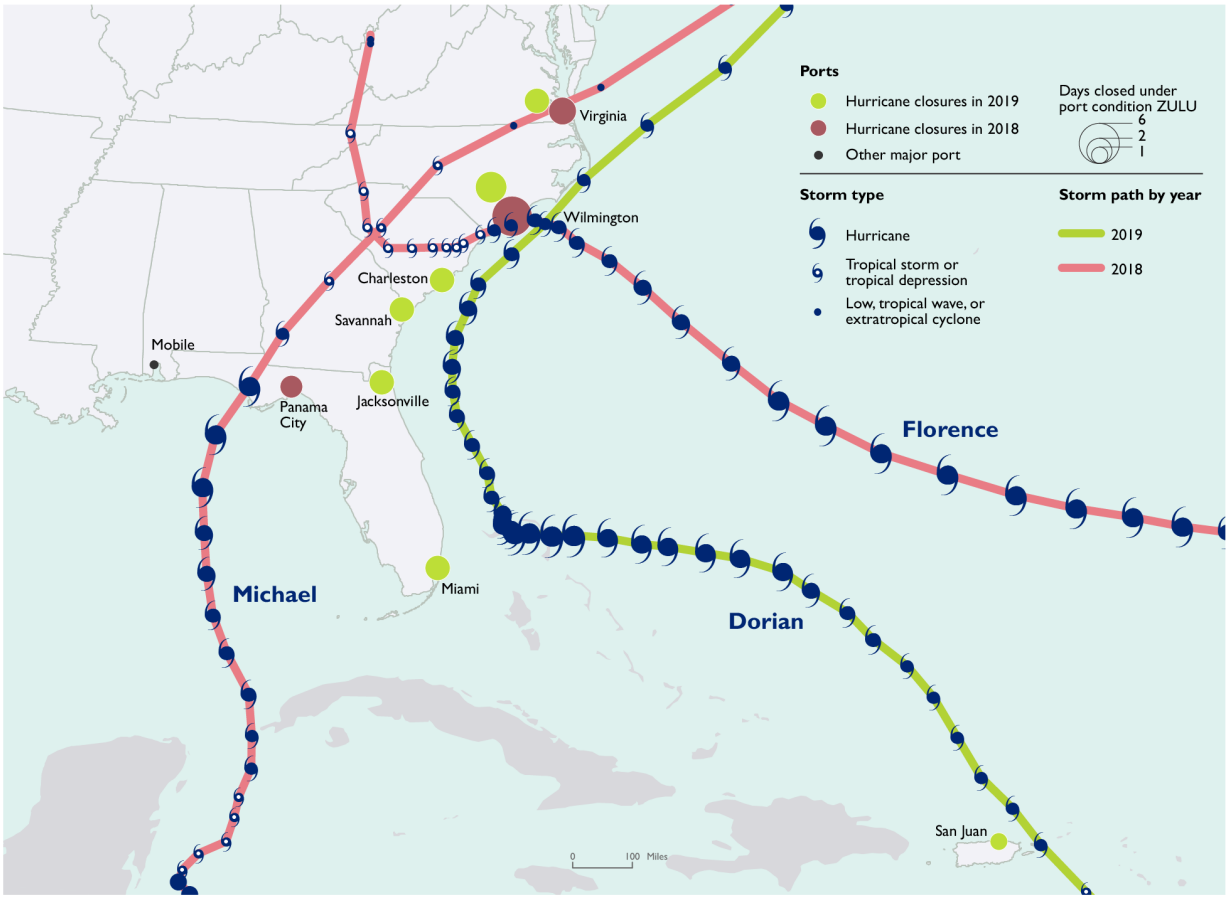
[7] U.S. Department of Transportation, Bureau of Transportation Statistics analysis; based upon TEU volumes at the ports of Houston, https://porthouston.com/; Los Angeles, https://www.portoflosangeles.org/; Long Beach, https://www.polb.com/; New York/New Jersey, https://www.panynj.gov/; Savannah, https://gaports.com/; Charleston, SC, http://scspa.com/about/statistics/; Oakland, https://www.oaklandseaport.com/; Port of Virginia, http://www.portofvirginia.com/; and Seattle/Tacoma, https://www.nwseaportalliance.com/; as of November 2020.

[8] U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center, available at https://www.nhc.noaa.gov/ as of November 2020.

[9] U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Prediction Center, available at https://www.noaa.gov/ as of December 2020.

[10] U.S. Coast Guard, *News Release: Coast Guard sets Port Condition Zulu in North Carolina* (09/12/2018) available at https://content.govdelivery.com/, and *News Release: Coast Guard reopens Ports of Wilmington, Morehead City with restrictions* (09/19/2018), available at https://content.govdelivery.com/ as of November 2020.

Figure 3 Hurricane Tracks and Select Container Port Closures: 2018 and 2019



NOTE: Panama City, FL, is not a profiled port, but included as a point of reference for where Hurricane Michael made landfall.

SOURCE: **Hurricane paths**—based on preliminary best track data from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Hurricane Center (NHC), NHC Data in GIS Formats, available at http://www.nhc.noaa.gov/gis, as of November 2020. **ZULU conditions**—based upon data from the U.S. Coast Guard's Homeport, as of November 2020.

New Statistical Boundaries of Ports

The U.S. Army Corps of Engineers (USACE) is responsible for collecting, processing, archiving, and distributing commercial vessel movement and cargo data, which includes the port data used by BTS to identify the ports profiled in this report. Traditionally, the USACE has collected dock-level data, which can be reported by geographic area, port, or waterway. The USACE is currently redesigning its statistical boundaries, in conjunction with BTS and the U.S. Department of Transportation's Maritime Administration, to 1) improve interoperability of data for geographic analysis, 2) ensure port statistical area polygons reflect contemporary municipal limits or legislation, and 3) reflect feedback from each port. This effort will support the *Geospatial Data Act* of 2018 and the *Foundations for Evidence-Based Policymaking Act* of 2019, specifically title II—the *OPEN Government Data Act*.[11,12] This is an ongoing project and may affect the ports profiled as well as commercial vessel movement and cargo data, especially if the docks within a port statistical area change.

Additional information is available at https://www.iwr.usace.army.mil/About/Technical-Centers/WCSC-Waterborne-Commerce-Statistics-Center/ or contact ceiwr-ndcwcsc.webmaster@usace.army.mil.

[11] P.L. 115-254

[12] P.L. 115-435

Top 25 Ports in 2019

The *FAST Act* requires the Port Performance Freight Statistics Program to identify the top 25 ports for each of these measures:

- overall cargo tonnage,
- 20-foot equivalent unit (TEU) of container cargo, and
- dry bulk cargo tonnage.

Table 4 lists the top 25 ports for each category (tonnage, container, and dry bulk) in 2019, a total of 50 ports.[13] Many ports are included in more than one category. For example, there are 6 ports that appear in all 3 of the top 25 lists:

1. Baltimore, MD
2. Houston, TX
3. Mobile, AL
4. New Orleans, LA
5. New York and New Jersey, NY & NJ
6. Virginia, VA

Of the 50 ports, 47 are located within the contiguous United States, plus 1 in Alaska, 1 in Hawaii, and 1 in Puerto Rico. The top 25 ports within each of these 3 categories have remained relatively consistent over the past few years. The 2019 list of 50 ports is like the 2018 list with a few minor changes:

- Freeport, TX, replaced Philadelphia, PA, as one of the top 25 ports by tonnage. However, Philadelphia, PA, remains in the top 25 in terms of TEU.
- Corpus Christi, TX; Vancouver, WA; and the Mid-America Port Commission replaced Chicago, IL; Longview, WA; and Long Beach, CA, in the list of top 25 ports by dry bulk tonnage. However, Long Beach remains in the top 25 in terms of TEU and tonnage.
- Camden-Gloucester, NJ, as one of the top 25 container ports, replaced Palm Beach, FL.

[13] Based upon port list published by the U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center ranked by loaded domestic and foreign TEU and does not include foreign empties. The TEU counts presented in the *Port Throughput Metrics* section are based upon American Association of Port Authorities (AAPA) and port authority data when available to include both empty and loaded containers, and thus reflects the full level of port activity.

Table 4 List of Top 25 Ports by Tonnage, Container, and Dry Bulk: 2019

	Top 25 List			Tonnage	Dry Bulk	Container
Port	Tonnage	Dry bulk	Container	Short tons (millions)	Short tons (millions)	TEU (000)
Anchorage, AK			●			339
Baltimore, MD	●	●	●	44	27	743
Baton Rouge, LA	●	●		73	33	
Beaumont, TX	●			101		
Boston, MA			●			222
Camden-Gloucester, NJ			●			181
Charleston, SC			●			1,854
Cincinnati-Northern KY, Ports of	●	●		37	32	
Cleveland, OH		●			12	
Corpus Christi, TX	●	●		111	10	
Detroit, MI		●			13	
Duluth-Superior, MN and WI	●	●		34	33	
Freeport, TX	●			30		
Gulfport, MS			●			156
Honolulu, HI			●			1,141
Houston, TX	●	●	●	285	25	2,447
Huntington - Tristate	●	●		37	25	
Indiana Harbor, IN		●			11	
Jacksonville, FL			●			993
Kalama, WA		●			17	
Lake Charles Harbor District, LA	●			58		
Long Beach, CA	●		●	81		5,260
Los Angeles, CA	●		●	63		6,265
Miami, FL			●			831
Mid-America Port Commission		●			11	
Mobile, AL	●	●	●	57	35	337
New Orleans, LA	●	●	●	92	48	434
New York and New Jersey	●	●	●	137	12	5,253
Oakland, CA			●			1,912
Pascagoula, MS	●			26		
Philadelphia, PA			●			396
Pittsburgh, PA		●			20	
Plaquemines, LA, Port of	●	●		53	37	
Port Arthur, TX	●			34		
Port Everglades, FL			●			704
Portland, OR		●			13	
Richmond, CA	●			28		
San Juan, PR			●			958
Savannah, GA	●		●	42		3,523
Seattle, WA		●	●		12	1,324
South Louisiana, LA, Port of	●	●		238	142	
St. Louis, MO and IL	●	●		31	26	
Tacoma, WA			●			1,603
Tampa, FL	●	●		30	11	
Texas City, TX	●			41		
Two Harbors, MN		●			17	
Vancouver, WA		●			10	
Virginia, VA, Port of	●	●	●	62	38	2,210
Wilmington, DE			●			206
Wilmington, NC			●			232

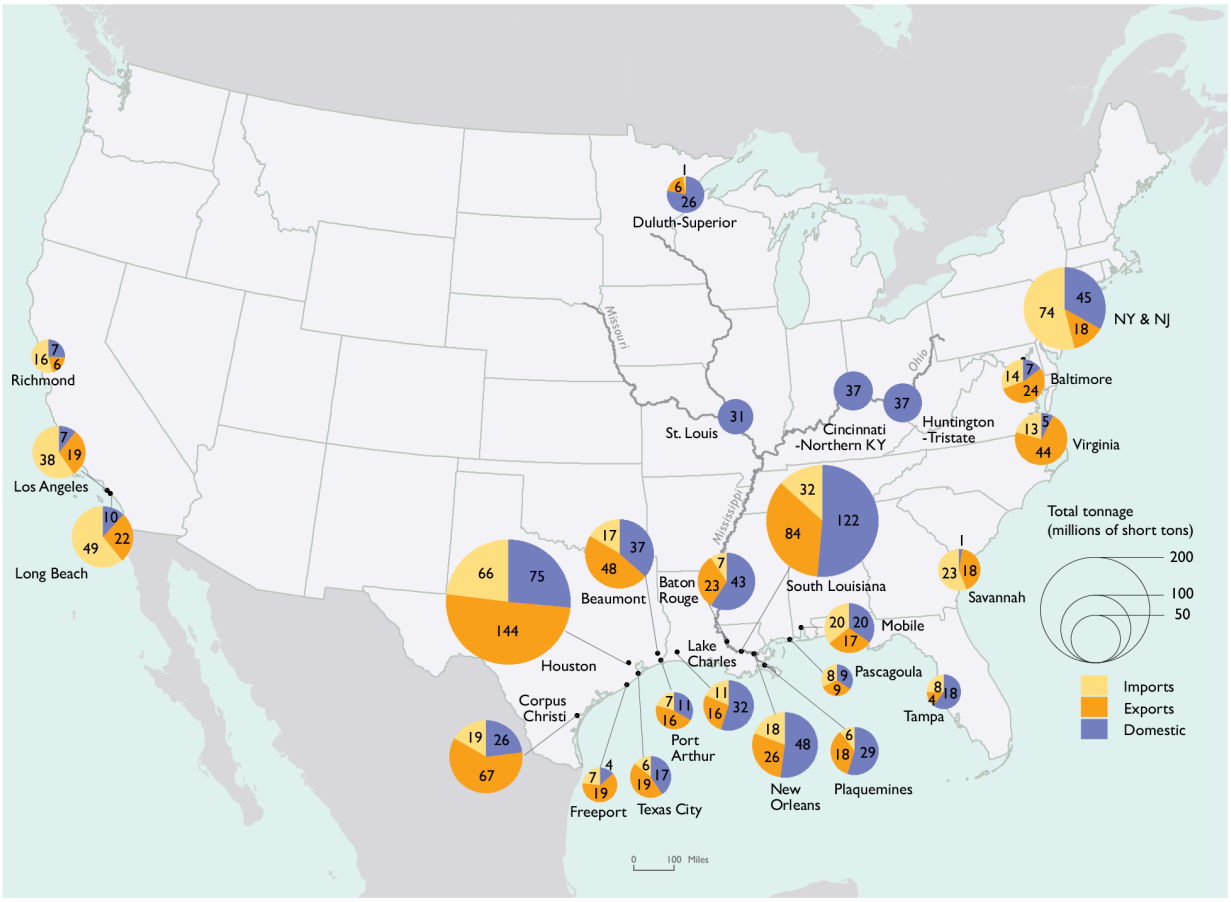
KEY: TEU = twenty-foot equivalent unit.

NOTES: *Appendix A* includes the full port name, city/location, and state(s). Based upon port list published by the U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center ranked by loaded domestic and foreign TEU. Container TEU does not include foreign empties.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, based upon 2019 data, U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation af of November 2020.

Detailed performance statistics for each port listed in table 2 are provided in the online *Port Profiles* available at https://www.bts.gov/ports. The geographic distribution of profiled ports varies by the type of freight handled. For example, most of the dry bulk ports are located along the Great Lakes and lower Mississippi, while the container ports are mostly located along the Atlantic, Gulf, and Pacific coasts. The volume of imports, exports, and domestic freight handled by each of the top 25 ports by tonnage, dry bulk tonnage, and TEU are depicted, respectively, in figures 4, 5, and 6.

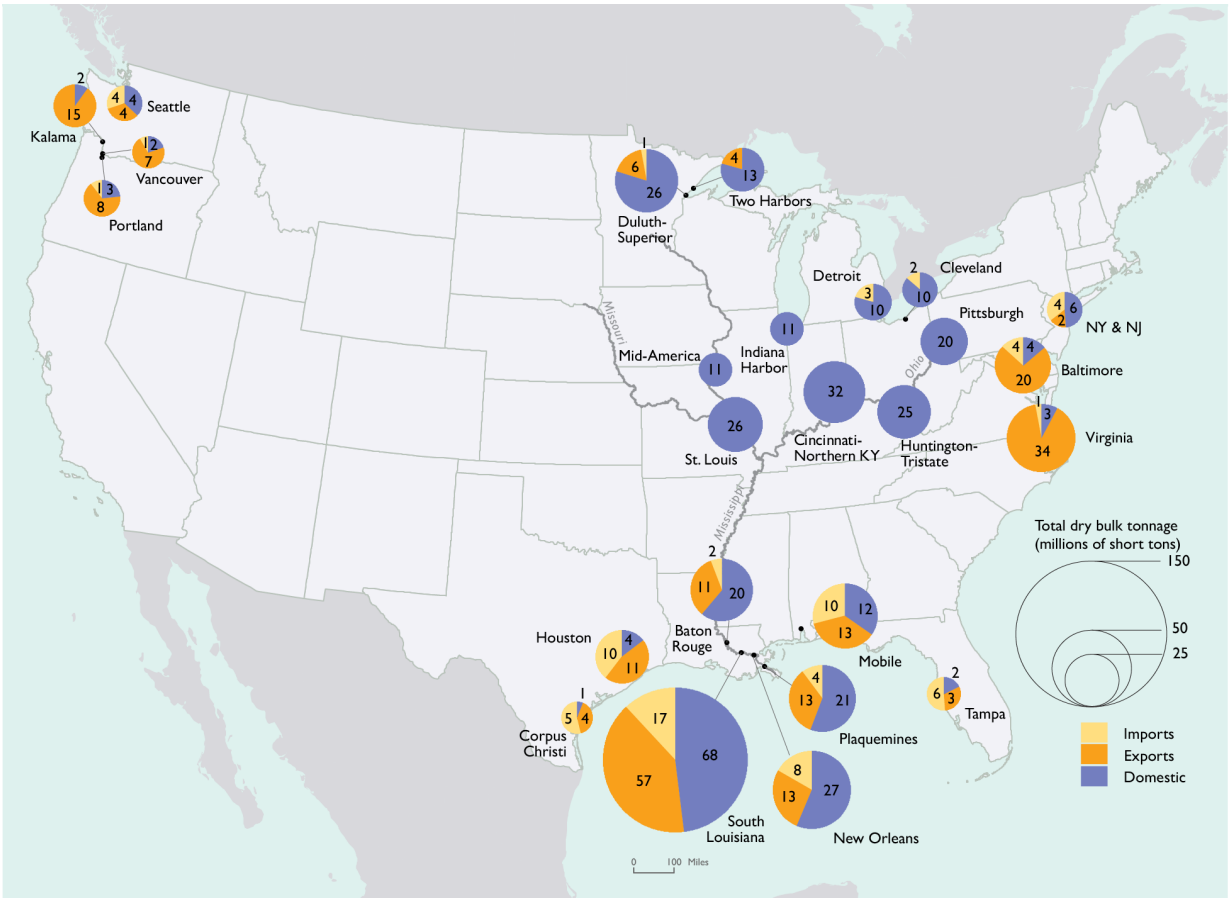
Figure 4 Top 25 Water Ports by Tonnage: 2019



NOTE: *Appendix A* includes the full port name, city/location, and state(s).

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, based upon 2019 data, U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

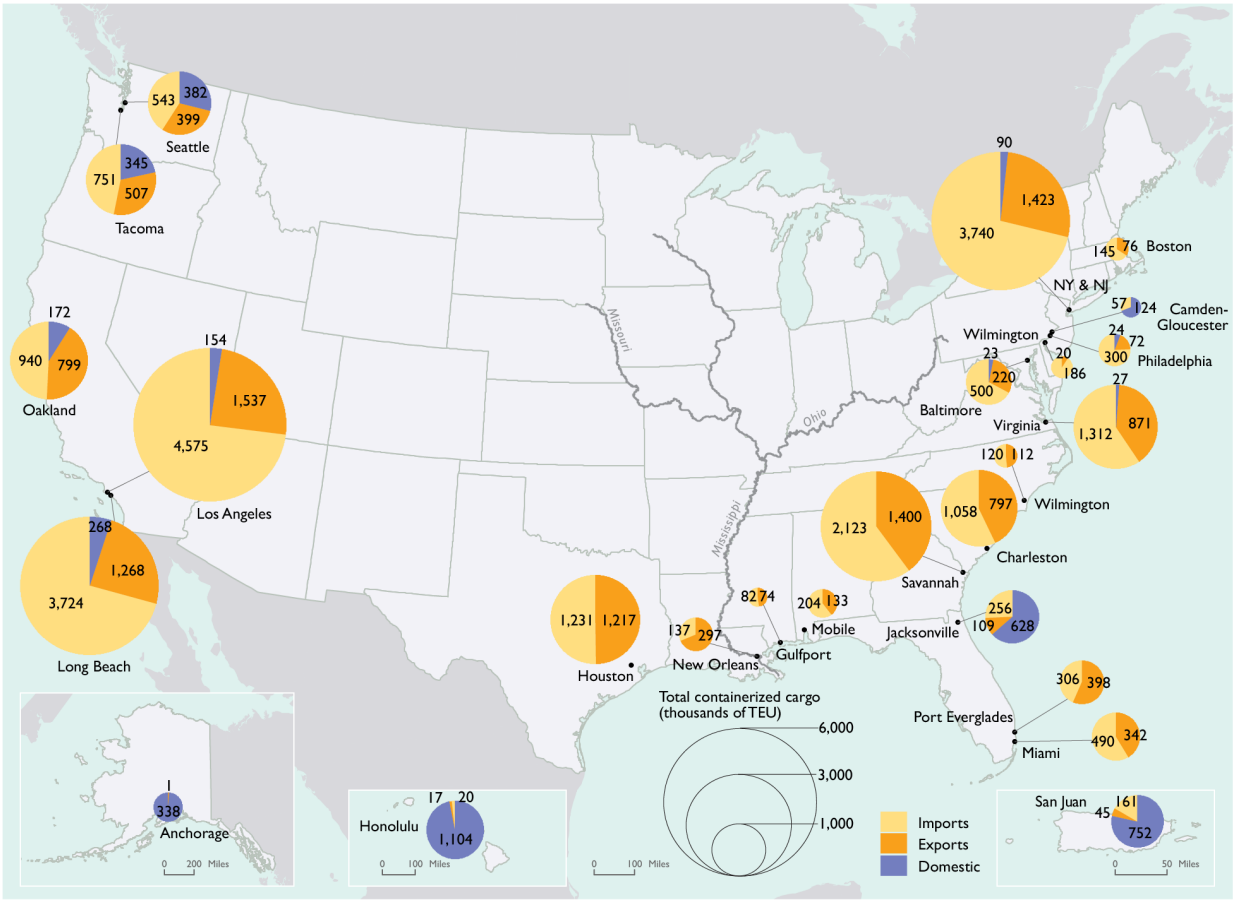
Figure 5 Top 25 Water Ports by Dry Bulk Tonnage: 2019



NOTE: *Appendix A* includes the full port name, city/location, and state(s).

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, based upon 2019 data, U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

Figure 6 Top 25 Water Ports by TEU: 2019



KEY: TEU = twenty-foot equivalent unit.

NOTE: *Appendix A* includes the full port name, city/location, and state(s). Based upon port list published by the U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center ranked by loaded domestic and foreign TEU. Container TEU does not include foreign empties.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, based upon 2019 data, U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

Port Throughput Metrics In 2019

Port throughput can be measured from different perspectives. For example, throughput could be measured by the amount of cargo or the number of vessels that a port handles over time. Port throughput is affected by many variables beyond physical capacity, such as:

- the volume of international or domestic cargo,
- competition between ports,
- contractual arrangements with shipping lines,
- disruptions caused by extreme weather (e.g., hurricanes), and
- connections to inland origins and destinations.

Most coastal ports handle both domestic and international cargo carried on oceangoing vessels, while inland ports (e.g., the ports of St. Louis, Cincinnati, Huntington, Mid-America, and Pittsburgh) almost exclusively handle domestic cargo moved on barges.

The throughput measures included in this program are summarized in table 5. Vessel dwell times are captured monthly, the food and farm products indices quarterly, and all other throughput measures annually in the *Port Profiles*. Annual data may mask seasonal variations in cargo flows that place periodic stress on available port capacity.

Table 5 Summary of Throughput Measures

Element/Metric	Description
Annual total tonnage	Domestic, foreign, import, export, and total short tons, 2019 and percentage change from 2018
Annual container throughput	Inbound loaded, outbound loaded, empty, and total TEU, 2019 and percentage change from 2018
Annual dry bulk tonnage	Domestic, foreign, import, export, and total short tons, 2019 and percentage change from 2018
Annual Ro/Ro units	Total units, 2019
Annual vessel calls by vessel type	2019 and percentage change from 2018
Top 5 commodities	Total short tons 2019 and percentage share of total
Top 5 food and farm product commodities	Total short tons 2019 and percentage share of total
Average container vessel dwell time	Within port terminal boundaries limited to terminals servicing container vessels
Average Ro/Ro vessel dwell time	Within port terminal boundaries limited to terminals servicing Ro/Ro vessels
Average liquid bulk vessel (tanker) dwell time	Within port terminal boundaries limited to terminals servicing liquid bulk vessels

NOTE: Metrics are presented in the online *Port Profiles*, which are available at www.bts.gov/ports.

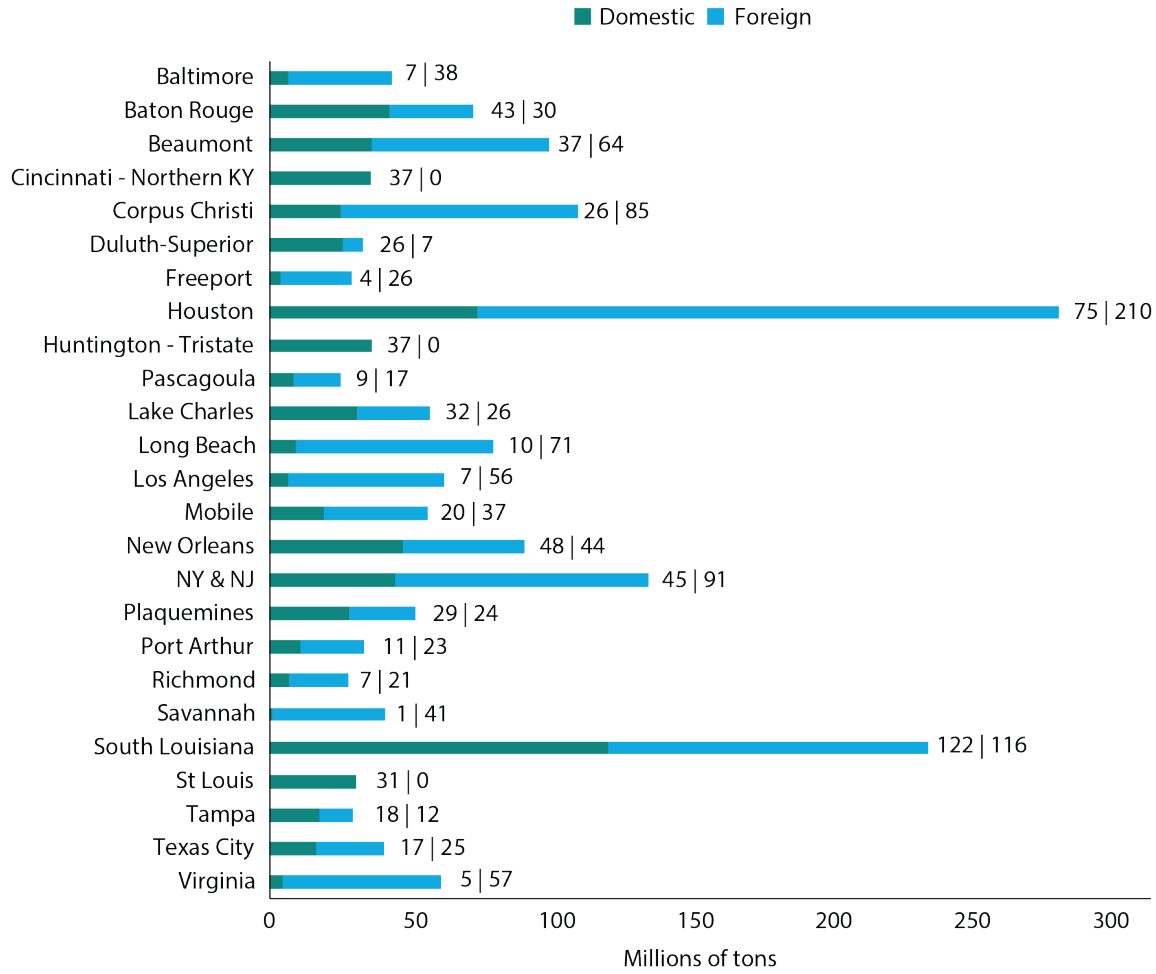
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Port Performance Freight Statistics Program*, November 2020.

Tonnage

The domestic and foreign short tons handled by the 25 top tonnage ports in 2019 are shown in figure 7. The top 25 ports handled a total of 1.82 billion tons of cargo in 2019, with 703.0 million tons of domestic cargo and 1.1 billion tons of foreign cargo. The highest tonnage figures are associated with ports that handle large quantities of both liquid bulk cargo (e.g., petroleum or chemicals) and dry bulk cargo (e.g., coal or grain), such as the ports of Houston and South Louisiana. Notably, the Port of South Louisiana dropped from 1st to 2nd place due to a considerable drop in agricultural exports, mirroring a national trend. According to the U.S. Department of Agriculture, U.S. exports of bulk agricultural commodities decreased by 7 percent, from $45.8 billion in 2018 to $42.4 billion in 2019.[14] Other changes include Freeport, TX, replacing Philadelphia, PA, as one of the top 25 ports by tonnage. However, Philadelphia, PA, remains in the top 25 in terms of TEU.

[14] U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade at a Glance, available at https://www.ers.usda.gov/ as of November 2020.

Figure 7 Tonnage Handled by the Top 25 Tonnage Ports: 2019

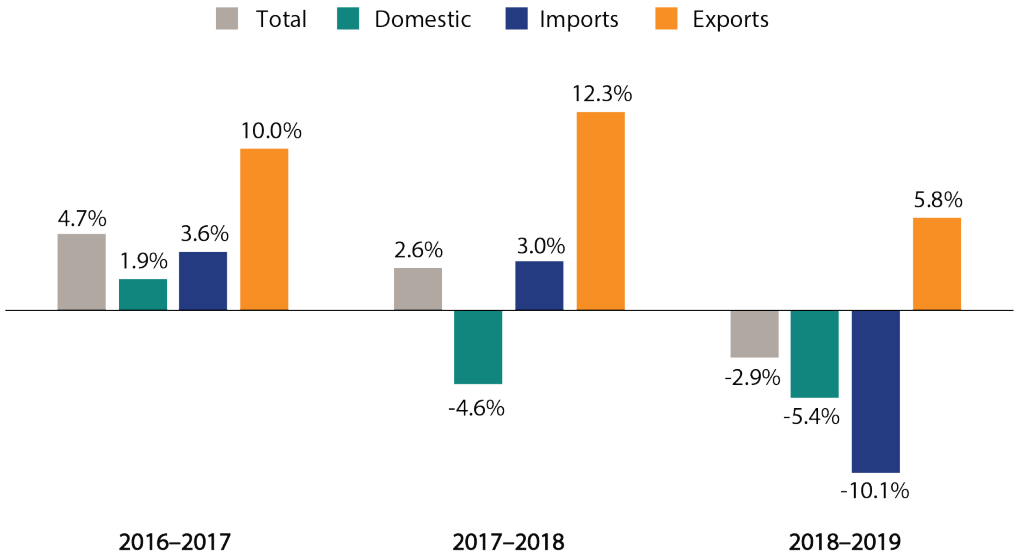


NOTES: **Domestic** is cargo that moves from a U.S. dock to a U.S. dock. **Foreign** is waterborne import, export, and in-transit cargo between the United States and any Foreign country. Appendix A includes the full port name, city/location, and state(s).

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

The 25 top tonnage ports handled 55.1 million fewer tons of cargo in 2019 than in 2018—a 2.9 percent decrease. Foreign cargo handled by the top 25 ports increased its share of the total in each of the past few years—the share of foreign tonnage grew from 56.3 percent in 2016 to 61.5 percent in 2019. The shift is due largely to a high growth rate in export tonnage. Figure 8 shows that, year over year, export tonnage grew 10.0, 12.3, and 5.8 percent, respectively, between 2017 and 2019. Conversely, domestic tonnage continued to decline, decreasing 4.6 percent in 2018 and 5.4 percent in 2019.

Figure 8 Annual Percent Change in Tonnage Handled at the Top 25 Tonnage Ports: 2017–2019

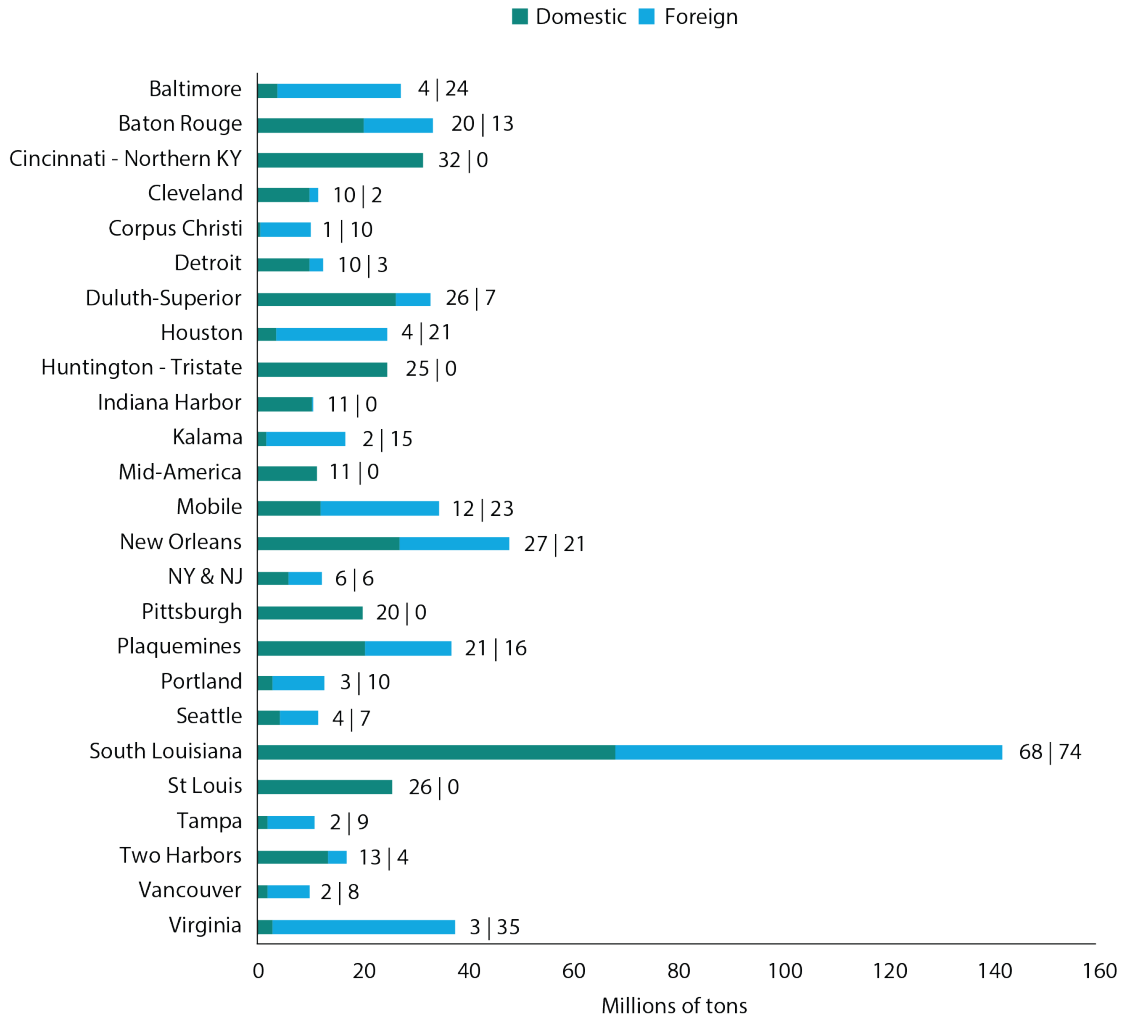


SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

Dry Bulk

The domestic and foreign short tons handled by the 25 top dry bulk tonnage ports in 2019 are shown in figure 9. The top 25 ports handled a total of 667.7 million tons of cargo in 2019, comprising 362.2 million tons of domestic and 305.5 million tons of foreign cargo. The top 25 ports by dry bulk tonnage (e.g., coal, grain, iron ore) remained relatively consistent between 2018 and 2019. The Port of South Louisiana remained in the top spot and handled by far the greatest volume of dry bulk cargo in 2019, almost 3 times the amount handled by the number two ranked Port of New Orleans and almost 4 times more than the number three ranked Port of Virginia. The Port of South Louisiana is a major export hub not only for dry bulk cargo but also for liquid bulk cargo (e.g., petroleum and chemicals). Other changes include Corpus Christi, TX; Vancouver, WA; and the Mid-America Port Commission, replacing Chicago, IL; Longview, WA; and Long Beach, CA in the list of the top 25 ports by dry bulk tonnage.

Figure 9 Tonnage Handled by the Top 25 Dry Bulk Tonnage Ports: 2019



NOTES: **Domestic** is cargo that moves from a U.S. dock to a U.S. dock. **Foreign** is waterborne import, export, and in-transit cargo between the United States and any Foreign country. *Appendix A* includes the full port name, city/location, and state(s).

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

Figure 10 shows that dry bulk tonnage handled at the top 25 dry bulk tonnage ports grew 6.7 and 0.3 percent, respectively, in 2017 and 2018. However, total dry bulk tonnage decreased by 8.7 percent in 2019, which largely reflects the considerable drop in agricultural exports as discussed above. Although imports grew between 2018 and 2019 while exports decreased, exports accounted for 73.3 percent of the total foreign tonnage. Another factor is U.S. coal exports, which decreased by 22.8 million short tons (about 20 percent) in 2019.[15]

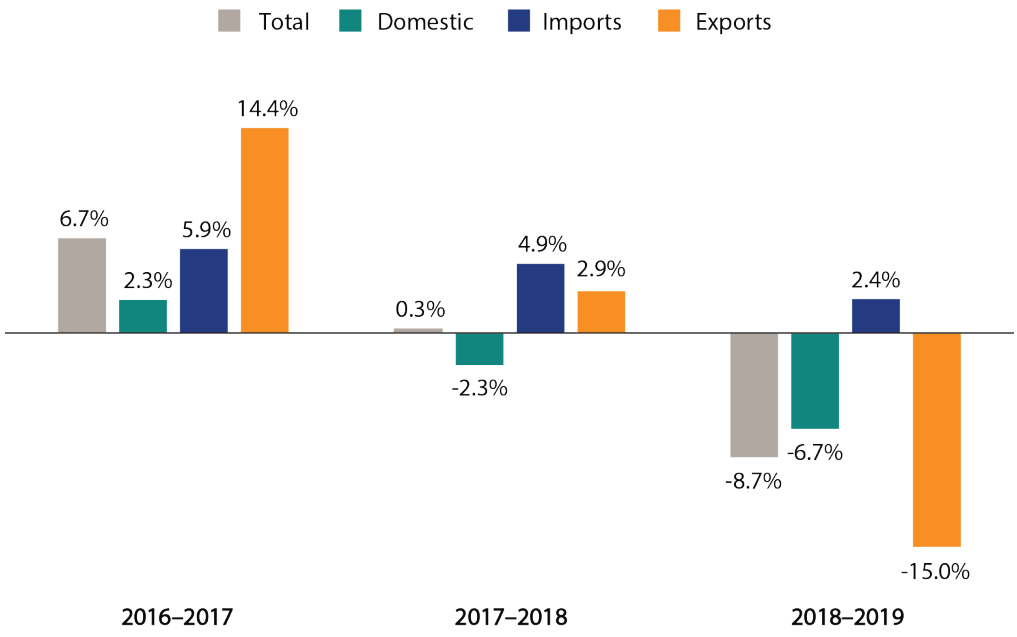
[15] U.S. Department of Energy, Energy Information Administration, *Coal explained: Coal imports and exports* (June 2020), available at https://www.eia.gov/ as of November 2020.

Container / TEU

Figure 11 displays the total number of TEU handled by the top 25 U.S. container ports in 2019. The top 25 ports handled a total of 55.5 million TEU in 2019. The 55.5 million TEU in 2019 included 25.9 million TEU of loaded inbound cargo and 14.7 million TEU of loaded outbound cargo. The top 25 container ports accounted for 96 percent of the loaded TEU handled in 2019.[16] The highest TEU volumes are associated with coastal container ports, such as the ports of Long Beach, Los Angeles, and New York

[16] Based upon port data published by the U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center ranked by loaded domestic and foreign TEU.

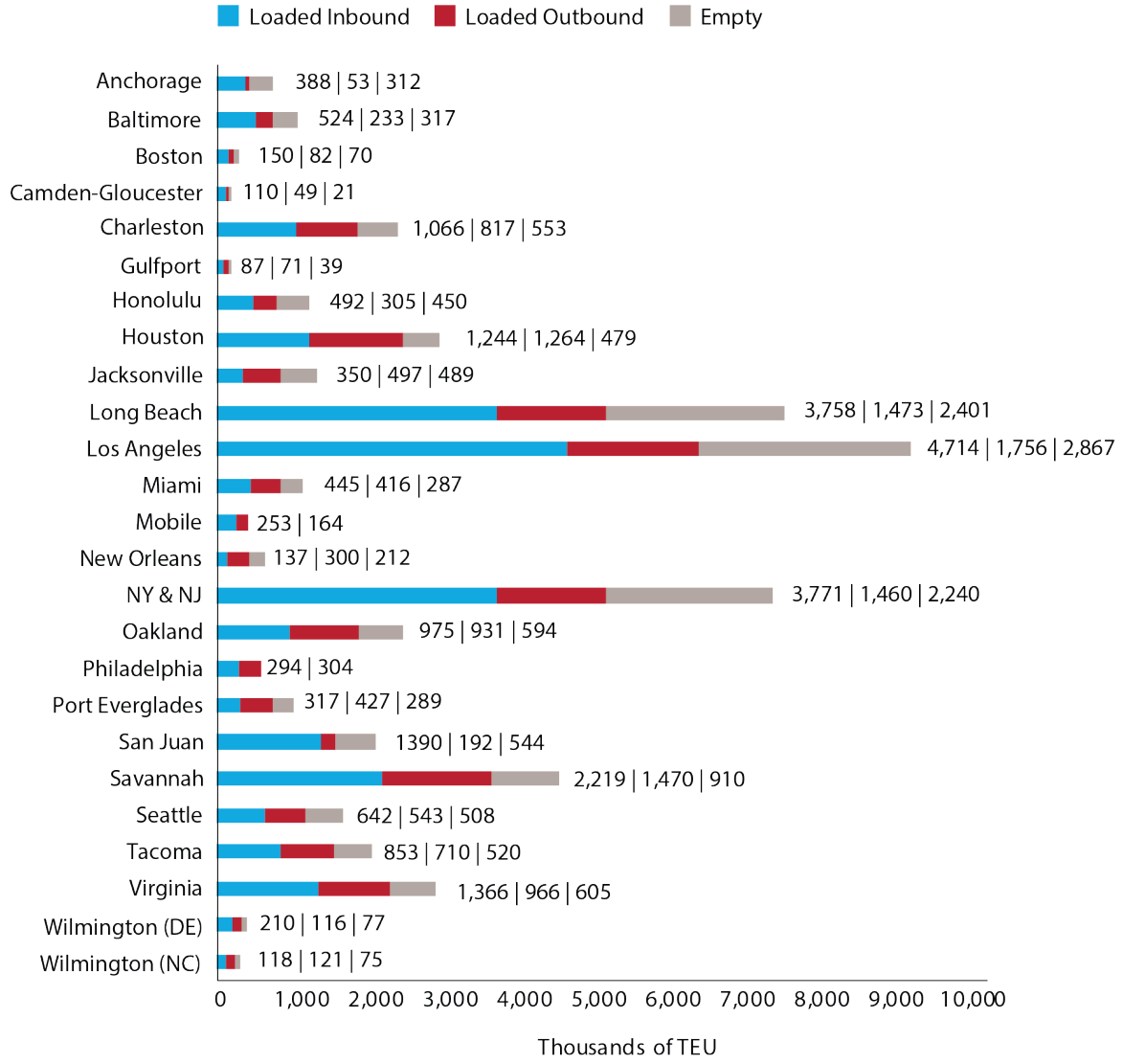
Figure 10 Annual Percent Change in Dry Bulk Tonnage Handled at the Top 25 Dry Bulk Tonnage Ports: 2017–2019



NOTES: **Domestic** is cargo that moves from a U.S. dock to a U.S. dock. **Foreign** is waterborne import, export, and in-transit cargo between the United States and any Foreign country. *Appendix A* includes the full port name, city/location, and state(s).

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation as of November 2020.

Figure 11 TEU Handled by the Top 25 Container Ports: 2019



KEY: TEU = twenty-foot equivalent unit.

NOTES: Based on port list published by U.S. Army Corps of Engineers' Waterborne Commerce Statistics Center ranked by loaded domestic and foreign TEU. Ports were provided the opportunity to verify their TEU volumes through the American Association of Port Authorities. *Appendix A* includes the full port name, city/location, and state(s).

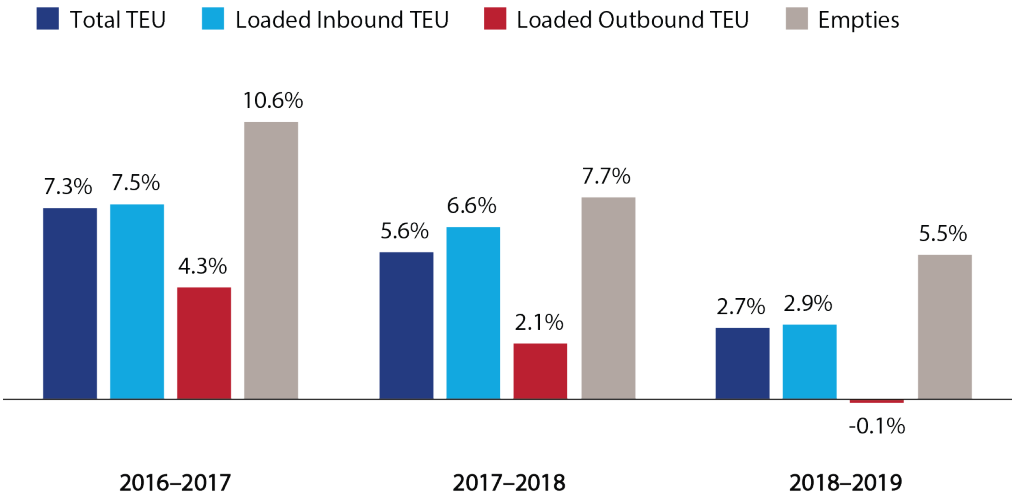
SOURCE: **Ranking**—U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation, as of November 2020. **TEU**—American Association of Port Authorities, Port Industry Statistics, available at www.aapa-ports.org as of November 2020 and Port Authorities.

and New Jersey. These 3 ports account for about 44 percent of the total TEU handled at the top 25 container ports in 2019.[17] In 2019 these three ports also handled about 7.5 million empty TEU, or about 51 percent of the total empty TEU handled at the top 25 ports. Annual TEU includes both loaded and empty containers as the effort to move a container is expended regardless of whether it is full or empty. In 2019 Camden-Gloucester, NJ, is on the top 25 container port list, replacing Palm Beach.

Figure 12 shows that, year over year, total TEU grew 7.3, 5.6, and 2.7 percent for 2017, 2018, and 2019, respectively, mostly from growth in inbound cargo and handling empties.

[17] American Association of Port Authorities, Port Industry Statistics, available at www.aapa-ports.org as of November 2020 and Port Authorities.

Figure 12 Annual Percent Change in TEU Handled at the Top 25 Container Ports: 2017–2019



KEY: TEU = twenty-foot equivalent unit.

NOTES: Based on port list published by U.S. Army Corps of Engineers' Waterborne Commerce Statistics Center ranked by loaded domestic and foreign TEU. Ports were provided the opportunity to verify their TEU volumes through the American Association of Port Authorities.

SOURCE: **Ranking**—U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, special tabulation, as of November 2020. **TEU**—American Association of Port Authorities, Port Industry Statistics, available at www.aapa-ports.org as of November 2020 and Port Authorities.

Estimated Vessel Dwell Times In 2019

The time vessels spend in a port is a major factor contributing to cargo throughput and performance. BTS estimates dwell time for container, liquid bulk (tanker), and Ro/Ro vessels using U.S. Coast Guard Automatic Identification System (AIS) data. AIS is a ship-to-ship and ship-to-shore maritime navigation safety communications system that monitors and tracks ship movements primarily for collision avoidance.[18] Average container, tanker, and Ro/Ro vessel dwell times for individual ports are shown in the online *Port Profiles* at www.bts.gov/ports.

Nationally, U.S. vessel dwell times remained stable in 2019, with little variation from 2018 as follows:

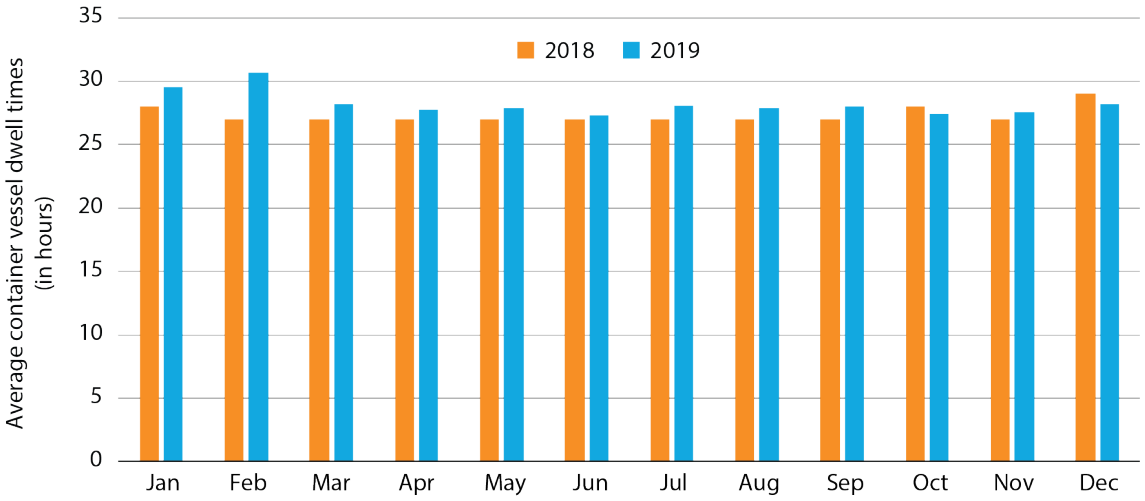
- The average 2019 dwell time of container vessels at the top 25 U.S. container ports was estimated at 28.2 hours, up from 27.3 hours in 2018.
- The average 2019 dwell time of tanker vessels at the top 21 tonnage ports[19] was estimated at 43.3 hours, down slightly from 43.5 hours in 2018.

As figure 13 shows, the month-to-month U.S. average container dwell time varies by about an hour, although vessels dwell longer in a port during winter months when ice and snow can slow port operations. For example, the average container vessel dwell time was about 31 hours in February 2020, which is about 3-hours longer than

[18] 47 CFR §80.5

[19] The ports of Cincinnati-Northern KY; Duluth-Superior, MN and WI; Huntington-Tristate, KY, OH, WV; St. Louis, MO and IL are located on rivers / the Great Lakes and handle primarily barges, which are not equipped with AIS and thus not included in the tanker dwell times.

Figure 13 Estimated Average U.S. Container Vessel Dwell Time by Month: 2018 and 2019



NOTES: AIS signals are susceptible to interference, which can result in missing or incomplete dwell time records. This issue may impact the reliability of our estimated dwell times. However, in collaboration with the USACE, BTS takes numerous data quality steps each year, including verifying our port terminal boundaries to account for expansion or reconfiguration and changes in vessel activity at each port terminal.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, calculated using AIS data provided by U.S. Army Engineer Research and Development Center, as of December 2019.

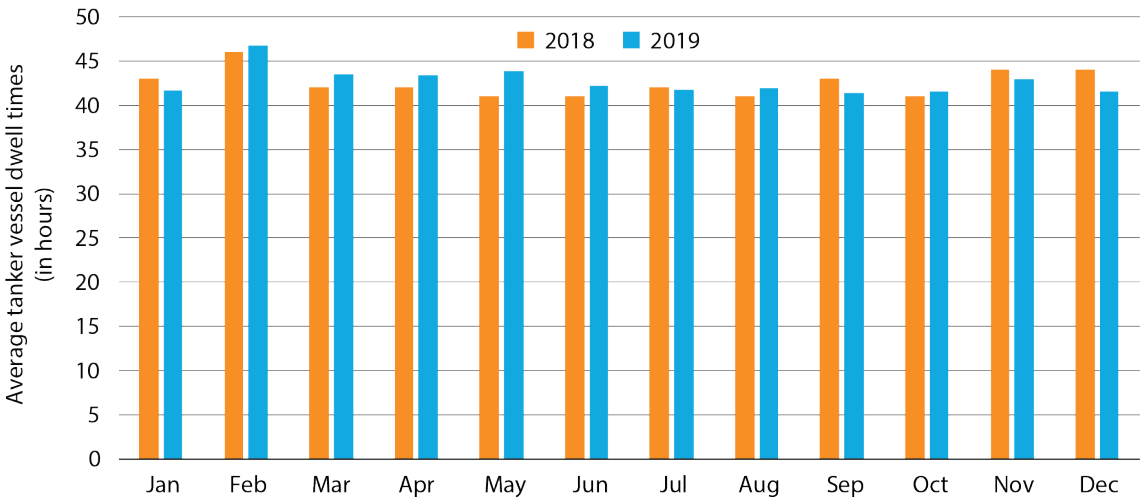
the estimated annual average. This may be attributable to the record wet precipitation that caused rivers to be near or above flood stage across much of the Southeast in February 2020, when flood-levels of rainfall on multiple days caused landslides and severe damage to roads and other infrastructure.[20] Estimates were based on 17,094 observed vessel calls in 2019 and 15,249 in 2018. Vessel calls of less than 4 hours or more than 120 hours were excluded as representing calls either too short for significant cargo handling or too long for normal operations.

As figure 14 shows, the month-to-month U.S. average tanker-vessel dwell time tends to vary by about an hour (except for February 2020 as noted above). According to the U.S. Census Bureau, mineral fuel and oil, which are transported by tankers, accounted for more than half of the tonnage handled by U.S. ports in 2019. These commodities require longer dwell times for ports to handle than cargo that is containerized. Other commodities, such as industrial chemicals, are also transported by tankers.[21] Estimates were based on observed 17,083 vessel calls in 2019 and 15,542 in 2018. Vessel calls of less than 4 hours or more than 120 hours were excluded as representing calls either too short for significant cargo handling or too long for normal operations.

[20] U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Assessing the U.S. Climate in February 2020*, available at https://www.ncei.noaa.gov/ as of November 2020.

[21] U.S. Department of Commerce, Census Bureau, USA Trade Online, https://usatrade.census.gov/ as of November 2020.

Figure 14 Estimated Average U.S. Tanker Vessel Dwell Time by Month: 2018 and 2019



NOTES: AIS signals are susceptible to interference, which can result in missing or incomplete dwell time records. This issue may impact the reliability of our estimated dwell times. However, in collaboration with the USACE, BTS takes numerous data quality steps each year, including verifying our port terminal boundaries to account for expansion or reconfiguration and changes in vessel activity at each port terminal.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, calculated using AIS data provided by U.S. Army Engineer Research and Development Center, as of December 2019.

Port Capacity Metrics In 2019

Many factors influence port capacity, which is a measure of the maximum throughput that a port and its terminals can handle over a given period, in tons, twenty-foot equivalent unit (TEU), or other units, such as barrels of liquid bulk (e.g., crude petroleum) or number of vehicles handled. Maximum throughput, or capacity, can be set by physical constraints, including the physical size (acreage) of terminals, length of berths, depth of access channels, and the amount and type of cargo handling equipment (e.g., container cranes). Port capacity can also be influenced by operational factors not currently measured in this program (e.g., gate hours) and economic factors, including labor availability and cost. These factors are typically proprietary, making them less likely to be available for public use. Port features that influence capacity are summarized in table 6.

Table 6 Summary of Port Capacity Metrics

Metric	Description
Channel depth (feet)	The vertical distance from the water surface to the bottom of a channel Channel depths may constrain port capacity, especially at coastal ports that serve the largest vessels (e.g., neo panamax container vessels), which require up to 50-feet deep channels
Air draft restrictions (feet)	The distance between the mean low-level water line and the lowest point of a bridge or other structure over a shipping channel The maps in the online *Port Profiles* present the limiting bridges located within the port vicinity. These restrictions may not affect all terminals in the port, especially if the bridge does not span navigational channels between the marine terminals and open water
Berth length for container ships (feet)	A location to stop and secure a vessel at a container terminal to load / unload cargo The container terminal table in the online *Port Profiles* presents the total linear footage, but berth designs may vary by terminal and pose different port capacity constraints
Container terminal size (acreage)	A designated area where loaded and empty containers are stored for transfer between vessels and truck or rail modes The container terminal table in the online *Port Profiles* presents the total acreage available but does not imply utilization
Number and type of container cranes	Number of dedicated container cranes for all the terminals at the top 25 container ports capable of serving 1) Panamax, 2) Post-Panamax, and 3) Super Post-Panamax vessels
Presence of rail transfer facilities	On-dock rail transfer facilities are present at 14 of the top 25 container ports Nearby rail facilities are indicated in the overview for each online Port Profile

NOTES: Metrics for each of the 25 port are presented in the online *Port Profiles* www.bts.gov/ports. Ports were provided the opportunity to verify capacity data through the American Association of Port Authorities.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Port Performance Freight Statistics Program, November 2020.

Air Draft and Channel Depths

Air draft and channel depths potentially limit port capacity as larger vessels come into service. These restrictions may not affect all terminals in a port. For example, some ports might have terminals with no air draft restrictions (e.g., container terminals at the Port of Virginia) because no bridges cross their navigation channels. Table 7 shows the air drafts by limiting bridges for select ports, and the online *Port Profiles* show what, if any, air draft or channel depth restrictions exist within the port vicinity.

Air draft restrictions may be eliminated as bridges are either raised or replaced. For example, in October 2020, the new Gerald Desmond Bridge in the Port of Long Beach's vicinity opened, raising the air draft over the Back Channel from 155 to 205 feet. The higher the bridge, the more stacked containers that can pass under (e.g., 8-foot tall containers can reach a combined height of 144 feet when stacked 18 high aboard a megaship's cargo deck).

Approach channel depths can limit the size of vessels able to call at a port. The Pacific coast ports with their natural harbors, such as the ports of Long Beach and Los Angeles, have the deepest channels. The Mississippi River ports of Cincinnati-Northern Kentucky, Huntington, Pittsburgh, and St. Louis have the shallowest channels. Even if a port's minimum channel depth allows for megaships, the individual marine terminals within the port vicinity may not have the minimum depth alongside to handle them.

Table 7 Air Drafts by Limiting Bridge for Select Container Ports: 2019

Port	Bridge	Air draft in feet
Baltimore	Chesapeake Bay	182
	Francis Scott Key Bridge	185
Camden-Gloucester	Walt Whitman Bridge	150
	Delaware Memorial	188
Charleston	Ravenel	185
Jacksonville	Napoleon B. Broward	169
Long Beach	Gerald Desmond	155
Los Angeles	Vincent Thomas	185
Mobile	Cochrane-Africatown	140
New Orleans	Crescent City	150
New York / New Jersey	Bayonne and Verrazano-Narrows	215
Philadelphia	Benjamin Franklin	135
	Delaware Memorial	188
Savannah	Talmadge Memorial	185
Seattle	West Seattle	140
Tampa	Sunshine	155
Wilmington (DE)	Delaware Memorial	188

SOURCE: U.S. Department of Homeland Security, U.S. Coast Guard, compiled and verified using National Oceanic and Atmospheric Administration (NOAA) Charts. Updated by the U.S. Department of Transportation, Bureau of Transportation Statistics using National Oceanic and Atmospheric Administration Charts, November 2020.

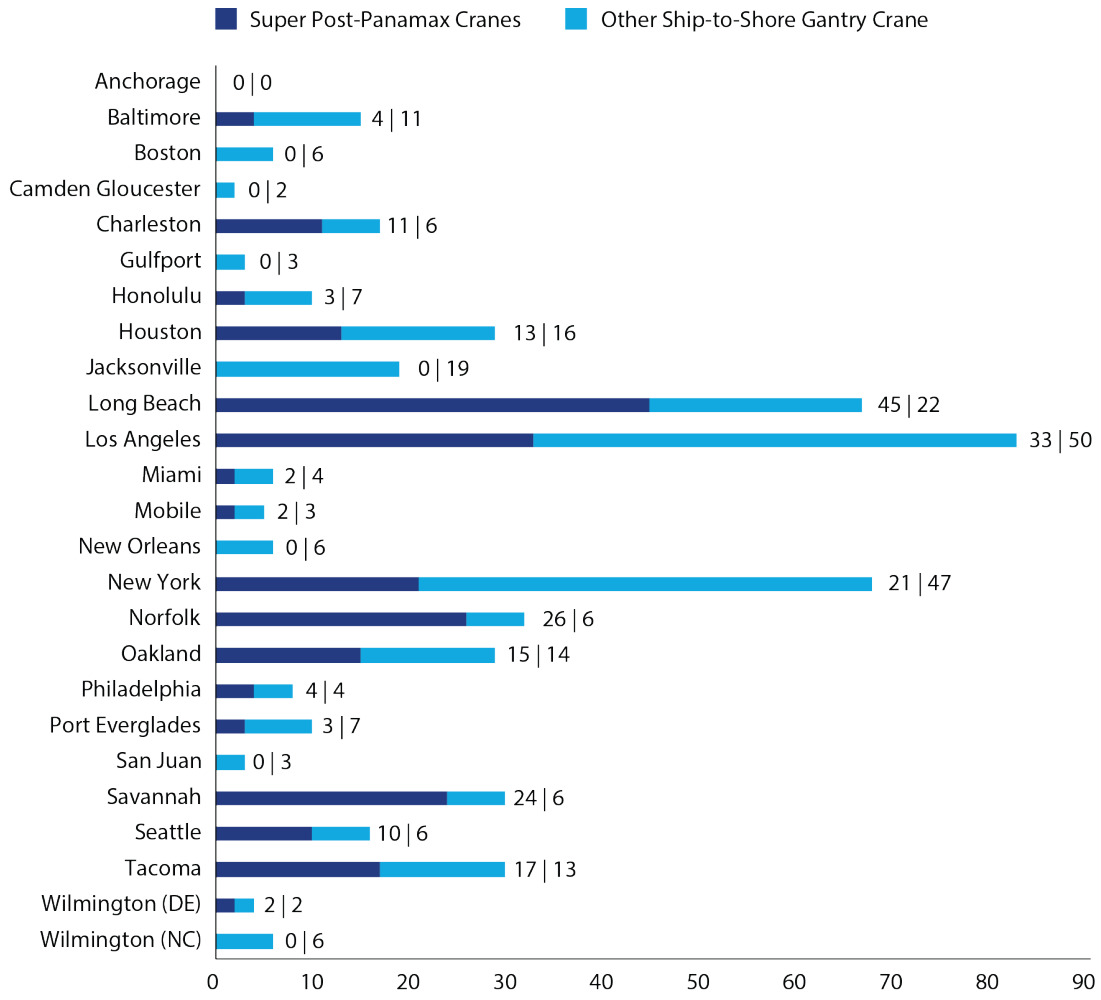
Container Cranes

Container cranes are the link between the waterside and landside, including truck and rail connections, or the container yard used for short-term storage. The number and size of cranes affects the number and size of container vessels a terminal can service simultaneously. The top 25 container ports operated a total of 504 ship-to-shore gantry cranes[22] in 2019, down 30 from 534 in 2018; 235 of these were classified as super post-panamax.[23] Several ports are currently replacing cranes and/or have container terminal improvement projects underway, thus the number and type of cranes is currently in flux. Figure 15 shows the number of shore-side container cranes used to load and unload container vessels.

[22] A crane mounted on a "gantry;" a frame or structure spanning an intervening space, often a workspace. The gantry may be mounted on wheels.

[23] A class of crane that can fully load and unload containers from the largest container vessels currently in operation that can be up to 24-rows of containers in width.

Figure 15 Total Number of Container Cranes at the Top 25 Container Ports: 2019



NOTES: Ports were provided the opportunity to verify their crane counts through the American Association of Port Authorities. The port of Anchorage utilizes cargo-handling equipment (e.g., container on trailer) other than ship-to-shore gantry cranes to transfer containers to and from vessels.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics analysis, based upon individual port websites, including links to terminal-specific websites as of November 2020.

Rail Connections

All major ports are either directly connected to the rail system or have nearby rail facilities. Bulk terminals have a variety of rail service connections suited to the type and volume of commodities they handle. Most container terminals have either on-dock transfer facilities within the terminal boundaries or off-dock facilities nearby. The online *Port Profiles* provides an overview of port rail connections. Table 8 lists the number of active terminals at the top 25 container ports. A total of 44 out of the 88 active container terminals (50 percent) at these ports had on-dock rail access in 2019.

Table 8 Number of Container Terminals with On-Dock Rail Access at the Top 25 Container Ports: 2019

Port	Number of container terminals	On-dock rail access
Anchorage, AK	1	0
Baltimore, MD	2	1
Boston, MA	2	1
Camden-Gloucester, NJ	1	0
Charleston, SC	4	0
Gulfport, MS	1	1
Honolulu, HI	2	0
Houston, TX	5	0
Jacksonville, FL	3	3
Long Beach, CA	8	6
Los Angeles, CA	8	7
Miami, FL	4	2
Mobile, AL	2	2
New Orleans, LA	1	0
New York, NY & NJ	6	6
Oakland, CA	5	0
Philadelphia, PA	2	0
Port Everglades, FL	2	0
San Juan, PR	3	0
Savannah, GA	2	1
Seattle, WA	6	2
Tacoma, WA	12	7
Virginia, VA	4	4
Wilmington, DE	1	0
Wilmington, NC	1	1

NOTES: Ports were provided the opportunity to verify their terminal facilities through the American Association of Port Authorities. Active container terminals determined by observed container vessel calls using AIS data. For on-dock rail access methodology, please see technical documentation at https://www.bts.gov/ports.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics analysis, based upon individual port websites, including links to terminal-specific websites as of November 2020.

Conclusion

Waterborne vessels are the leading transportation mode for international freight, moving 41 percent of freight value in 2019—over $1.7 trillion. Nearly $1.1 trillion of this amount is containerized, which is the primary means for moving intermodal cargo. Of the top 25 U.S. international freight gateways (airports, land border crossings, and maritime ports) by value, 10 are maritime ports, including the ports of New York and New Jersey, Los Angeles, Long Beach, Houston, Savannah, Virginia, Charleston, Baltimore, Oakland, and Tacoma.

The *Fixing America's Surface Transportation* (FAST) Act requires the Bureau of Transportation Statistics to report on the top 25 ports as measured by 1) overall cargo tonnage, 2) dry bulk cargo tonnage, or 3) by twenty-foot equivalent unit (TEU) of containerized cargo. The top 25 ports for each category (tonnage, container, and dry bulk) in 2019 totaled to 50 ports because many ports appear in more than one category. The Port Performance Freight Statistics Program provides nationally consistent capacity and throughput performance measures for these ports.

Of the 50 ports profiled in 2019, forty-seven are located within the contiguous United States, plus one each in Alaska, Hawaii, and Puerto Rico. The ports of Baltimore, Houston, Mobile, New Orleans, New York and New Jersey, and Virginia are in the top 25 for all three cargo categories. From 2015 to 2019, tonnage handled at the top 25 ports increased by 4.4 percent and the number of TEU by 18.6 percent, while the tonnage handled by the top 25 dry bulk ports decreased by 4.9 percent.

Top 25 Tonnage Ports in 2019

In 2019, accounting for 96 percent of the loaded TEU handled, the top 25 container ports handled a total of 55.5 million TEU. The highest tonnage figures are associated with ports that handle large quantities of both liquid bulk cargo (e.g., petroleum or chemicals) and dry bulk cargo (e.g., coal or grain), such as the ports of Houston and South Louisiana. The top 25 ports have remained relatively consistent over the past few years. Freeport replaced Philadelphia as one of the top 25 ports by tonnage in 2019.

Top 25 Dry Bulk Ports in 2019

The top 25 dry bulk ports handled a total of 667.7 million tons of cargo in 2019, accounting for 28 percent of the total tons in 2019. The Port of South Louisiana remained in the top spot and handled by far the greatest volume of dry bulk cargo, almost 3 times the amount handled by the number two ranked Port of New Orleans and almost 4 times more than the number three ranked Port of Virginia. The Port of South Louisiana is a major export hub not only for dry bulk cargo but also for liquid bulk cargo (e.g., petroleum and chemicals). Corpus Christi, Vancouver, and the Mid-America Port Commission replaced Chicago, Longview, and Long Beach on the list of top 25 ports by dry bulk tonnage.

Top 25 Container Ports in 2019

The top 25 container ports handled a total of 55.5 million TEU in 2019, accounting for 96 percent of the loaded TEU handled in 2019. The highest TEU volumes are associated with coastal container ports, such as the ports of Long Beach, Los Angeles, and New York and New Jersey. In 2019 Camden-Gloucester was on the top 25 container port list, replacing Palm Beach.

Nationally, container and tanker vessel dwell times were stable in 2019, with little variation from 2018. The average 2019 dwell time of container vessels at the top 25 U.S. container ports was estimated at 28.2 hours, up from 27.3 hours in 2018.

The record-breaking 2020 hurricane season has witnessed 30 named storms, 13 hurricanes, and 6 major hurricanes, far above the average hurricane season production of 12 named storms, 6 hurricanes, and 3 major hurricanes. Hurricanes can cause numerous port closures and power outages, which may have a ripple effect on vessel schedules and dwell times.

Many factors influence port capacity, including the amount and type of cargo handling equipment (e.g., container cranes) and the availability of on-dock rail transfer facilities. Most container ports use ship-to-shore gantry cranes mounted on rails that run alongside the waterway to load and unload container vessels. Ports have replaced smaller panamax ship-to-shore gantry cranes with faster, more capable super post-panamax ship-to-shore gantry cranes. The top 25 container ports operated a total of 504 ship-to-shore gantry cranes in 2019. Many container ports use on-dock rail to move intermodal shipping containers directly onto waiting railcars. A total of 44 out of the 88 active container terminals (50 percent) at these ports had on-dock rail access. Alternatively, containers can be drayed by truck to a nearby railyard.

In the next edition, BTS will be able to examine the extent to which maritime trade and transportation have rebounded from the impacts of the COVID-19 pandemic. More specifically, BTS will have a full year's data on U.S-international freight flow transported by vessel and the tonnage and number of TEU handled by the ports.

In addition, BTS will examine whether and how vessel dwell times have been impacted by the COVID-19 pandemic and the unprecedent hurricane season.

The Port Performance Freight Statistics Program serves a variety of data users with diverse information needs and concerns, from U.S. Department of Transportation policy officials and members of Congress, to the many groups involved in port management and operations, the shipping community, and the public. This fifth Annual Report and corresponding interactive digital *Port Profiles* on the BTS website reflect an ongoing evolution of the Port Performance Freight Statistics Program to meet the needs of our data users.

BTS continues to review our data user's comments and explore alternative data sources to expand port throughput and capacity statistics. Please send questions and comments on the Port Performance Freight Statistics Program and the *Port Profiles* to PortStatistics@dot.gov.

Appendix A—Ports Profiled

Individual *Port Profiles* are available on the BTS website at www.bts.gov/ports.

Port Name	City / Location	State(s)
Alaska, AK Port of	Anchorage	AK
Baltimore, MD	Baltimore	MD
Greater Baton Rouge, LA Port of	Baton Rouge	LA
Beaumont, TX	Beaumont	TX
Boston, MA	Boston	MA
Camden-Gloucester, NJ	Camden-Gloucester	NJ
Charleston, SC Port of	Charleston	SC
Cincinnati-Northern KY, Ports of	Cincinnati-Northern KY	OH, KY
Cleveland-Cuyahoga Port, OH	Cleveland	OH
Corpus Christi, TX	Corpus Christi	TX
Detroit-Wayne County Port, MI	Detroit	MI
Duluth-Superior, MN and WI	Duluth-Superior	MN, WI
Port Freeport, TX	Freeport	TX
Gulfport, MS	Gulfport	MS
Honolulu, O'ahu, HI	Honolulu	HI
Houston Port Authority, TX	Houston	TX
Huntington-Tristate, KY, OH, WV	Huntington - Tristate	KY, OH, WV
Indiana Harbor, IN	Indiana Harbor	IN
Jacksonville, FL	Jacksonville	FL
Kalama, WA Port of	Kalama	WA
Mid-America Port Commission	Mid-America	IL, IA, OH
Long Beach, CA Port of	Long Beach	CA
Los Angeles, CA Port of	Los Angeles	CA
PortMiami, FL	Miami	FL
Lake Charles Harbor District, LA	Lake Charles	LA
Mobile, AL	Mobile	AL
New Orleans, LA	New Orleans	LA
New York, NY & NJ	New York	NY, NJ
Oakland, CA	Oakland	CA
Jackson County Port, MS	Pascagoula	MS
Philadelphia Regional Port, PA	Philadelphia	PA
Pittsburgh, PA Port of	Pittsburgh	PA
Plaquemines Port District, LA	Plaquemines	LA
Port Arthur, TX	Port Arthur	TX
Port Everglades, FL	Port Everglades	FL
Portland, OR Port of	Portland	OR
Richmond, CA	Richmond	CA
San Juan, PR	San Juan	PR
Savannah, GA Port of	Savannah	GA
Seattle, WA	Seattle	WA
South Louisiana, LA, Port of	South Louisiana	LA
St. Louis, MO and IL	St. Louis	MO, IL
Tacoma, WA	Tacoma	WA
Tampa Port Authority, FL	Tampa	FL
Texas City, TX	Texas City	TX
Two Harbors, MN	Two Harbors	MN
Vancouver USA, WA Port of	Vancouver	WA
Virginia, VA, Port of	Virginia	VA
Wilmington, DE	Wilmington	DE
Wilmington, NC	Wilmington	NC