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Port Performance Freight Statistics Program

GLOSSARY



Term	Definition
Air draft	The distance between the mean low-level water line and the lowest point of a bridge or other structure over a shipping channel.
Anchorage	A designated area inside or outside a harbor for vessels to anchor before or after a port call.
Approach channel	The main access channel into a bay, harbor, or port. A channel that leads from the open ocean or main stem of a river to a harbor entrance, often lined with lighted buoys to assist navigators. Also known as an entrance channel. In places with naturally shallow waters the approach channel may require dredging.
Apron	The portion of a marine terminal adjacent to the berth or wharf face in which the actual loading and unloading of a vessel often takes place. The apron contains the rail tracks used by gantry cranes and/or roadways used by vehicles that transport containers or cargo between a crane and a storage area. The width of an apron will depend on the operational requirements of any cranes or support vehicles in use.
Authorized channel depth	The depth of a U.S. Army of Corps of Engineers' navigation project as authorized by Congress and as presented in the appropriate design documents. The water depth available in an official Federal channel refers to a local datum, such as mean lower low water.
Automatic Identification System (AIS)	A ship-to-ship collision avoidance system that enables communication of vessel dimensions, position, course, speed, and other ship data via a very high frequency virtual data link network. Mariners worldwide use AIS to ensure safety at sea. AIS allows ships to continuously broadcast and receive data with other ships, satellites, and land-based stations. The U.S. Coast Guard regulates AIS carriage and use in U.S. waters.
Barge	A flat-bottomed, unpowered vessel used to carry cargo. Barges are usually moved in groups by tugboats or towboats.
Beam	A vessel's maximum width. The beam determines the need for channel width and for the outreach capabilities of loading and unloading equipment.
Berth	A location to stop and secure a vessel at a port for cargo transfer or other purposes. Berth locations are often determined by the availability of securement points on the wharf and may not have fixed size or boundaries.
Bobtail	A category of truck movement in which the truck tractor moves without a chassis or trailer.
Break-bulk	A category of cargo that is non-containerized and typically requires handling equipment to load and unload. Examples include bundled lumber or steel products moved by cranes, or project cargoes of many types. Break-bulk cargoes are sometimes also called general cargo, and roll-on/roll-off (Ro/Ro) cargoes are sometimes classified as break-bulk.
Bulk	A category of cargo that is shipped loose in the hold of a ship without packaging or containers. Bulk freight may be dry or liquid. Grain, coal and sulfur are usually moved as dry bulk cargo. Petroleum products usually move as liquid bulk cargo.
Cargo	The goods carried aboard ship, barge, truck, or train, including any packaging, pallets, containers, or other items that move with the goods. Also commonly called freight.

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Cargo tonnage	The weight of the cargo aboard ship or handled by a terminal or port. Cargo tonnage is commonly measured in short or metric tons. Cargo tonnage usually excludes the weight of containers or other shipping devices.
Carrier	(1) A company that transports goods via a given mode (e.g., an ocean carrier transports goods using ocean-going vessels); (2) A specific vessel type (e.g., an ore carrier or an auto carrier).
Channel	The navigable portion of a waterway, usually marked and designated on the appropriate navigation charts with known widths and depths. Part of a watercourse used as a fairway for the passage of vessel traffic. May be formed totally or in part through excavation, such as dredging (see also "Navigation channel").
Channel depth	The vertical distance from the water surface to the bottom of a channel; normally referred to some datum, such as mean lower low water in a tidal channel. Channel depth may fluctuate based on tides or infill from sediment (see also "Channel shoaling").
Channel reach	A shorter segment within a longer navigation channel, such as a straight section between curves, or a section in front of a harbor. Often named on nautical charts for communication purposes. There is no universal length that defines a channel reach.
Channel shoaling	When sand or other sediment settles into a navigation channel and partially or fully obstructs the channel. Channel shoaling may limit or prevent vessel movement through a channel.
Chassis	A wheeled framework for carrying a marine cargo container over a road (a "highway" chassis) or within a terminal (a "yard" chassis). As an unpowered frame, a chassis is moved either by an over-the-road truck tractor or by a yard tractor.
Chassis depot	An off-terminal area for storage, maintenance, and repair of bare chassis. Chassis pools may operate from chassis depots.
Chassis pool	A fleet of container chassis made available for use for moving marine containers within a terminal or over a road. A chassis pool may be provided by a specific marine terminal or ocean carrier, or by a third-party pool operator. A "gray" pool is one in which the chassis may be used interchangeably for all or most ocean carrier containers.
Class I, II, III railroad	Class I railroads are line haul freight railroads with 2015 operating revenue of \$457.91 million or more. As of 2017 there are seven: Burlington Southern & Santa Fe Railway, CSX Transportation, Canadian Pacific Rail, Canadian National, Kansas City Southern, Norfolk Southern, and Union Pacific (including subsidiaries). Class II and III railroads are smaller and typically provide local or regional service.
Cold ironing	The process of shutting down a ship's engine and connecting its essential services to an alternative energy source, often shore-power, while a ship is stopped at the dock. This often takes place while cargo is being loaded or unloaded.
Commodity	(1) The goods being handled (e.g., "conveyors are used to transfer the commodity between vessel and shore");

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	(2) A categorical description of specific goods (e.g., "the leading commodities were grain, coal, and iron ore").
Concessionaire	An entity operating a port facility under a concession agreement rather than under the more common lease agreement.
Container	Standardized, reusable shipping units. Most containers are "dry" units for general use, but containers may also be refrigerated, flat rack, open top, bulk liquid, or otherwise configured for special needs. The specifications of containers used in international trade are governed by the International Standards Organization. Marine containers are 20 feet, 40 feet, or 45 feet long, 8 feet or 8'6" wide, and 8'6" or 9'6" high. Containers used in North American domestic service are usually 48 feet or 53 feet long.
Container crane	A specialized wharveside crane used to transfer marine containers between vessels and terminals. The crane is built on a boom that sits atop a gantry so that cargo can be loaded or unloaded from vehicles that pass beneath, and moved over water to or from docked vessels. These cranes typically operate on rails that run parallel to the water to allow the crane to move along the apron.
Container depot	An off-terminal area for storage, maintenance, and repair of empty containers.
Container yard	A designated area within a container terminal where loaded and empty containers are stored for transfer between vessels and truck or rail modes.
Containership	A specialized ocean-going vessel used to carry marine containers. Containerships are typically "cellular," with holds divided by "cell guides" to hold stacks of containers.
Controlling (or limiting) depth	Actual (as measured) minimum depth of a navigable waterway or channel at its shallowest point from the mean low level water line. The least depth of water available for navigation in a channel. This depth controls the draft of loaded ships that may safely enter a harbor or port.
Crane	Equipment used to transfer cargo on and off vessels. The most common types of cranes are container cranes (wharveside gantry cranes used to handle marine containers) and mobile, multi-purpose cranes used to handle many cargo types.
Deadweight tonnage (DWT)	(1) The number of metric tons (2,205 pounds) a vessel can transport, store, or bunker of cargo or fuel; (2) The difference between the tons of water a vessel displaces "light" and the number of tons it displaces when submerged to the "load line."
Dock	In strict parlance, a dock is the area of water where the vessel ties up at the wharf or terminal. In common parlance, "dock" is used interchangeably with "wharf," "berth," and "pier."
Draft	The distance the hull of a ship extends beneath the surface of the water. Generally, equal to the minimum depth of water in which a ship will float.
Drayage	Movement of containers over public roads by truck, using a container chassis.
Dredge	(1) To remove sediment and other materials ("dredge materials") from the bottom of a channel or harbor to deepen the facility; (2) The floating equipment used to deepen a channel or harbor.
Dry bulk	Non-liquid cargo that is shipped loose in the vessel hold without packaging or containerization, and is typically transferred with conveyors, clamshell buckets,

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	or other bulk material handling equipment. Major dry bulk commodities include grain, coal, ore, cement, and minerals.
Economies of scale	The reduction in unit cost of goods or services from an increase in quantity. In maritime operations, economies of scale often result from increasing vessel, terminal, or shipment size.
Extended hours	Additional time that terminal truck gates are open beyond the terminal's standard day shift.
<i>Fixing America's Surface Transportation (FAST) Act of 2015</i>	The <i>FAST Act</i> of 2015 is legislation that governs Federal spending on surface transportation and addresses a number of topics, including the requirement to collect and report on port performance statistics regarding capacity and throughput.
Fleeting area	An area of a river or harbor used for assembling and breaking up groups of barges.
Gantry crane	A crane mounted on a "gantry;" a frame or structure spanning an intervening space, often a workspace. The gantry may be mounted on wheels.
Gateway	Any port or route by which imports enter the U.S. A "gateway port" commonly refers to those major container ports, such as Long Beach, Los Angeles, and New York-New Jersey, which handle substantial trade for other inland regions as well as for their own nearby markets.
Goods	Items that may be shipped. Goods are considered freight or cargo when they are being transported by rail, truck, air, or ship.
Harbor	A natural or man-made body of water where vessels go to load and unload cargo or for other purposes. Ports are generally located within harbors.
Harbor district	A regulated area under the control of a port authority, which may include areas on the water and landside facilities (see also "Port authority").
Hazardous material (hazmat)	A commodity that poses a hazard due to its nature as flammable, explosive, corrosive, toxic, poisonous, etc. Often shortened to "Hazmat."
Inbound cargo	Waterborne cargo unloaded from vessels into port terminals. Both imports from foreign sources and domestic cargo from other U.S. points are inbound cargo.
Infrastructure	Permanent facilities and capital equipment, such as port terminals, railroads, navigation aids, and container cranes. "Infrastructure" also includes information technology.
Intermodal	The movement of foreign or domestic cargo by more than one mode, e.g., ship-truck or ship-rail-truck. The port industry usually reserves the term "intermodal" for container movements that involve rail. "Intermodal terminals" are rail facilities that transfer containers or trailers between trains and trucks.
International Classification of Ships by Type	Numeric codes for vessel types such as ore carriers, dry bulk barges, and chemical tankers. These codes are used to maintain consistency between various data sources.
Jurisdictional bodies	A port governance model in which a public port authority acts as an overseeing body and private terminals are responsible for providing and operating their own infrastructure located within the port's physical boundaries.
Keel	The lowermost external part of a vessel; a longitudinal ridge or projection that assists in keeping the vessel on the chosen course.
Landlord port	A type of port that leases facilities (e.g., terminals) to operating companies (e.g., marine terminal operators) rather than operating the facilities directly.

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Length Over All (LOA)	The maximum length of a vessel. The LOA affects berth length, turning radius, and other port and channel considerations.
Liquid bulk	Cargo shipped in fluid form in tanker holds without packaging or containerization that is typically transferred with pump and piping or hoses. Major liquid bulk commodities include petroleum products, liquid natural gas, and liquid chemicals.
Liquefied natural gas (LNG)	A natural gas (mostly methane) that has been converted to liquid form by cooling for storage or transport.
Lock Operations Management Application	A component system of the U.S. Army Corp’s River Information Services that collects AIS data on the inland waterway system.
Main channel	In a system of channels, the main channel is the central, and often largest, continuous portion off which secondary channels branch. A channel is a navigable portion of a waterway, usually marked and designated on the appropriate navigation charts with known widths and depths. Part of a watercourse used as a fairway for the passage of vessel traffic. May be formed totally or in part through excavation, such as dredging (see also “Channel” and “Navigation channel”).
Maintained depth	The depth to which a federally-authorized navigation channel is normally maintained. The maintained depth may be different than the authorized depth because of changes in traffic patterns, maintenance schedules, or operational constraints. The maintained depth may be equal to the controlling depth (see also “Controlling depth”).
Manifest data	A listing of cargo aboard a vessel for recordkeeping or Customs purposes. A manifest can be a paper or digital document.
Maximum operational depth of approach channel	The maximum depth of water available for navigation in a channel. This depth controls the draft of loaded ships that may safely enter a harbor or port (see also “Controlling depth”).
Megaship	A term usually used to describe container ships in the 13,000 to 20,000 twenty-foot equivalent unit (TEU) range.
Metric ton	2,205 pounds or 1,000 kilograms.
Mode	The type of transportation used for moving a shipment of cargo (e.g., ocean-going vessel, river barge, rail, highway, etc.)
Multimodal	(1) Shipments of cargo that are transported using more than one mode (in which case it is synonymous to the broader use of "intermodal"); (2) Facilities that can be accessed by more than one mode (such as a port served by both road and rail).
Nationwide AIS (NAIS)	A U.S. Coast Guard system of towers and transceivers to receive and transmit AIS messages.
Navigation	The act of moving a vessel on a waterway.
Navigation channel	A section of waterway used for vessel movements, defined in a standard way on a nautical chart. Navigation channels may be naturally deep, but are often cut to be deeper than the surrounding seabed to allow large vessels to reach a port (see also “Channel”).

Term	Definition
Navigation project	A Congressionally-authorized infrastructure project related to navigation, often with a specific maximum depth (see also "Authorized depth"). A navigation project may include one or multiple infrastructure components, such as a navigation channel, breakwater, river training structures, or pier.
Near-dock rail	A rail intermodal terminal within a short distance of marine terminal gates. A near-dock rail transfer facility requires transport on a highway chassis over public roads.
Neo-Panamax	The maximum size of vessels that are able to pass through the newly expanded (2016) Panama Canal locks. Neo-Panamax vessels are a maximum 1,201 feet in length, 161 feet in width, and 50 feet in draft.
On-dock rail	A rail intermodal container transfer facility within marine terminal boundaries, or accessible without movement over public roads. The presence of an on-dock rail transfer facility allows terminal workers to load containers onto rail cars within the terminal, thereby avoiding the need to transport containers through the terminal gates on chassis.
Operating port	A port where the owner of the facility is also responsible for the operations of some or all of the terminals in the jurisdiction rather than contracting the responsibility to a private sector port operator.
Outbound cargo	Cargo loaded on to waterborne vessels at port terminals. Both exports to foreign sources and domestic cargo bound for other U.S. points are classified as outbound cargo.
Panama Canal	A 48-mile waterway across Panama connecting the Pacific and Atlantic oceans. The original canal lock dimensions limited vessels to so-called "Panamax" sizes. The 2016 opening of a third set of locks allowed for the passage of larger Neo- and Post-Panamax vessels.
Panamax	(1) The maximum size of vessels that are able to transit the original Panama Canal locks. A "Panamax" vessel is limited to 965 feet in length, 105 feet in width, and 39.5 feet in draft; (2) A class of crane that is able to fully load and unload containers from a Panamax-class (and smaller) container ship.
Pier	A land-connected structure to which a vessel is secured for the purpose of loading and unloading cargo.
Port	(1) The land, facilities, and adjacent body of water located on a coast, river, or Great Lake where cargo is transferred between ships and other ships, trucks, trains, pipelines, or storage facilities. A port is typically located within a harbor; (2) A place in which vessels load and discharge cargoes and passengers. Facilities normally include berths, cargo handling equipment and personnel, cargo storage facilities, and land transportation connections. Often with a city, town, or industrial complex; (3) The left side of a vessel, while facing forward; to turn to the left.
Port authority	A government entity that either owns or administers a port.
Port capacity	A measure of the maximum throughput that a port and its terminals can handle over a given period, which can be measured in tons, TEU, or other units.

Term	Definition
Port district	A governmental or quasi-governmental body formed through legislation to govern the physical area and logistics of a single port or port partnership (see also “Port authority”).
Port throughput	The amount of cargo or number of vessels a port handles over a designated amount of time. Port throughput can be estimated with measures that include a number of variables including cargo tonnage, container TEU, and vessel calls.
Port vicinity	A mapped geo-spatial boundary capturing the entirety of a port’s area. Intended to provide individuals with an informal understanding of the size and location of an individual port.
Post-Panamax	(1) Vessels that are too large to fit into the original locks of the Panama Canal; (2) A class of crane that is able to fully load and unload containers from a Post-Panamax-class (and smaller) container ship up to approximately 18 containers in width.
Private terminal	A port facility that provides, maintains, and operates its own infrastructure.
Project cargo	Cargo that could be large, heavy, or otherwise require special handling for infrequent or short-term movements. Examples include wind turbines, large cranes, or factory equipment.
Public terminal	A port terminal operated by a public port authority or harbor district.
Push boat	A small, powerful boat used to push unpowered barges along inland waterways and other navigation channels.
Radiation portal monitor	A large, stationary radiation detector through which cargo containers carried on truck chassis pass at ports of entry, designed to prevent the smuggling of nuclear material into the United States. Truck-mounted radiation portals are mobile.
Roadability	(1) Safe and legal operating condition of container chassis for use on public roads; (2) A Federally-administered program to ensure that intermodal equipment used to transport intermodal containers is safe and systematically maintained.
Roll-on/roll-off (Ro/Ro)	(1) Cargo that can be loaded onto a vessel with ramps, whether under its own power or pulled/pushed by another vehicle; (2) Any specialized vessel designed to carry Ro/Ro cargo, or a terminal that serves such vessels.
Sailing draft	The distance that the hull of a laden ship extends beneath the surface of the water. Measured from waterline on the hull to the deepest point of the keel.
Seasonality	Regular fluctuation of cargo volumes within the year due to holiday demand peaks, agricultural harvests, or other predictable events.
Ship	A large vessel designed for deep-water travel on oceans and great lakes, as opposed to inland waterways.
Ship's gear	Equipment on board a ship used for loading and discharging cargo (e.g., cranes, loading booms, and elevators).
Shoaling	When sand or other sediment settles into a navigation channel and partially or fully obstructs the channel. Channel shoaling may limit or prevent vessel movement through a channel.

Term	Definition
Short-line railroad	A railroad that operates less than 350 miles of track and earns less than \$40 million annually.
Short ton	A unit of measure equal to 2,000 pounds, as opposed to a metric ton which equals 2,205 pounds.
Standard International Trade Classification	A standard numeric code developed by the United Nations to classify commodities used in international trade; based on a hierarchy with headings and subheadings providing increasingly specific information.
Suez Canal	A 120-mile sea-level waterway that intersects Egypt to connect the North Atlantic Ocean and Indian Ocean via the Mediterranean and Red Seas. As the facility does not have locks, the primary limiting factors to vessel size is the water draft (66 feet) and the air draft under the Suez Canal Bridge (223 feet). All but the largest bulk, liquid bulk, and LNG carriers can pass through the Suez Canal.
Super Post-Panamax	(1) The largest class of container vessel; larger than the Neo-Panamax limit of 1,201 feet in length, 161 feet in width, and 50 feet in draft; (2) A class of crane that is able to fully load and unload containers from a super-post-Panamax-class (and smaller) container ship, typically up to 22 to 25 containers wide.
Tenant	The operator of a terminal leased from a landlord port.
Terminal	A bounded physical space within a port as defined by the port operating body. Terminals can be defined by their facilities, equipment, the type of cargo handled, physical barriers or boundaries, ownership or operating structure, and other characteristics. Small ports may have only one terminal, while others may include over 50.
Terminal gate	Infrastructure including physical gates and associated personnel and information infrastructure that process inbound and outbound containers and may process security information, driver identity, and container pickup/delivery verification.
Trade route	A sea-lane between two regions, with ports of call at both ends and potentially along the way. The primary container trade routes are all east-west in direction: North America-Asia, North America-Europe, and Asia-Europe. Also referred to as a trade.
Transatlantic	The ocean trade routes that connect North America and Europe via the Atlantic Ocean. One of the three primary global maritime trade routes (along with North America-Asia and Asia-Europe).
Transpacific	The ocean trade routes that connect North America and Asia via the Pacific Ocean. One of the three primary global maritime trade routes (along with North America-Europe and Asia-Europe).
Transshipment	The process of transferring cargo from one vessel to another, usually by unloading the cargo at a terminal and reloading it onto the second vessel.
Tow boat	A vessel used to push a group or "tow" of barges lashed together to move as a unit.
Tug boat	A small, powerful boat that primarily pushes or pulls other waterborne vessels. Tugs guide larger vessels within port harbors and push and pull unpowered vessels such as barges in harbors or along inland waterways.

Term	Definition
Twenty-foot equivalent unit (TEU)	A unit of measure for container traffic equal to standard 20-foot shipping container. The more common 40-foot container is equal to two TEU. Many metrics used to estimate vessel capacity, containerized trade, and port or terminal container throughput are measured in TEU.
Under keel clearance	(1) The space or distance between the keel of a (usually) loaded ship and the channel bottom in a static or still water condition. The allowable margin of safe water for ship passages as set by local port authorities and pilots; (2) The difference between the loaded ship draft and the lowest safe channel depth.
Vessel call	A single visit, including inbound and outbound movement, to a terminal or port by a waterborne vessel.
Waterfront	The landside portion of a terminal or port that borders a water, river, or lake.
Waterway	A body of inland water that allows for the movement of vessels; including rives, canals, and lakes.
Wharf	A structure built on the shore of a harbor parallel to the water so that vessels may dock alongside (see also “Dock” and “Pier”).
Wharf face	The portion of a wharf, dock, or pier on which the infrastructure required to tie up, load/unload, and service a vessel is located.