



Port of Long Beach | Adobe Stock

FREIGHT GATEWAY

by Liann Bielicki '24

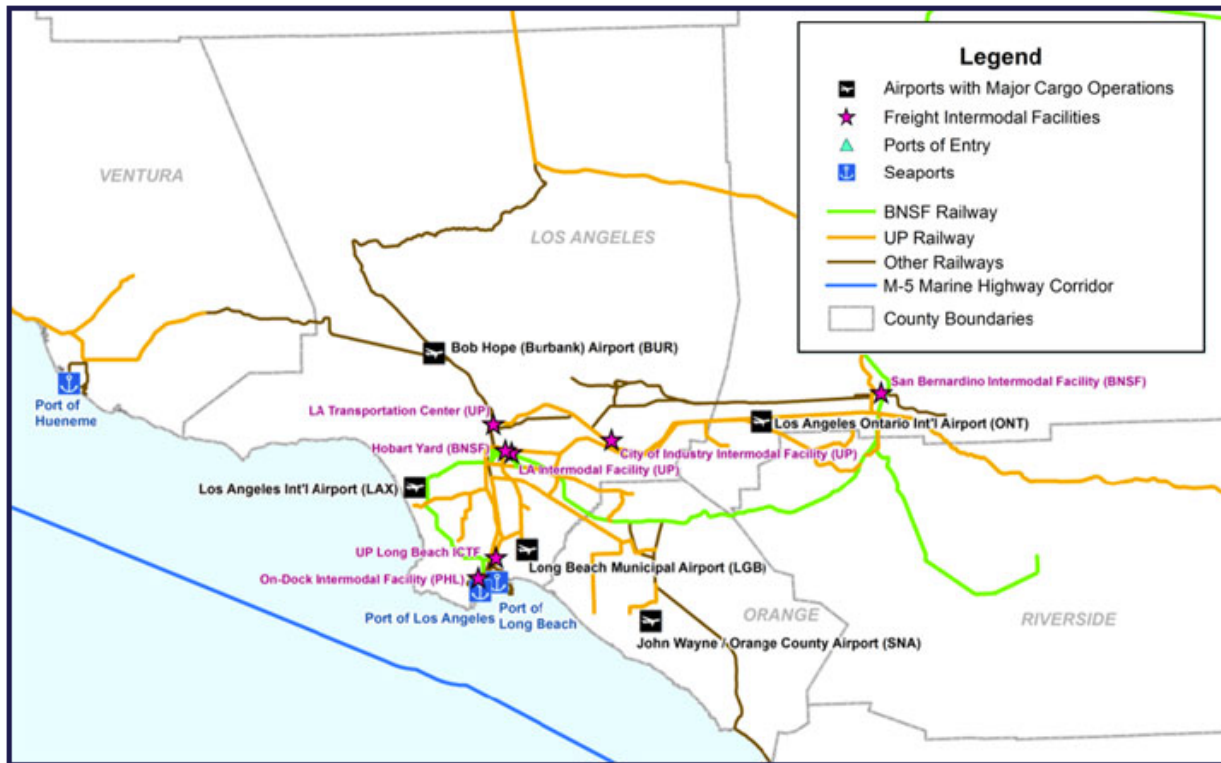
The Los Angeles region is a central hub for trade between the United States and the rest of the world, with goods, both imports and exports, flowing through Southern California airports and ports. According to the Federal Aviation Administration, Los Angeles International Airport (LAX) was the fourth busiest in the nation for freight volume in 2021, handling a tonnage of 14.8 million pounds. Ontario International Airport is also among the top ten cargo airports in the country, handling 5.3 million pounds of freight in 2021.

The Port of Los Angeles and the Port of Long Beach are the other major facilities for the flow of freight in the region. The two ports are next-door neighbors and together comprise the San Pedro Bay port complex. It handles more containers per ship call than any other port complex in the world and ranks number nine for overall freight volume. The Port of Los Angeles itself ranks number 17 and is the busiest seaport in the Western Hemisphere. Its top trading partner is China/Hong Kong with \$134 billion in trade for

2022. Japan is a distant second with \$38 billion. The Port of Long Beach is the 21st busiest container cargo port in the world. Trade with East Asia accounts for more than 90% of the shipments through the Port of Long Beach. Its top trading partners are China, Vietnam, Thailand, South Korea, and Taiwan.

The Inland Empire is the heart of the logistics industry in Southern California. On arrival at one of the region's seaports or airports, goods are transported to the thousands of warehouses in the Inland Empire, where they are stored and sent off to the rest of the United States. This article examines the ports as key components of the logistics sector in Southern California.

The Port of Los Angeles and the greater San Pedro Bay area were first officially documented in 1542 by Portuguese explorer Juan Rodriguez Cabrillo. Commercial ventures only began much later in the 1800s. The bay was used by Spanish missionaries to trade with and receive goods from



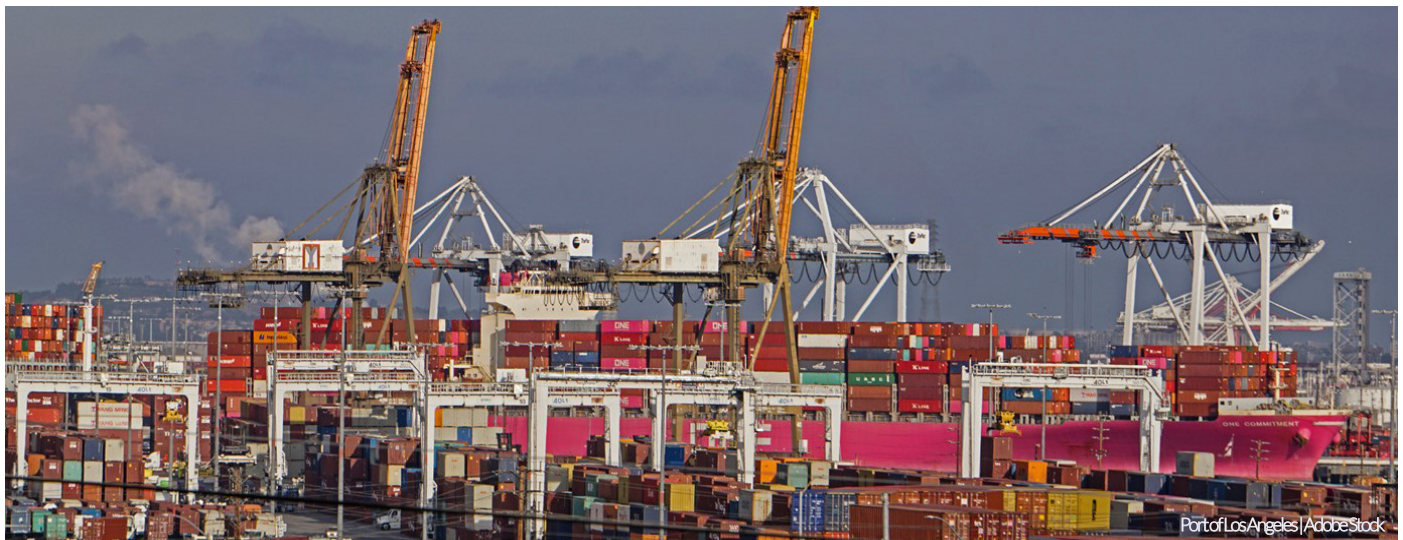
Source: United States Department of Transportation, Federal Highway Administration, <https://www.fhwa.dot.gov/freighteconomy/losangeles.cfm>.

Spain. Over time, international trade grew and thrived. Congress declared San Pedro Bay “the official port for Los Angeles” in 1897. The Board of Harbor Commissioners was formed in 1907, marking the official founding of the Port of Los Angeles.

As the Port of Los Angeles expanded, it benefited immensely from its location. When the Panama Canal opened in 1914, the Port of Los Angeles had an advantage over other West Coast ports as it was the furthest south. (The Port of San Diego was not established until 1962.) The Port continues to be an important connection for trade with Asia. The *Los Angeles Times* reports that the Los Angeles and Long Beach ports “combine to handle nearly 40% of U.S. imports from Asia.”

The Port of Los Angeles reports that it has been the busiest container port in the Western Hemisphere since 2000. In 2021, following the pandemic, an all-time high of 10.7 million TEUs (twenty-foot equivalent unit containers) were processed, partially fueled by the explosion of demand for goods from the pandemic. The Port of Los Angeles estimates that the economic activity it generates affects one in nine jobs in Southern California (in Los Angeles, Orange, Riverside, San Bernardino and Ventura counties).

The Port of Long Beach is the other part of the San Pedro Bay port complex. It has been open since 1911 and is managed by the City of Long Beach Harbor Department. It is the top export seaport in the United States. The Port



of Long Beach and Port of Los Angeles compete with one another for business but also work together to coordinate things like security.

The Port of Long Beach handled 8 million TEUs of cargo in 2023, down 12% from 9.1 million TEUs in 2022. The Port of Long Beach estimates that port-related business supports one in 20 jobs in Southern California. Top imports include crude oil, electronics, plastics, furniture, and clothing. Top exports include petroleum coke, petroleum bulk, chemicals, waste paper, and foods.

Container Trade

Twenty-Foot Equivalent Unit Containers (TEU)

YEAR	PORT OF LOS ANGELES TEU COUNT	PORT OF LONG BEACH TEU COUNT
2023	8,629,681	8,018,668
2022	9,911,159	9,133,657
2021	10,677,610	9,384,368
2020	9,213,396	8,113,315
2019	9,337,632	7,632,032
2018	9,458,748	8,091,023
2017	9,343,193	7,544,507
2016	8,856,783	6,775,171
2015	8,160,458	7,192,069
2014	8,340,066	6,820,807
2013	7,868,582	6,730,573

Source: Port of Los Angeles, <https://www.portoflosangeles.org/business/statistics/container-statistics>. Port of Long Beach, <https://polb.com/business/port-statistics/#yearly-teus>.

Transporting Goods

Once goods are received, whether through the ports or airports, they must embark on the second leg of their journey. Land transportation, primarily by truck and rail, moves containers and other packages to nearby warehouses and distribution centers.

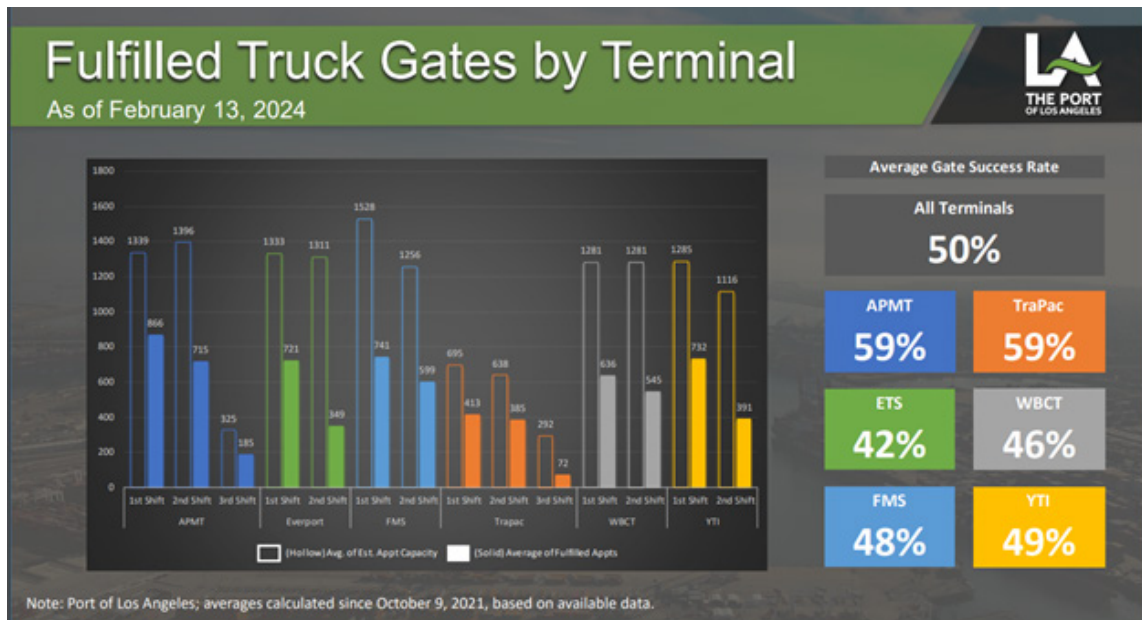
The Port of Los Angeles reports that, on any given day, the majority of containers have been at the port for 0-4 days. In mid-February 2024, 83% of containers had a “dwell time” of 0-4 days, 11.3% of 5-8 days, and 5.7% of 9+ days. These numbers vary from day to day.

Marine Terminal Operators (MTOs) are businesses that contract with ocean carriers to process containers when they arrive at the port. Once the MTOs are finished, drayage companies- truckers that specialize in short-distance moves of full sea containers to intermediary warehouses- then move goods off-port. The Port of Los Angeles reports that they fulfill on average 7,349 truck

Goods In and Out of the Port of Los Angeles Twenty-Foot Equivalent Unit Containers (TEU)

Top 5 Imports (in TEUs)	Top 5 Exports (in TEUs)
Furniture - 684,000	Pet/Animal Feed - 181,000
Auto Parts - 360,000	Paper/Waste Paper - 147,000
Apparel - 269,000	Soybeans - 104,000
Plastics - 268,000	Fabrics/Raw Cotton - 83,000
Footwear - 263,000	Recycled Metal - 62,000

Source: America’s Port, The Nation’s #1 Container Port and the Global Model for Security, Sustainability, and Social Responsibility, <https://kentico.portoflosangeles.org/getmedia/16a9576f-7966-44f0-82c3-a5ebfaa8a7a4/port-101-digital-brochure>.



Source: Port of Los Angeles, <https://kentico.portoflosangeles.org/getmedia/e7e35d31-c560-49fe-be52-f335412879e8/appointment-report>.

Key Regional Transportation Facilities and Freight Hubs

HIGHWAYS		I-5, I-10, I-15, I-40, I-105, I-110, I-210, I-215, I-405, I-605, I-710, US-101, US-395, SR-14, SR-58, SR-86, SR-126 and SR-138
RAILROADS		BNSF, Union Pacific
AIRPORTS		Los Angeles International, Ontario International, Bob Hope (Burbank), Long Beach Municipal, and John Wayne
WATERBORNE		Ports – Los Angeles, Long Beach, and Hueneme. Marine Corridors – I-5
INTERMODAL TERMINALS		Hobart, Southern California International Gateway, San Bernardino, Commerce, City of Industry, Intermodal Container Transfer & Dolores yards.

Source: United States Department of Transportation, Federal Highway Administration, <https://www.fhwa.dot.gov/freighteconomy/losangeles.cfm>.

appointments per day. These appointments allow trucks to come in at staggered, predetermined times, improving the flow of traffic. However, appointments are not always fully booked. Presently, the Port of Los Angeles generally fills only 50% of truck appointments per day across all terminals. The chart below shows a breakdown of available truck appointments versus fulfillments across six terminals and across different shift times on February 13, 2024. On average, these appointment slots were half filled, with the busiest time being the first shift of the day. The Southern California Association of Governments projects that total truck miles traveled in the region will grow by over 80% by 2035, increasing from 6.8% of all vehicle miles traveled in 2008 to 10% by 2035.

Although it might seem cheaper to locate warehouse facilities close to the ports to reduce transportation costs, many businesses choose to locate their warehouses in the Inland Empire, some 60 miles inland, to benefit from cheaper real estate and labor costs.

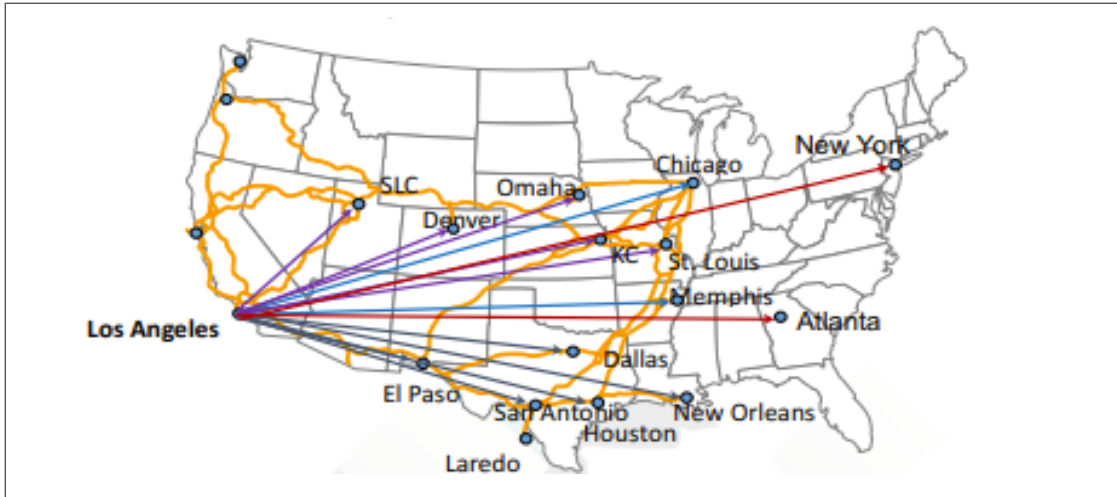
Rail is another option. Some shipping lines have on-port rail access, making it convenient and economical. Rail is considered the cheapest mode of transportation per pound. About 35% of intermodal containers are transported away from the port by rail, using more than 65 miles of on-dock track. The Port of Los Angeles estimates that the average train eliminates approximately 400 truck trips. The nearby Intermodal Transfer Container Facility, as well as the UP East Los Angeles Yard and the BNSF Hobart/Commerce Yard, handle the further processing of intermodal cargo, particularly cross-country rail shipments.

Similarly, when goods arrive at the Ontario International Airport, sorting, staging, and support facilities on the airfield help improve the efficiency of distribution to warehouses in the Inland Empire and beyond. Trucks are the primary method of transportation from the airport and to those warehouses. Local packages are separated for delivery, while remaining cargo is containerized for shipment to warehouses and intermodal facilities. Intermodal facilities are distribution centers that process cargo at an intermediate stage for transportation toward a final destination via truck or rail.

Storing goods

The Inland Empire is home to an estimated 4,000 warehouses. Many of these were built to meet the demands of e-commerce. Although the spike in online shopping during the pandemic accelerated plans for more warehousing, many local communities have pushed back.

Rail Connecting the Ports to Key Markets



Source: America's Port, The Nation's #1 Container Port and the Global Model for Security, Sustainability, and Social Responsibility, <https://kentic.portoflosangeles.org/getmedia/16a9576f-7966-44f0-82c3-a5ebfaa8a7a4/port-101-digital-brochure>.

As described above, when cargo arrives in the ports or airports, logistics managers decide where to move the shipments for further processing and distribution. Because the Inland Empire provides these services at lower cost than the closer-in Los Angeles and Orange counties, warehouses in the Inland Empire are often used for shipments to other areas of the U.S. or for goods that will be stored longer-term.

The top five cities with the most land dedicated to warehouses in Southern California are Ontario, Fontana, Los Angeles, Industry, and Rialto. Indeed, eight of the top ten cities are in the Inland Empire. Notably, the largest Amazon warehouse in the world is currently under construction in Ontario, where it will span 4.1 million square feet. The number of warehouses in the Inland Empire region increased from 234 in 1980 to more than 4,000 today. *CalMatters* reports that roughly 1 billion square feet of the Inland Empire is devoted to warehouses.

For some packages, an Inland Empire warehouse is the final destination before delivery to the customer. For example, Amazon's fulfillment centers store, sort, and route goods via couriers to local destinations. Other goods, whose final destination is elsewhere in California or the United States, go first to intermodal facilities, where they are sorted and reloaded onto trucks or rail for another leg of their journey.

The future of logistics

As the volume of goods rose from e-commerce and demand for medical supplies during the pandemic, the supply chain and logistics network were pushed to their limits. Physical infrastructure at the ports limits how many ships can dock and unload. Before the pandemic, ships could arrive and offload goods with no additional wait times. In October 2021, CBS News reported there were 62 container ships anchored in San Pedro Bay, 37 waiting to unload at the Port of LA and 25 destined for Long Beach. In addition to the container ships there were barges, tankers, and car carriers also waiting, bringing the total number of ships anchored in the San Pedro Bay to 100. The average wait time for those ships was ten days.

The congestion was resolved by 2022, partially due to the workarounds that retailers and manufacturers developed to reduce the traffic through Southern California. Some shippers also began to switch to other ports due to fears over union negotiations between the West Coast seaports and their employees. As pandemic restrictions were lifted and consumer purchasing reverted to pre-pandemic patterns, there was a decline in the overall volume of freight and operations at the ports returned to normal. Yet, this episode was a warning sign of how stretched the logistical physical infrastructure is in Southern California. ♦

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