

Fast Freight Facts: Commercial Vehicles (Trucks)

Trucking is by far the predominant mode of freight transportation in California. Trucks serve virtually all markets, from long-distance interstate commerce to the “last mile” of intermodal goods movement. Trucking is the essential mode for intrastate, regional, and local goods distribution, including manufactured goods, resource extraction (e.g., logs, sand and gravel), food and farm-to-market products, containers, machinery and industrial supplies, petroleum products, air cargo ground transportation, and drayage.

The Predominant Freight Mode

- Trucking serves every community in California. Over 78 percent of all California communities depend exclusively on trucks to move their goods.
- The California Department of Motor Vehicles (DMV) registered 5,645,836 commercial trucks and 2,380,417 commercial trailers in 2011.
- In 2010, trucks transported 88 percent of the total manufactured tonnage in the state or about 3,822,566 tons per day.
- California has 172,139 miles of public roads, over which motorists traveled 327.8 billion miles in 2011. Trucking’s use of California public roads was about 24.8 billion miles in 2008. Regions with the largest numbers of truck vehicle miles are: Southern California, the Central Valley, the Bay Area, and the Border Region.
- The Average Annual Daily Truck Miles of Travel for 4-axle-or-more trucks on California Interstate Routes in 2009 was 15,499,902. The top three counties were: San Bernardino (2,755,616), Los Angeles (2,670,809), and Riverside (2,177,154).
- Caltrans issued more than 126,000 Oversize/Overweight Permits in fiscal year 2010-11.

Jobs and the Economy

- In 2011, transportation and material moving occupations (largely the trucking industry) in California provided 890,750 jobs, or about one in 15 statewide.
- Trucking industry wages paid in California in 2010 exceeded \$30.3 billion, with an average annual industry salary of \$47,680. Drivers of heavy trucks, tractor-trailer, light trucks, and delivery trucks held 204,630 jobs in 2011, with a mean annual salary of \$38,400.
- More than 30,130 trucking companies were located in California in 2011, most of which were locally owned small businesses. These companies in turn are served by a wide range of supporting businesses and services.
- The operator of a typical five-axle tractor-semitrailer combination in 2011 paid \$8,743 in state highway user fees and taxes plus \$7,771 in federal user fees and taxes, in addition to regular business taxes.
- The trucking industry in California paid approximately \$4.3 billion in federal and state roadway taxes and fees in 2009. In 2008, the industry paid 36 percent of all taxes and fees owed by California motorists, even though trucks represented only about 8 percent of vehicle miles traveled in the state.

Truck Classification, Size, Limits, and Routes

- The Federal Highway Administration (FHWA) classification system recognizes 10 types of trucks. FHWA Classes 4 through 7 are medium-duty trucks; Classes 8 through 13 are heavy-duty trucks. Tractor-trailer vehicles combine a tractor with a semitrailer, trailer, or both and have four or more axles (also known as “semis” or “18-wheelers”).
- Legal truck sizes are regulated by federal and state law. The largest trucks that may operate legally in California are defined by the federal Surface Transportation Assistance Act (STAA) of 1982. A STAA semitrailer may be up to 53 feet in length, with a kingpin-to-rear axle (KPRA) maximum of 40 feet, and with no overall length limit.
- STAA trucks are limited to the National Network, Terminal Access routes, and Service Access routes (STAA Network).
- The maximum length for a California legal truck tractor and semitrailer combination is 65 feet overall. A motor truck (3 axles) and trailer or semitrailer combination (double) may be 75 feet.
- Caltrans may determine which highways cannot safely accommodate trucks with a 40-foot KPRA length. On the State Highway System, approximately 3,364 miles cannot accommodate a 40-foot KPRA length.
- Some California legal routes are “advisory routes,” where Caltrans signage advises truckers not to use the route unless their truck’s KPRA length is less than a specified length under 40 feet (often 30 feet). Where road geometry is designed for smaller vehicles, large trucks may be prone to off-tracking – the tendency for rear tires to follow a shorter path than the front tires when turning, resulting in the trailer crossing onto the shoulders or across the centerline.
- Non-California-registered trucks comprise approximately 29% to 33% of the total Class 8 heavy-duty truck mileage on California highways.

Challenges and Opportunities

- In a 2011 survey conducted by the American Transportation Research Institute (ATRI), the top 10 trucking issues identified by the trucking industry were: (1) economy; (2) hours of service; (3) driver shortage; (4) Federal Motor Carrier Safety Administration (CSA); (5) fuel issues; (6) congestion; (7) transportation funding; (8) tort reform; (9) onboard truck technology; and (10) truck size and weight.
- California ranks first in the nation in overall (private and public) commercial vehicle parking shortage. Truck parking demand estimates indicate that demand exceeds capacity at all public rest areas and at 88 percent of private truck stops on the 34 corridors in California with the highest volumes of truck travel.
- In California, heavy-duty trucks are responsible for 20 percent of the global warming pollution from the transportation sector. Proximity to diesel pollution is linked to health problems such as reduced lung function and increased asthma and bronchitis.
- Numbers of fatal and injury truck collisions declined between 2005 (343 fatalities; 7,810 injuries) and 2009 (236 fatalities; 4,874 injuries). The highest number of accidents in all years occurred in Los Angeles County.
- Of the top 250 major freight chokepoints and bottlenecks in the nation, as identified by the FHWA and ATRI in 2011, 15 were in California – 6 in Los Angeles, 3 in Sacramento, 2 in Oakland, and 1 each in San Bernardino, Corona, San Rafael, and San Diego.

Sources

American Transportation Research Institute (ATRI). <http://atri-online.org/>.

_____. ATRI 2011. California Fast Facts.

_____. ATRI 2011. Critical Issues in the Trucking Industry.

California Trucking Association. <http://caltrux.org/research>

California Department of Transportation, Division of Transportation System Information: 2010 California Public Road Data – Statistical Information derived from the Highway Performance Monitoring System. <http://www.dot.ca.gov/hq/tsip/hpms/datalibrary.php>.

California Department of Transportation. Executive Fact Booklet 2012.

California Department of Transportation Office of Truck Services.
<http://www.dot.ca.gov/hq/traffops/trucks/>.

California Highway Patrol. Annual Report of Fatal and Injury Motor Vehicle Traffic Collisions.
<http://www.chp.ca.gov/switrs/pdf/2009-sec6.pdf>

IHS Global Insight Transearch database, cited by ATRI 2011 in California Fast Facts.

Lutsey, Nicholas. 2008. Assessment of Out-of-State Heavy-Duty Truck Activity Trends in California. UC Davis Institute of Transportation Studies (UCD-ITS-RR-08-16).

Rodier, C. and Shaheen, S. 2007. Commercial Vehicle Parking In California: Exploratory Evaluation of the Problem and Possible Technology-Based Solutions. UC Davis Institute of Transportation Studies (UCD-ITS-RR-07-36).

Union of Concerned Scientists. California's Heavy-Duty Trucks and Global Warming.
http://www.ucsusa.org/clean_vehicles/solutions/cleaner_diesel/CA-heavy-duty-trucks-and-global-warming.html

University of California Irvine. Institute of Transportation Studies. Online California Freight Data Repository (Cal-FRED). <http://moon.its.uci.edu/calfred/>

U.S. Department of Labor. Bureau of Labor Statistics. May 2011 State Occupational Employment and Wage Estimates California. http://www.bls.gov/ro9/ro9_ca.htm

U.S. Department of Transportation. Bureau of Transportation Statistics. Research and Innovative Technology Administration. 2002. California Transportation Profile.
http://www.bts.gov/publications/state_transportation_statistics/california/index.html

_____. http://www.bts.gov/programs/freight_transportation/.

_____. United States Transportation Facts and Figures: State Facts: California.
<http://gis.rita.dot.gov/StateFacts/>.

US Department of Transportation Federal Highways Administration: Freight Analysis Framework.
http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf/

_____. http://www.ops.fhwa.dot.gov/freight/freight_analysis/state_info/california/ca.htm

_____. Highway Statistics Series. <http://www.fhwa.dot.gov/policyinformation/statistics.cfm>

_____. Vehicle Types. <http://www.fhwa.dot.gov/policy/ohpi/vehclass.htm>