

APPENDIX B-1: FREIGHT RAIL

California occupies an economically strategic position in our State, the Nation and the world. All modes of freight transportation – trucking, shipping, air cargo, and freight rail – are critical to this success. Commodities moved by rail tend to have a low transportation cost to weight/volume ratio, which makes them attractive to transport by freight rail lines instead of trucks. In order for California to maintain its preeminent position, it is vital that the State’s current freight rail system be preserved and maintained. This network must be reliable, accessible, cost-effective, and provide and enhance the mobility of people and goods, yet remain competitive with other modes. Overall, California’s railroads are stable, productive, and competitive and they have enough business to operate profitably.

FREIGHT RAIL INVENTORY

Freight railroads in California are owned and operated by private companies ranging in size from the large transcontinental railroads to short line holding companies such as Genesee & Wyoming Inc. and Omnitrax and small independent firms such as the Richmond Terminal Company and the Northwestern Pacific. These railroads are responsible for building and maintaining the system on which they operate. California’s freight railroad system consists of 29 railroads, which are categorized into two different classes:

- **Class I** railroads generate more than \$433.2 million in annual operating revenues.
- **Class III** railroads referred to as “short line” railroads; generate less than \$34.6 million in annual operating revenues.

BNSF Railway Company (BNSF) and Union Pacific Railroad (UP) are the only Class I railroads, and there are 27 short line railroads operating in California. Class I railroads are separated into subdivisions, and many short

lines were once branches from larger main lines.

This freight rail network supports the operations of industries throughout the State and links California with domestic and international markets.

CLASS I RAILROADS

Typically, the distance at which the economics become favorable for using a Class I railroad is approximately 500 miles.

Union Pacific (UP)

Created by the Pacific Railroad Act of 1862 signed by Abraham Lincoln, UP has evolved as the largest railroad in the United States. The UP ships a significant volume of intermodal freight, and is the largest shipper of chemicals in the country.

In California (2013), UP operates an expansive network of over 3,267 miles of track, has an annual payroll of \$429 million with 4,860 employees, and makes \$228.4 million in in-state purchases.

UP serves diverse regions including the San Joaquin Central Valley, the Port of Oakland and San Francisco Bay Area, and the Los Angeles metropolitan area. The UP Los Angeles Service Unit operating from the Ports of Los Angeles and Long Beach is the primary route to the four major gateways of St. Louis, Chicago, Memphis, and New Orleans.

Carload services include two system classification yards at West Colton (Southern California) and Roseville (northern California). Regional yards are located in Lathrop (San Joaquin County), Commerce (Los Angeles County) and Yermo (San Bernardino County).

BNSF

BNSF Railway is North America's largest intermodal carrier. It is the largest grain-hauling railroad in the country and is the nation's freight rail leader in intermodal (container) volume.

BNSF is the product of mergers and acquisitions of nearly 400 different railroad lines, including two major railroads (Burlington Northern Railroad and the Atchison, Topeka and Santa Fe Railway), over the course of 160 years.

In California, BNSF operates over 2,125 miles of track – 1,155 miles of which are owned by BNSF and 975 miles through trackage rights (rights of one railroad to operate on another's tracks).

The Transcontinental (Transcon) route east from the Ports of Los Angeles and Long Beach is an integral part of the California freight rail network and is their land bridge link to markets in Kansas City, Memphis, and Chicago.

BNSF rail yards include Bakersfield, Barstow, City of Commerce (Los Angeles), Fresno, Needles, Richmond, Riverbank, San Bernardino, San Diego, Stockton, and Wilmington. Intermodal hub centers are located at Fresno, Richmond, San Bernardino, Stockton, and Vernon (Hobart).

CLASS III SHORT LINE RAILROADS

California is home to 27 active short line railroads throughout the state (see table labeled California Short Line Railroads). Some have switching functions at the largest seaports and others serve as shorter line haul functions for Class I railroads in urban and rural areas. Short line railroads play an important role in moving goods to and from California regions and local communities.

Abandoned rail lines are an ongoing concern because once track is removed; it is very difficult to restore the lines. The likelihood of freight service is doubtful at best. For further information, see Rail Preservation Programs: A Survey of National Guidance and State Practice, (Caltrans, June 2011) - http://www.dot.ca.gov/hq/tpp/offices/ogm/trains/Rail_Preservation_PI_6-21-11.pdf

INTERMODAL RAIL

Intermodal rail, the long-haul transporting of shipping containers or truck trailers on railroad flat cars, continues to grow rapidly. According to the American Association of Railroads, "Intermodal allows railroads, ocean carriers, trucking companies, and intermodal customers to take advantage of the best attributes of various transportation modes to yield an efficient and cost-effective overall freight movement...(it) represents a cost-effective, environmentally friendly alternative to excessive reliance on highways to transport freight."

ECONOMIC IMPACT

Nationwide, each freight rail job supports 4.5 jobs elsewhere in the economy. According to United States (US) Department of Commerce economic models, every dollar spent on investments in our freight railroads — tracks, equipment, locomotives, bridges, etc. — yields \$3 in economic output. In addition, each \$1 billion of rail investment creates more than 17,000 jobs.

The Association of American Railroads in 2012 stated that "the more than 175,000 freight railroad employees are among America's most highly compensated workers." They further stated that in 2011, the average full-time rail industry employee earned annual wages and benefits totaling \$110,470.

Job Opportunities

Freight railroads plan to hire more than 11,000 people in 2013. According to the Association of American Railroads, 23% of railroad workers will retire making well paying jobs available throughout the country by 2015.

ENVIRONMENT

One train can carry the same load as 280 trucks and can move a ton of freight an average of 400 miles on one gallon of fuel. In 2011, 155.6 million tons of freight originated, terminated, or passed through California by rail. It would have taken approximately 8.6 million trucks to handle this freight.

The California Air Resources Board (ARB) has developed and implemented a number of measures to significantly reduce locomotive and railyard emissions in California, including regulations, enforceable agreements, and funding of clean technology. Programs include Rail Emission Reduction, Railyard Health Risk Assessments and Mitigation Plan, Locomotive Technology and Locomotive Incentive Funding, etc.

KEY FREIGHT RAIL ROUTES

A key route for both Class I railroads in California is the Tehachapi Trade Corridor, which is dispatched by the UP. The Tehachapi Trade Corridor is a major trade route which connects the State with national markets.

In Northern California, the Martinez Subdivision, Feather River Canyon, and Donner Pass routes serve the Port of Oakland and Port of Stockton, and are owned and dispatched by the UP but serve BNSF through trackage right agreements. Donner Pass has replaced the Feather River Canyon route as UP's primary intermodal service route eastward. Previously, only 5,000 foot trains could run through the rugged canyon route but now 9,000 foot trains traverse the Pass, thus optimizing UP's intermodal operation.

TRADE CORRIDOR IMPROVEMENT FUND (TCIF)

The Proposition 1B TCIF program represents the first time that pure public and private partnerships for freight rail have been achieved in the history of the State. Following are the three largest programmed TCIF freight rail projects:

Colton Crossing: A new elevated 1.4-mile-long overpass has now removed the chokepoint that existed where the BNSF mainline crossed UP tracks in Colton. With approximately 62 freight

trains per day on each line, Colton Crossing was one of the busiest at-grade rail-to-rail crossings in the nation. Putting the UP tracks above the BNSF line allows both railroads to use the tracks safely and eliminate waits as crossing trains pass. This project, completed in August 2013, exemplified a successful public-private partnership between Caltrans, San Bernardino Associated Governments, the city of Colton, UP, and BNSF Railway.

Tehachapi Trade Corridor Rail Improvement

Project: This project located in Kern County will improve capacity through the corridor by 70%. It involves 15 miles of double tracking, adding 3 main bridges, connecting existing siding and signal system improvements to a very rugged segment of rail through the Tehachapi Range.

Richmond Rail Connector Project: This project will provide an at-grade rail connection to enhance BNSF's access to the Port of Oakland. The project will allow slow-moving intermodal trains to bypass the City of Richmond thus reducing delays and congestion and improving safety in the local community. The project also enhances the Port of Oakland's competitiveness and optimizes the Tehachapi Trade Corridor by providing a faster, more direct route through Northern California.

POSITIVE TRAIN CONTROL

Positive train control (PTC) is advanced technology designed to automatically stop or slow a train to avoid collision accidents. A major infrastructure safety mandate of the Federal Railroad Administration (FRA), PTC rail technology provides benefits in terms of train separation and collision avoidance, line speed enforcement, temporary speed restrictions, and rail worker wayside safety. Due to the cost and complexity of installing PTC, rail operators are asking for a delay beyond the 2015 deadline.

California Short Line Railroads

<i>Name</i>	<i>Standard Carrier Alpha Code</i>
Arizona & California Railroad Company	ARZC
Central California Traction	CCT
California Northern Railroad	CFNR
Central Oregon & Pacific Railroad	CORP
Fillmore and Western	FWRY
Lake County Railway	LCR
Los Angeles Junction Railway Company	LAJ
Modesto & Empire Traction Company	MET
Napa Valley Wine Train	NVRR
Northwestern Pacific	NWP
Pacific Harbor Line, Incorporated	PHL
Pacific Imperial Railroad	PIR
Pacific Sun Railroad	PSRR
Quincy Railroad	QRR
Richmond Pacific Railroad Corporation	RPRC
Sacramento Valley Railroad	SAV
San Diego & Imperial Valley Railroad	SDIY
San Joaquin Valley Railroad Company	SJVR
Santa Cruz, Big Trees, and Pacific Railway	SCBG
Santa Maria Valley Railroad	SMV
Sierra Northern Railway	SERA
Southwest Portland Cement Railroad (Mojave Northern Railroad)	SWPC
Stockton Terminal & Eastern Railroad	STE
Trona Railway Company	TRC
Ventura County Railroad Company	VCRR
West Isle Line, Incorporated	WFS
Yreka Western Railroad	YW

Source: 2013 California State Rail Plan (CSRP)

California Freight Rail System Map



Source: 2013 California State Rail Plan (CSRP)
 Corrections: MCR – McCloud – Most of the line has been abandoned. MNRR (Modoc Northern Railroad) – no longer exists. NCRY (Niles Canyon Railroad), OERM (Orange Empire Railway Museum) and WRM (Western Railroad Museum) are railroad museums that provide rail excursion trips. SCBG (Santa Cruz, Big Trees and Pacific Railway and SCMB (Santa Cruz Monterey Bay Railroad) is mostly

passenger excursion with SCBG operating freight service (mostly lumber) from a connection with UP at Santa Cruz to Olympia, CA.

SOURCES AND ADDITIONAL INFORMATION

Association of American Railroads, <https://www.aar.org/Pages/Home.aspx>

2013 California State Rail Plan, California State Transportation Agency, May 2013

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Union Pacific in California, 2013 Fast Facts,

http://www.up.com/cs/groups/public/documents/up_pdf_natedocs/pdf_california_usguide.pdf