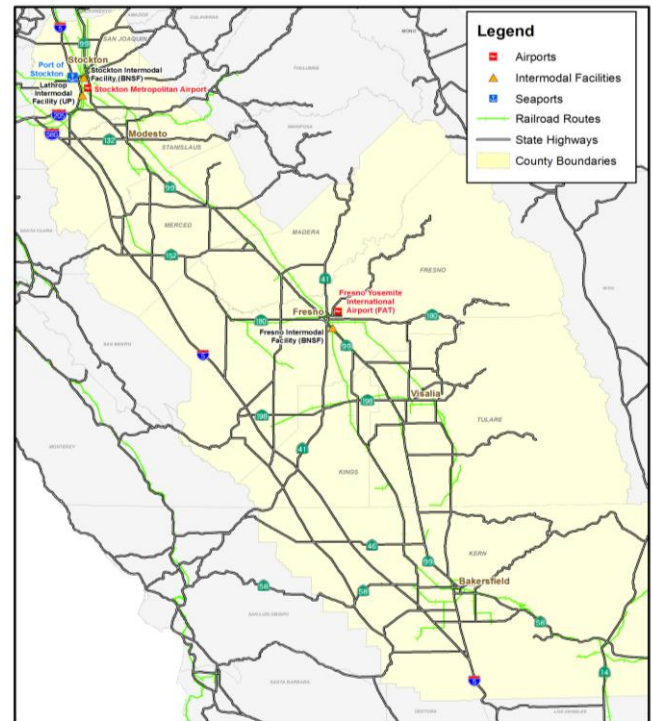


APPENDIX B-6-5: SAN JOAQUIN VALLEY

INTRODUCTION

The San Joaquin Valley (SJV) goods movement region encompasses eight counties - Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Sutter. It also includes all of Caltrans Districts 6 and 10. The area includes 62 cities of which Fresno, Bakersfield, Modesto and Stockton have populations over 200,000. According to the recently completed San Joaquin Valley Goods Movement Plan (a major reference source for most of this document). A SJV region population is over 4 million and is anticipated to grow to 6.05 million by 2040. It is California's fastest growing region.

The SJV region is effectively served by all major California seaports, although only the Port of Stockton is actually within the region itself. The Ports of Oakland, West Sacramento, Los Angeles, Long Beach, and others are linked to SJV origins and destinations by truck. The Port of Stockton is primarily a bulk commodity port and has two sections: the East Complex (the original Port of Stockton property) and the West Complex (the former Naval base on Rough and Ready Island). Both complexes are home to numerous non-maritime businesses on port property as well as to maritime shippers, receivers, and handling facilities. Both complexes have extensive rail trackage operated by the California Central Traction, with connections to Union Pacific and BNSF Railway.



The Port of Stockton is one of three ports to be connected by the Marine Highway, a container-on-barge service that links the Port of Oakland, Port of Stockton and Port of West Sacramento. The first phase was completed and began operation in 2013 with barge service between the Port of Stockton and the Port of Oakland. Currently the service has been halted but is anticipated to return in 2015. The Port of West Sacramento will become part of the service at a later date. Among these public benefits are reduced miles of truck travel on congested regional highways; less wear-and-tear on highways and bridges by removing heavy and overweight loads; lower fuel consumption by shipping goods via barge rather than via exclusive truck movements; reduced GHG production and improved air quality by reducing diesel emissions from trucks; and improved public safety by reducing truck traffic.

The area is also served by numerous short line railroads and by the Union Pacific Railroad (UP) and BNSF Railway class I¹ railroads within the region, and to points east such as Chicago, Kansas City, Saint Louis, Omaha, Memphis, New Orleans, Dallas, Fort Worth, and New York. The primary freight rail routes that

¹ The seven Class I freight railroads in the U.S. are BNSF Railway, CSX Transportation, Grand Trunk Corporation, Kansas City Southern Railway, Norfolk Southern Combined Railroad Subsidiaries, Soo Line Railroad, and Union Pacific Railroad. Class I railroads have operating revenues of \$432.2 million or more. Federal Railroad Administration, <https://www.fra.dot.gov/Page/P0362>

serve the region are the Tehachapi and Transcontinental (Transcon) routes. There are numerous rail yards, and rail served warehousing and distribution facilities in the region located in and around Bakersfield, Fresno and Stockton.

The highway and local road system is the primary freight infrastructure for the region, and trucking is the dominant freight mode. Truck movements are centered on the main north-south arteries, including I-5 and SR 99, as well as numerous east-west corridors such as SR 58, SR 108, SR 120, SR 180, I-580 to 205, SR 152, SR 46, and SR 198. There are over 31,420 roadway miles in the SJV consisting of interstate highways, such as I-5 and I-580; state highways, including SR 99 and SR 58; and major county roadways. Due in large part to the SVJ’s north-south orientation, the key regional highways are the north-south corridors, I-5, and SR 99. In addition to its role as an interregional connection for SJV shippers, I-5 also carries large volumes of through traffic connecting most of the major population centers and markets on the West Coast. The Valley’s urban centers are located predominantly on SR 99.

IMPORTANCE OF GOODS MOVEMENTS AND ECONOMIC BENEFITS

The Central Valley has a diverse internal economy and plays a major role in the distribution of agricultural products, processed food, and energy products throughout California, the Nation, and the world. A number of companies have located large regional and national distribution centers in the Central Valley in the Valley to take advantage of its relatively inexpensive land and low labor costs, good access to the national rail and interstate highway networks, connections to major deepwater ports such as Oakland, Los Angeles and Long Beach and its closeness to major consumer markets in Southern California and the San Francisco Bay Area. It is also home to a burgeoning logistics and distribution industry. It is California’s fastest growing region.

REGION OVERVIEW

COUNTIES	DISTINGUISHING CHARACTERISTICS
Kern	County is a major producer of grapes, milk, vegetables, almonds, and pistachios. Major goods movement industries include: Oil Services, Fruit and Vegetable Farming, Mineral Extraction, and Logistics. Such companies as Chevron Corporation, Giumarra Farms, Sears Logistics SVC, and U.S. Borax operate in the county.
Kings	Kings county is a major producer of milk, cotton, cattle and calves, tomato products, and pistachios. County goods movement industries include: Meat and Poultry Farming and Processing, Fruit and Nuts, and Produce Exporting. Companies such as Central Valley Meat Co., Del Monte Foods, Nichols Farms, Leprino Foods, J.G. Boswell Co operate in the county.
Tulare	Tulare county is a major producer of milk, oranges, grapes, cattle and calves, and corn. County goods movement industries include: Canning and Other Food Processing, Fruit and Vegetable Farming, Ranching, Warehousing and Distribution. Companies operating in the county include: Enns Packing Co., Sun Pacific Ranches, and Walmart Distribution Center.
Fresno	County is a major producer of grapes, tomatoes, poultry, almonds, cattle and calves. Goods movement industries include: Meat and Poultry Farming and Processing, Fruit and Nuts, and Produce Exporting. Companies such as Cargill Meat Solutions, Foster Farms, and Sun-Maid Growers operate in the region.

COUNTIES	DISTINGUISHING CHARACTERISTICS
Madera	Major producer of grapes, almonds, milk, pistachios, cattle and calves. Goods Movement industries include: Food Processing, Trucking and Distribution, and Manufacturing. Companies operating in the county include: Lamanuzzi and Pantealeo Cold Storage, Panella Trucking L.L.C and Georgia Pacific Corp. Madera.
Merced	Major producer of milk, chickens, almonds, cattle and calves, and sweet potatoes. Goods Movement industries include: Meat and Poultry Farming and Processing, Fruit and Vegetable Farming, and Food Processing. Local companies include: Bianchi and Sons Packing Co., Foster Farms, Hilmar Cheese Co.
Stanislaus	Major producer of milk, almonds, chickens, cattle and calves, and tomatoes. Goods Movement industries include: Wineries, Canning and Other Food Processing, and Vineyards. Companies operating in the area include: Carlo Rossi Winery, Conagra Foods, Del Monte Foods.
San Joaquin	Major producer of grapes, milk, cherries, tomatoes, walnuts. Goods Movement industries include: Ranching, Food Processing, Fruit and Vegetable Farming, and represent companies such as B&B Ranch, Pacific Coast Producers, Morada Produce Co.

REGIONAL TRANSPORTATION PLANNING

The Central Valley region is home to many MPO and regional transportation planning agencies. The San Joaquin Valley Regional Transportation Planning Agencies (RTPAs) include: the Council of Fresno County Governments, Kern Council of Governments (COG), Kings County Association of Governments, Madera County Transportation Commission, Merced County Association of Governments, San Joaquin Council of Governments, Stanislaus Council of Governments and Tulare County Association of Governments.

Within these planning organizations are many freight related groups including: San Joaquin COG Goods Movement Task Force and Fresno COG Rail Committee.

There have been numerous goods movement and multi modal freight related studies within the region and for the various planning organizations.

CENTRAL VALLEY GOODS MOVEMENT GATEWAYS, CORRIDORS, HUBS, AND FLOWS

TRUCKING

Primary Central Valley North-South Routes

- Interstate 5 (a “Corridor of the Future”¹)
- SR 99/70/149 (a “Focus Route”² and “Farm to Market”³ corridor)
- I-580, SR-41

Primary Central Valley East-West Routes

- Interstate 80 (part of a national freight corridor targeted for multi-state operations coordination efforts)
- US 50, I-205
- SR 4, SR 12, SR 26, SR-46, SR-58, SR 104,

- SR 108, SR 120, SR 132, SR 140,
- SR-152, SR-180, SR-198, SR 219

Trucking Issues

- Corridors with elevated freight volumes, such as I-5 and I-80, have high truck pavement damage impacts.
- Arch Road at SR 99 and Airport Way at Roth Road in Stockton are key truck access routes to freight rail intermodal facilities at the BNSF Mariposa and UP Lathrop Intermodal yards.
- STAA Access and STAA route signage issues continue to be a very significant issue in the Valley. Illegal Truck Parking due to a lack of truck parking facilities in the Valley is also a significant issue.
- Because a truck parking shortage exists, Caltrans works to accommodate parking through ramp and intersection design and advocacy with local partners.
- Trucking issues would be exacerbated by acceptance of other states longer STAA truck lengths and higher axle weights.

CENTRAL VALLEY WAREHOUSING AND DISTRIBUTION CENTERS

- *North Pointe Master Planned Business Park* - Industrial and logistics facilities designed to serve the California Central Valley and the western United States. <http://www.northpointebusinesspark.com/>
- *International Trade and Transportation Center (ITTC)* - ITTC is a 700-acre rail-served logistics park located in Shafter, California. ITTC has direct rail access with Union Pacific and BNSF Railway's mainlines and easy access to I-5 and SR 99. <http://www.ittc.com/>
- *Tejon Ranch Industrial (TRI) Complex* - A master planned development located at the heart of California's north-south connection, Interstate 5 and Highway 99, comprised of 1,450 acres. TRI provides outbound capabilities able to serve California and 11 western states within 24 hours. Currently it is served by trucks only but is investigating rail service and initiating contact with both UP and BNSF to discuss. <http://www.tejonranch.com/tic/index.asp>
- *San Joaquin Partnership* - The San Joaquin Partnership is a non-profit, private-public economic development corporation assisting business and industry to locate into San Joaquin County, California, including the Cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy. <http://www.sjpnnet.org>

Freight Rail

- Railroad freight service is integral to the development of agriculture and commerce in SJV.
- Unlike truck traffic, nearly all SJV rail traffic moves to or from other states. Carload rail service in the SJV is dominated (about 75 percent of the total tonnage) by inbound flows, reflecting the region's consumption of agricultural inputs (e.g., grain and animal feed for the livestock industry, fertilizers and chemicals for farming); heavy bulky materials (e.g., coal and petroleum products, wood products); and semi-finished goods.
- All intraregional rail traffic is carload. The intermodal traffic is slightly imbalanced in the outbound direction.

- UP is the primary Class I railroad in the area, with BNSF Railway having major trackage rights, particularly over the Tehachapi Route where they move 70% of the rail volume.
- UP and BNSF both have lines that run north and south through Caltrans District 6 and connect to the Port of Oakland with points east and west towards Chicago, Kansas City, SJV shippers.
- UP Lathrop and BNSF Mariposa are key intermodal freight rail facilities. Rail lines through the SJV connect with mainline trackage in the LA Basin to the south and mainlines to the north.
- Various shortline freight railroads interface with the Class I railroads to move commodities, agricultural products, and other freight throughout the Central Valley, the State, and the U.S. They are: California Northern Railroad, Central California Traction Company, Modesto and Empire Traction Company, Stockton Terminal and Eastern Railroad, San Joaquin Valley Railroad (SJVR), Sierra Northern Railway, West Isle Line (WFS), and Tulare Valley Railroad (TVRR). All interface with the Class I railroads to move Central Valley freight and agricultural goods throughout the State, U. S., and to Far East markets.
http://www.gwrr.com/about_us

Positive Train Control (PTC)

- The Rail Safety Improvement Act of 2008 (RSIA), signed by the President Obama on October 16, 2008, as Public Law 110-432, has mandated the widespread installation of PTC systems by December 2015. The railroads are currently seeking an extension of the deadline into 2016. All of the affected railroads are pursuing development of the PTC implementation plans required by the RSIA and are adapting their individual PTC systems to maximize interoperability. The BNSF Railway, UP, Norfolk Southern Railway, and CSX Transportation are leading the interoperability effort for technologies based on the Electronic Train Management System .

Seaports

Port of Stockton

- Situated between three major highways and I-5. Also has shortline and class I freight rail service and is served by the Stockton Regional Airport. Port can provide domestic, national and international distribution of imports and exports.
- On the San Joaquin River, approximately 75 miles east of San Francisco and can berth 17 vessels.
- Approximately 60 tenants on leased land construct and operate their own facilities. Tenant and Port operations handle liquid bulk, dry bulk, and warehouse/distribution activities.
- Part of the “Marine Highway” Project (with the ports of Oakland and West Sacramento)—a federal Transportation Investment Generating Economic Recovery (TIGER) grant.
<http://www.portofstockton.com/>

Port Issues

- Major infrastructure improvements are needed to become more competitive.
- Currently, the United States Corps of Engineers is studying the deepening of the Stockton ship channel from 35 feet deep to 40 feet deep.

AIRPORTS

- Airports in the SJV collectively account for less than 1 percent of all air cargo handled by California’s civilian airports. Products moved by air continue to use airports outside of the SJV. Airports in the SJV collectively account for less than 1 percent of all air cargo handled by

California's civilian airports. However, on a tonnage basis, the leading exports from Los Angeles International and San Francisco International are agricultural commodities, substantial shares of which were grown in the SJV.

- According to foreign trade statistics published by the U.S. Commerce Department, California shipped just over \$1 billion in agricultural exports by air in 2011, a 27% increase over the preceding year. Due to the lack of direct flights linking SJV airports with overseas markets, virtually all of these airborne exports must first be trucked to LAX or SFO.

AIR CARGO AIRPORTS

- *Fresno Yosemite International Airport*
Cargo carriers include Airborne Express, FedEx, and United Parcel Service.
<http://www.fresno.gov/DiscoverFresno/Airports/AirlineServiceandAirCargoInformation.htm>
- *Stockton Metropolitan Airport*
Located between the two primary north-south routes in the region, Interstate 5 and State Highway 99. Currently, the airport is underused due to the economic downturn.
<http://www.sjgov.org/airport/>

SYSTEM PERFORMANCE AND FREIGHT INFRASTRUCTURE NEEDS

- Freight transportation in the Central Valley is influenced by the agricultural sector. While there is growth projected for all major goods movement industries, agriculture and farming have experience rising crop values over the past 10 years of nearly 30 percent.
- Agriculture, mining and manufactured goods account for over 87% of all commodities; inbound, outbound or locally.
- Other industries such as warehousing and distribution in the goods movement transportation system will continue to expand and will serve higher margin agricultural products. Agricultural growth is expected to level off around 2040 with a 1 percent growth rate per year for the next 30 years.
- The SJV is experiencing the demands of the modern global logistics system across a range of goods, from raw agricultural materials to consumer products. The Nation's food supply will continue to require effective goods movement to distribute and export products quickly and efficiently.
- The rise in globalization has caused supply chains to lengthen, disperse, and become more complex as producers look to gain competitive advantage by accessing lower labor costs in locations outside of the U. S.
- In 2007 over 85% of all tonnage in the Central Valley moved by truck. Rail movements are almost exclusively outbound, inbound or through the region. Distances within the region are too short for cost effective rail service.

ENVIRONMENT

- The SJV is classified by the Environmental Protection Agency (EPA) as in serious nonattainment for particulate matter 2.5 (PM2.5) and extreme nonattainment for Ozone. In order to help mitigate these issues, regulations from state and Federal agencies have been implemented to reduce emissions. The main Truck and Bus regulation from the California Air Resources Board became effective (along with amendments) on December 14, 2011; and requires the upgrading of diesel trucks and buses in the State to include PM filters by 2012.²¹ Throughout the regulatory process, stakeholders reported uncertainty about how the regulation would be implemented,

who it would affect, and how the regulation would impact business for goods movement industries in the SJV.

- The regulation described previously requires the retrofitting trucks with exhaust filters to capture pollutants (particularly diesel particulate matter) before they are emitted. There are incentives programs through the State to help users with the financial costs associated with these retrofit programs; however, some stakeholder participants have reported that the funding behind these programs has not always been available.

The University of California, Davis report *Land of Risk Land of Opportunity* (November 2011) identified the following environmental conditions in the San Joaquin Valley:

- Nearly one-third of the nearly four million people in the region face both high degrees of environmental risks (for example, toxic air and water pollutants) and high degrees of social vulnerability (poverty, low levels of formal education, and low English literacy). Other research has shown that such social vulnerability increases susceptibility to environmental hazards and increases risks of health problems.
- There are many more environmental hazards identified by area residents than are documented in state and federal regulatory inventories.
- The combined conditions of environmental hazards and social vulnerability are not randomly distributed across the region but are concentrated in a range of urban and rural communities.
- These areas of high environmental vulnerability deserve special attention from regulators and policy makers to protect the health and well-being of area residents.

As a result of air pollution generated by stationary agricultural and industrial sources coupled with the automobiles and diesel trucks that stream through the region's highways, residents of the San Joaquin Valley suffer from high rates of asthma and other respiratory ailments. Madera, Fresno, and Kings Counties for example, have rates approximately twice that of the state as a whole for asthma-related emergency room visits by young children (ages 0-4).

The combination of high social vulnerability and environmental hazards such as drinking water contamination is not an isolated phenomenon, but is found in a large number of communities in the region. A recent study of San Joaquin Valley water systems found 10 community water systems with high levels of nitrate contamination and another 24 communities with medium levels of contamination (above the safety standard).

Resources

Highway 99 Updated Business Plan, Volume 1, September 2009, prepared by Caltrans District 6 and 10
<http://www.sjvcogs.org/pdfs/2009/99bp1.pdf>

Highway 99 Business Plan, Volume II, September 2009, prepared by Caltrans District 6 and 10
<http://www.sjvcogs.org/pdfs/2009/99bp2.pdf>

Land of Risk, Land of Opportunity, Cumulative Environmental Vulnerabilities in California's San Joaquin Valley, University of C California – Davis, Center for Regional Change, November 2011
<http://regionalchange.ucdavis.edu/ourwork/publications/ceva-sjv/full-report-land-of-risk-land-of-opportunity>

San Joaquin Valley Interregional Goods Movement Plan, Cambridge Systematics, Incorporated, prepared for San Joaquin Valley Regional Transportation Agencies, January 2012
<HTTP://WWW.SJVCOGS.ORG/PDFS/2012/GOODSECO11212.PDF>