

The California Mexico International Border

Importance of the California-Mexico Border

California and Mexico share over 130 miles of an international border. International trade is a key contributor to the economic well being of both countries. Much of this trade was facilitated by the 1994 North American Free Trade Agreement (NAFTA), which broadened the free trade agreement (FTA) between the U.S and Canada to include Mexico; thereby, creating the world's largest free trade agreement area. The FTA trilateral agreement eliminated duties and quantities restrictions boosting cross border trade, economic growth and investment and job creation. Mexico and Canada make up the two largest markets for U.S. exports, purchasing nearly one-third of U.S. merchandise. NAFTA became especially important with the launch of the European Union and the economic growth of China and other emerging markets. For Mexico, trade liberalization transformed their economy from primarily being an oil exporter to now an exporter of a diversified array of manufactured products and made the country one of the largest exporters in the world.¹

Trade among the NAFTA partners is not just trade of finished products but is a system of building products together between countries where companies send parts and materials back and forth (sometimes multiple times) during the production process. This process known as production sharing takes advantage of economies of scale and the competitive advantages of each country (assembly of Mexican exports to the U.S. include 40 percent² American content, far exceeding any other foreign import³, see Table 1). Although Asia still remains an attractive offshoring destination (outsourcing operations or manufacturing to another country), nearshoring (moving of production and or business functions to a neighboring country) with Mexico is once again on the rise. Many U.S. companies are returning to Mexico not just because of its proximity to the U.S., making it a shorter supply chain, but because it has become increasingly more attractive to companies that want lower production costs; more control over quality, delivery schedules, smaller differences with time zones and keeping outsource products closer to their business. Many companies have production and manufacturing plants in Tijuana, Mexico, and have their parent company in San Diego. Often referred to as maquiladoras or maquila, these operations in Mexico have manufacturing operations in a free trade zone, where factories can import materials and equipment tariff free and can assemble, process or manufacturer closer to the country of origin. Factors such as China's climbing labor costs, rising cost of transportation costs, and with its low concentration of skilled workers, Mexico has become more attractive to U.S. manufacturers and importers.

In 2012, California reached an all time high total trade value with Mexico of over \$62.3 billion, making it California's largest export market (see Table 1). According to the U.S. Chamber of Commerce⁴, U.S. trade in goods and services with Canada and Mexico rose from \$337 billion in 1993 to \$1.182 trillion in 2011. Trade with Mexico accounts for six million U.S. jobs. California's exports to Mexico are predominantly computers and electronic products, which account for 31 percent of all California exports to Mexico⁵.

¹ North American Free Trade Agreement, http://www.naftanow.org/facts/default_en.asp, retrieved April 17, 2014

² With production sharing, especially between the United States and Mexico, the same components will cross the border several times as a product is assembled.

³ Wilson Center, Mexico Institute, *et al*, *The State of the Border Report – A Comprehensive Analysis of the U.S.-Mexico Border*, May 2013.

⁴ United States Chamber of Commerce, *20 Years, NAFTA Triumphant, Assessing Two Decades in Trade, Growth, and Jobs*, 2012. http://www.uschamber.com/sites/default/files/reports/1112_INTL_NAFTA_20Years.pdf

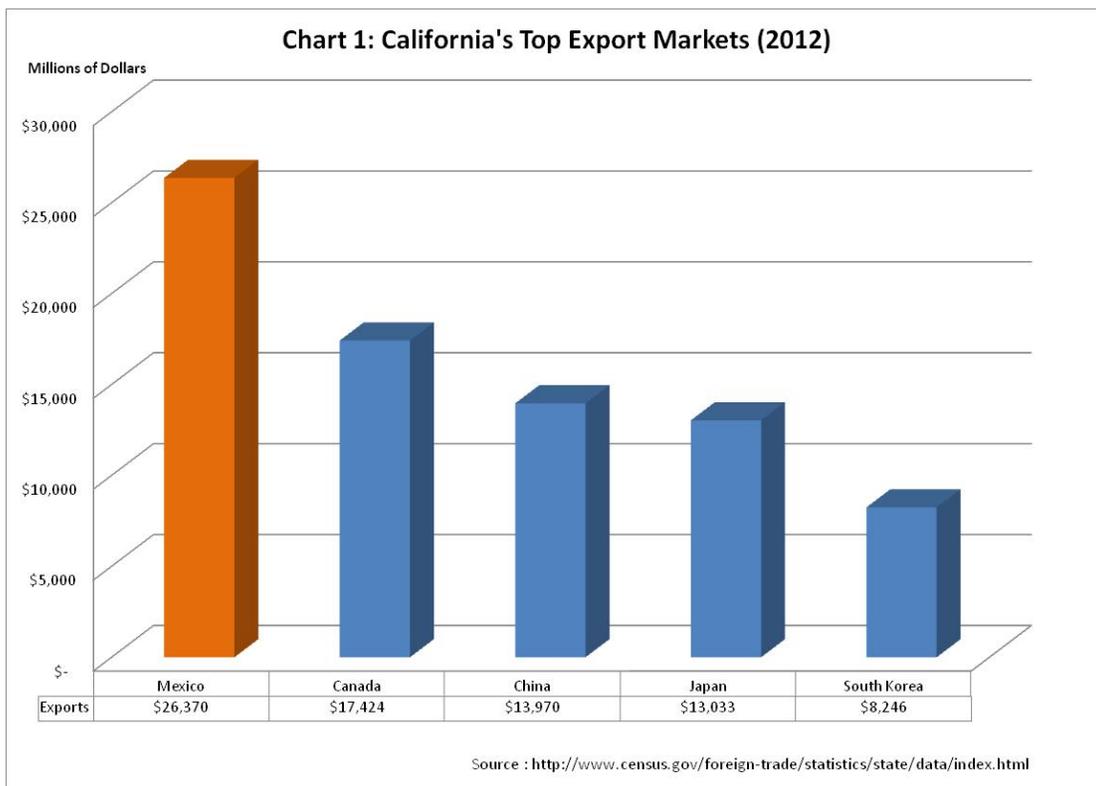
⁵ <http://www.calchamber.com/international/trade/pages/tradestatistics.aspx>

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Table 1: 2012 Production Sharing Value of U.S. Content in Imports

Mexico	40%
Canada	25%
Malaysia	8%
Korea	5%
China	4%
Brazil	3%
European Union	2%
Japan	2%
India	2%
Countries less than 2%	9%
Total	100%

Note: U.S. /Mexican production sharing far exceeds any other U.S./foreign imports.



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Land Ports of Entry (POEs) have a critical role in preserving and encouraging this growth. By 2050⁶, border crossings in San Diego County are estimated to exceed 3.4 million incoming trucks per year and 39 million tons of goods, valued at \$309 billion (an average annual growth of 5.3 percent in value, between 2007 and 2050). Similarly, by 2050 almost 17 million tons of goods per year are projected to be handled at Imperial County border crossings, with an estimated value of \$143 billion (an average annual growth of 5.4 percent). The vast majority of freight flows (98 percent) are by truck, many of which use the State Highway System. This increase in truck traffic will impact the already strained system at key bottlenecks including POEs.

A significant portion of freight flows entering the region from Mexico does not stay within the border region. Nearly 90 percent of the goods entering San Diego County have a final destination elsewhere in California or in adjacent states such as Arizona and Nevada or as far as New York⁷. The land POEs also have a strong relationship with San Pedro Bay seaports. Twelve percent of all laden trucks with an ultimate origin/destination outside of the border region have a connection to the seaports in Long Beach and Los Angeles⁸.

California Gateways

The California-Mexico international border has six POEs: San Ysidro, Otay Mesa, Tecate, Calexico West, Calexico East, and Andrade (see Map 1). The Otay Mesa POE in San Diego County and the Calexico East POE in Imperial County are the two main California-Mexico freight gateways. In terms of the number of truck crossings, the Otay Mesa POE is the busiest commercial land port in California and the second busiest commercial POE on the U.S.-Mexico border. In 2012, the Otay Mesa POE handled approximately 1.5 million trucks and close to \$35 billion worth of goods in both directions. The Calexico East POE serves nearly all of the international truck traffic crossings in Imperial County with a total trade value of over \$12 billion dollars in 2012. The most transported commodities entering the United States by truck through California POEs include pulp, paper, or allied products⁹; electrical machinery, equipment, and supplies; and food and farm products.

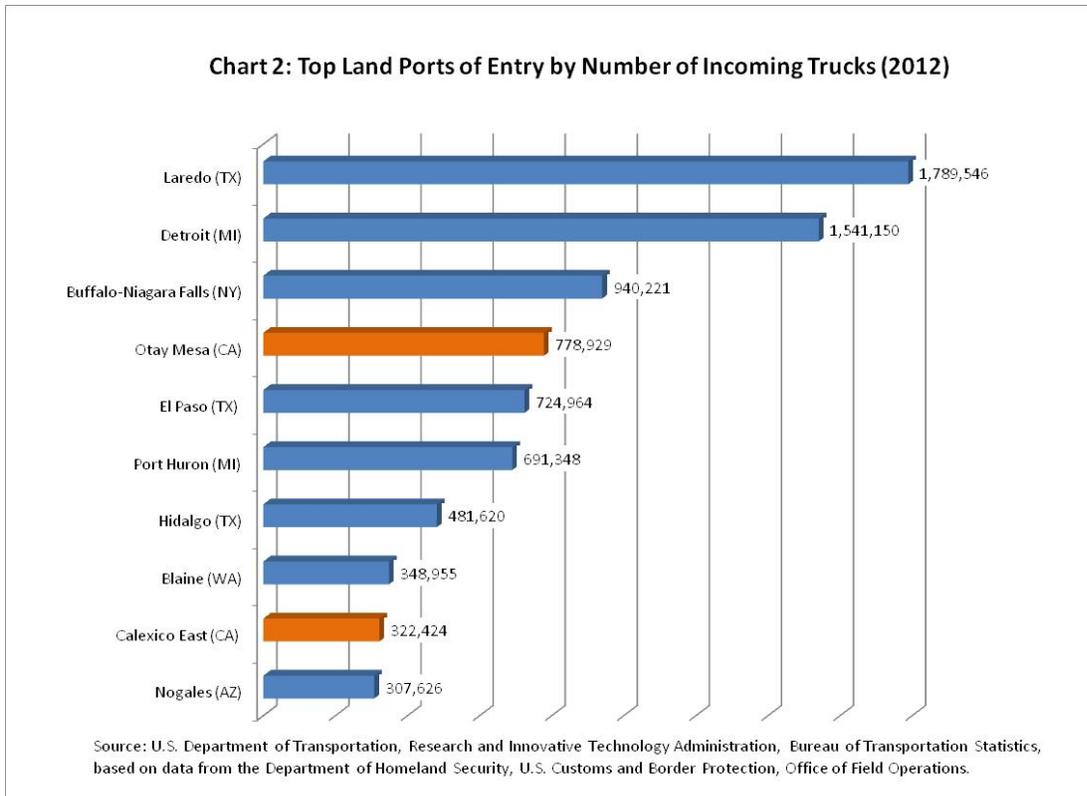
⁶ San Diego Association of Governments, *San Diego and Imperial Valley Freight Gateway Study*, March 2010. http://www.sandag.org/uploads/publicationid/publicationid_1479_10924.pdf

⁷ *Ibid.*

⁸ Caltrans, *2003 Commercial Vehicle Border Crossing Survey*.

⁹ This group includes the manufacture of pulp (wood and other fiber), of paper and paperboard, and in the manufacture of paper and paperboard into commodities such as boxes, bags, etc.

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A new Otay Mesa East POE with a tolled highway (State Route 11) is scheduled to open in 2017 as a critical relief valve for cross border congestion. This project will help reduce freight and passenger traffic congestion at the San Ysidro, Otay Mesa, and Tecate POEs, as well as deliver additional capacity for future growth by providing a new alternative for traversing the U.S.-Mexico border.

In addition, a proposed San Diego-Tijuana Cross Border Facility (CBF) project site will be located adjacent to the U.S.-Mexico international border in the City of San Diego. The project includes the construction and operation of a pedestrian bridge linking passenger facilities in the U.S. with the existing airport terminal in Tijuana, Mexico.



Figure 1: Trucks at Otay Mesa POE

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The CBF's primary purpose is for passengers originating in or traveling to the U.S. using the Tijuana International Airport to avoid crossing the U.S.–Mexico international border via the existing, congested POEs at San Ysidro and Otay Mesa, or the future Otay Mesa East.

Border Freight Challenges and Opportunities

Economic Impacts of Border Delays

Port of Entry (POE) facilities and border transportation routes are severely congested, resulting in significant delays for trucks waiting to cross the international border. In addition, federal, State, and regional planning agencies project significant future increases in truck traffic. Freight flows through the region will grow by 2.1 percent annually in volume, and 4.0 percent in value¹⁰. Cross border delays discourage trips across the border and inhibit potential growth in business income, hindering trade in the



Figure 2: Traffic queues at Calexico East POE (looking into Mexico)

long term. Congestion delays at the U.S.-Mexico border result in shipments not being delivered on time, increased transportation costs and interruptions in manufacturing and delivery cycles. Uncertainty over wait times acts as a barrier to the import and export of goods, and hinders California from attracting new investments, as well as maintaining existing investments. In 2008¹¹, over 30,000 jobs were lost nationwide due to northbound delays for both freight flows and personal trips at the California-Mexico border, including 25,000 jobs in California. Impacts of

delay were also significant on the other side of the border with over 11,000 jobs lost in Mexico, including 7,600 in Baja California. By 2017, using conservative growth projections, nearly 45,000 jobs could be lost in the U.S. and 16,000 in Mexico due to border crossing delays. Truck delays at the border have an annual cost to San Diego County of \$412 million in business output and 2,256 jobs¹². The Imperial County annual loss is \$58 million in business output and 276 jobs. At the State level, the total revenue loss is \$943 million and 4,892 total jobs lost. The existing commercial POE facilities are inefficient, with cross border wait times up to several hours for trucks. Truck cross border wait times and long queues are caused by several factors such as limited hours of operations at the POEs, inadequate transportation and POE infrastructure facilities, and insufficient customs staffing levels on both the U.S. and Mexican sides. The existing commercial POE facilities are inefficient, with cross border wait times up to several hours for trucks. Congestion delays are not limited to northbound traffic. At the Otay Mesa POE, southbound

¹⁰ *Ibid.*

¹¹ Caltrans, SANDAG, *Economic Impacts of Wait Times at the California-Mexico Border 2009 Update*.

http://www.dot.ca.gov/dist11/departments/planning/pdfs/systplan/ImpactsOfBorderDelayFinalReport_January2010.pdf

¹² *Ibid.*

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truck traffic queues on city streets to reach the U.S. Customs export facility. These delays cause trucks to back-up, idle, and block surface street and intersections blocking access to local businesses. Delays contribute to unacceptable exhaust emission levels and illegal truck maneuvering in the area surrounding the POEs (cutting in line, “road rage”, etc.), as well as truck and passenger vehicle conflicts. Contributing to the difficulties is the lack of truck parking facilities and rest stops near the POEs.

Environmental Impacts of Border Delays

According to a 2010 San Diego State University study¹³, greenhouse gas (GHG) emissions at the San Diego County POEs (San Ysidro, Otay Mesa, and Tecate) were approximately 80,000 metric tons (mt) of carbon dioxide equivalents (CO₂ E) for all three border crossings combined, comprising 0.5 percent of total on-road transportation emissions in San Diego County based on the latest 2006 GHG inventory. Heavy-duty diesel trucks at the Otay Mesa POE commercial crossing contributed the most on a per vehicle basis (15.3 kilograms CO₂ E/crossing). Vehicles using the “trusted traveler” Secure Electronic Network for Travelers Rapid Inspection (SENTRI) lanes contributed the least overall emissions (1.1 kilograms CO₂ E/crossing). Of the total 80,000 mt of GHG emissions, 45 percent were from idling while waiting to cross the border.

The health impacts of traffic-related air pollution are well documented. In adults, traffic-related pollution has been linked to cardiovascular disease, respiratory illness, and cancer. In children, traffic-related pollution has also been linked to asthma, reduced lung growth, bronchitis, leukemia, and birth defects.

After the signing of NAFTA, growth in economic activity between the U.S. and Mexico produced an increase of cross border trade. This increase in border economic activity impacted land POEs and the transportation network serving them. NAFTA did not provide any funding streams for POEs or improvements to cross border connecting transportation facilities. Many of the POEs are 40 years old on the average and lack the capacity to handle steadily growing traffic volumes. The 1998–2004 Transportation Equity Act for the 21st Century (TEA-21) and the 2005–2011 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established the Coordinated Border Infrastructure Program to finance border projects. However, the current federal transportation bill, Moving Ahead for Progress in the 21st Century (MAP-21) folded the border financing program into a larger program, leaving border projects to compete with projects from other regions.

Inter-agency Coordination

California’s border with Mexico poses challenges and opportunities and that requires the use of multiple perspectives - bi-national, international, and government-to-government. The California-Mexico border lacks a single integrated vision or coordinated mechanisms among the various federal, state, and local agencies in charge of mobility and security, particularly for communities adjacent to the land POEs. Each government agency that works at the border has different missions, objectives, project development and delivery processes, and performance measures to serve narrowly defined constituents. These objectives and processes are often in conflict between agencies.

¹³ Barzee, Suzanne Louise, *Greenhouse gas emissions due to vehicle delays at the San Diego-Tijuana border crossings*, San Diego State University, Dissertation, 2010.

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Role of the California Department of Transportation

The California Department of Transportation (Caltrans), in partnership with the U.S. General Services Administration, the U.S. Customs and Border Protection (UCBP), the U.S. Federal Highway Administration, the San Diego Association of Governments (SANDAG), and the Imperial County Transportation Commission, collaborates to reduce congestion and improve mobility in California's border international transportation network including ports of entries (POEs). Caltrans works with the federal, State, and local government agencies and community stakeholders from the U.S. and Mexico, in addition to representing the State of California in a number of national and binational forums to address the State's border transportation issues, challenges, and opportunities. Caltrans actively participates in binational transportation and planning groups such as the U.S.-Mexico Joint Working Committee (JWC)¹⁴, the U.S.-Mexico Binational Bridges and Border Crossings Group¹⁵, and the Border Governors Conference (BGC)¹⁶.

In 2008, on behalf of the State of California, Caltrans delivered the first JWC U.S.-Mexico Border Master Plan (BMP)¹⁷. The goal of the California-Baja California BMP was to integrate state, federal, and local input to develop binational criteria for prioritizing POE and transportation projects. Caltrans continues to serve as the co-lead agency along with the Baja California Secretariat of Infrastructure and Urban Development (SIDUE) in a soon to be completed 2014 BMP update, which will also include low-cost operational improvements that provide immediate relief to border delays and develop a framework for a future transportation computer model to conduct POE sensitivity analyses.

Cross Border Planning History at the California-Mexico International Border

Many factors, externalities, and events influence the dynamics of the California-Mexico international border. Until 2000, border crossing delays were shorter compared to current levels of congestion. In 1998, the JWC completed the Binational Border Transportation Planning and Programming Study¹⁸. The study produced an inventory of transportation infrastructure along the U.S.-Mexico border and specified some of the "disconnects" that existed at that time. In 2004, Caltrans in conjunction with the JWC reported the results from two key studies. One study, the *Transportation Infrastructure and Traffic Management Analysis of Cross Border Bottlenecks*¹⁹, prioritized infrastructure projects, and recommended immediate action to relieve bottlenecks. The second study, the *Binational Border*

¹⁴ The JWC has its roots in NAFTA between the U.S., Canada, and Mexico. The JWC's primary focus is to facilitate efficient, safe, and economical cross-border transportation movements and cooperate on land transportation planning. The JWC's main objectives are: to promote effective communication and coordination; analyze current and future transportation infrastructure needs; and evaluate transportation demand and infrastructure impacts.

¹⁵ The U.S.-Mexico Binational Group on Bridges and Border Crossings purpose is to provide a forum for a binational effort to manage the planning, construction, and maintenance of planned, ongoing, or new border crossing projects and POEs along the U.S.-Mexico border.

¹⁶ The U.S.-Mexico Border Governors Conference (BGC) is a mechanism for ongoing dialogue and consultation, as well as a close working relationship among the governors of the Border States in order to generate

¹⁷ <http://www.dot.ca.gov/dist11/departments/planning/pdfs/systplan/10-California-BajaCaliforniaBorderMasterPlanSeptember2008.pdf>

¹⁸ http://www.borderplanning.fhwa.dot.gov/study_4phases.asp

¹⁹ <http://www.borderplanning.fhwa.dot.gov/bottleneckStudy/bottleRpt.pdf>

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*Transportation Infrastructure Needs Assessment*²⁰, identified major transportation corridors in the border region, developed a quantitative procedure to evaluate the needs for these corridors, and identified transportation projects and possible funding sources. These two studies led Caltrans and the JWC to recognize the need for the implementation of U.S.-Mexico Border Master Plans for each border state.

After the terrorist attacks of September 11, 2001, security became the main goal in the management, operations, and planning at the border. The U.S. started enforcing several security policies such as the 2009 Western Hemisphere Travel Initiative, a federal law that requires all travelers to show a valid passport or another approved secure document that proves their nationality at land and sea ports of entry when traveling to the U.S. from areas within the Western Hemisphere. In 2009, UCBP increased random southbound vehicular inspections on the U.S. side of the border for commercial and noncommercial vehicles crossing into Mexico. Around the same time, Mexico implemented policies to address border security such as southbound inspections into Mexico (called the “SIAVE” program)²¹. However, neither the U.S. nor Mexico POEs were designed for southbound commercial vehicle inspections. These events and policies generated longer border crossing delays and increased traffic congestion at the ports of entry.

Most recently, in May 2013, President Barack Obama and Mexico’s President Enrique Peña Nieto announced the formation of the High Level Economic Dialogue (HLED) to advance strategic economic binational cooperation between the states, as well as for the prosperity and improvement of the quality of life for the inhabitants of the region. At BGC conferences, governors discuss issues and opportunities and commercial priorities to promote mutual economic growth, job creation, and global competitiveness. Among the goals laid out in the HLED work plan, the U.S. and Mexico intend to continue efforts to modernize and expand a bilateral air transport relationship and develop an agenda of ongoing cooperation on intelligent transportation and freight systems²². We share a common goal to have economic growth and development that is mutually beneficial to both countries supported by an efficient, sustainable transportation system.

²⁰ <http://www.borderplanning.fhwa.dot.gov/tocBINS.asp>

²¹ SIAVE (Sistema de Aforo Vehicular).

²² <http://www.whitehouse.gov/the-press-office/2013/09/20/fact-sheet-us-mexico-high-level-economic-dialogue>