

## Trend Analysis: Farm-To-Market Goods Movement

### Trend Statement

California's agricultural supply chain is a major user of the transportation system network. The State produces nearly one-half of United States grown fruits, nuts, and vegetables and also is a major producer of livestock and livestock products. Farm-to-market goods movement is hampered by a variety of factors<sup>1</sup>. Small, rural roads in California have not been designed to support large trucks, population centers are disconnected from each other and from other regions where the main agricultural production occurs and short-haul rail services are disappearing<sup>2</sup>. Together, these challenge the success of transporting farm goods to market.

### Background

The seeds of the farm-to-market road system were planted in the early 1930s when the United States (U.S.) Bureau of Public Roads called on America to "get the farmer out of the mud," a slogan that led to a greatly improved and expanded system of paved rural roads. Most often crop production is located near transportation facilities. Therefore, it is imperative that all arterials and major arteries carrying goods to and from crop production locations and the last-mile roads are maintained to support the efficient delivery and shipment of commodities.

The San Joaquin Valley (SJV) is the main contributor to agricultural production in the state and is the main focus of the limited research on farm-to-market goods movement within California. The San Joaquin Valley, also known as the Central Valley (CV), produces a very large share of California's exports, especially agricultural products. Beyond the Central Valley, the eastern Sierras, Sacramento Valley, Imperial Valley (east of San Diego County), and the Central Coast also contribute to farm-to-market goods movements. In the Central Valley, goods movement is a significant contributor to poor air and water quality. Increased local growth will create a demand for more goods movement, increase congestion and hasten the degradation of the roadways in the SJV.<sup>3</sup>

In the Sacramento Valley most of the agricultural production takes place in the Northern Sacramento Valley and, in fact, agriculture is the primary source of economic vitality for most Northern Sacramento Valley counties. Sacramento Valley's agricultural is similar to the San Joaquin Valley. Almonds and walnuts are of greater importance north of the Delta, and rice, which is not practicable in the drier San Joaquin Valley, is a major crop. The town of Corning, also known as the Olive City, produces olives for oil extraction and for consumer consumption. It is also home to the Bell Carter Olive Company, which is the world's largest ripe olive cannery. Sunsweet Growers Incorporated is headquartered in Yuba City. It is a growers' cooperative and the world's largest handler of dried tree fruits including cranberries, apricots, and prunes."<sup>4</sup> The

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<sup>1</sup> It should be noted that a very significant limitation is the lack of research and dedicated study devoted to farm-to-market goods movements.

<sup>2</sup> See Trend Analysis: Railroad Abandonment and Preservation – State Ownership Strategies for more information.

<sup>3</sup> <http://www.sjvcogs.org/pdfs/2012/2012-03-26%20draft%20Task%20six%20draft.pdf>

<sup>4</sup> <http://www.sunsweet.com/about/index.asp>

Sacramento Valley controls more than two-thirds of the worldwide prune market with over 400 growers in California.

In Imperial Valley, local farmers produce more than 100 different commodities, including bamboo, sugar cane, flax, corn, artichokes, fish, goats, honey, cilantro, water lilies and more. Imperial Valley agriculture production in 2011 generated an estimated \$1,175,000,000 in personal income for California families, and an estimated \$5.3 billion in total economic impact.

The Central Coast region, a five-county region (Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara) is a major producer of broccoli, lettuce and strawberries. Wine grapes and nursery products are also important agricultural products. The majority of the major crop production locations are clustered near U.S. 101 – particularly in the Salinas Valley. Other major clusters are located around Santa Maria, and east of Paso Robles near State Route (SR) 46.

The Staggers Rail Act (1980) which deregulated the rail industry has allowed rail road companies to disinvest in less profitable, inefficient railroads and consolidate railroads resulting in agricultural commodities being more dependent on trucking.

- The U.S. Department of Agriculture (USDA) claims that *“it increasingly appears as if the real challenges facing farmers in the future will not be in producing crops for domestic and export markets – U.S. farmers are the world’s most productive. Instead, the real challenge for U.S. agriculture will be whether the transportation services and infrastructure will exist to market what is produced effectively.”*<sup>5</sup>

As a result, trucking is a critical mode for the first, last and sometimes “in-between” miles. Trucking generally provides the last link in the transportation chain, carrying all types of commodities from intermediate destinations, such as seaports, rail terminals and distribution facilities to their final destinations. It also means that there is a need for improved truck parking facilities, both for long haul truckers and near coolers.

To date, comprehensive studies focused on farm-to-market issues are limited and are focused on the Central Valley with the exception of SR 395 in the eastern Sierras and on goods movement-related border crossings in Imperial County.

## Freight System Implications

Farm-to-market goods movement activities are limited by inadequate infrastructure, congestion and disconnected population centers. Roadways in most agricultural regions are not designed to accommodate large trucks. These lower quality roads decrease the efficiency of all types of goods movement because they are too narrow for consistent safe passage, exhibit high levels of disrepair (slowing vehicular movement) and often do not allow for passing (slow trucks therefore create congestion easily). According to the San Joaquin Interregional Goods

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<sup>5</sup> United States Department of Agriculture. *Agricultural Transportation Challenges for the 21<sup>st</sup> Century: A Framework for Discussion*. (USDA: Transportation and Marketing Programs, and Agricultural Marketing Service, 2000. Available at <http://www.ams.usda.gov/tmd/summit/contents.htm>)

Movement Plan (August, 2013), “Both [population growth and increased mean incomes] will contribute to greater freight demand [and] higher volumes of freight vying for space on the region’s system.” Cambridge Systematics Inc. calculates that “roughly 85 percent of this tonnage...is anticipated to be carried by truck” (2012). This growth in population and freight tonnage will likely translate into ever-increasing congestion on the roadways and continued degradation of farm-to-market goods movement activities if there is not significant transportation infrastructure interventions.

Agencies in the Central Valley are attempting to address these issues through the San Joaquin Valley Interregional Goods Movement Plan (August 2013) which covers the following topics:

- In depth analysis of existing conditions as they relate to freight
- Analysis of the importance freight plays in the valley economy
- Ongoing stakeholder outreach activities
- Goods movement data reporting – including in-depth reports for specific key Valley industries
- Analysis of growth in freight demand
- Evaluation of community environmental and economic freight impacts
- Identification of policy and project interventions
- A list of funding sources available

### Planning Considerations

Much of the current effort to improve conditions in the San Joaquin Valley relate to transportation infrastructure and goods movement activities and planning (see the resources section for links to planning documents/initiatives). Beyond California, other states are creating their own networks of farm-to-market roadways for rural regions. Texas, Iowa and Missouri all have examples of such infrastructure (Figure 1). In Texas, there are 40,985 miles of farm-to-market roadways<sup>6</sup>. These road networks are designed to directly connect agriculturally productive regions with population centers so that produce can be delivered to consumers efficiently. When creating a farm-to-market network, states must consider designing and modifying roadways to accommodate trucks that meet Surface Transportation Assistance Act (STAA) standards although funding is not always available for these kinds of upgrades. Larger trucks that traverse small rural road networks cause significant damage to the infrastructure and increase the potential for conflicts with passenger vehicles. States and the federal government should also consider the seasonality of agricultural commodities because the harvest period varies by agricultural product and so need and capacity should be designed and built to meet the ebb and flow of harvest seasons. Alternatives to trucking, such as short haul railroads<sup>7</sup> have the potential to provide consistent links between producers and consumers but have met with limited success<sup>8</sup>

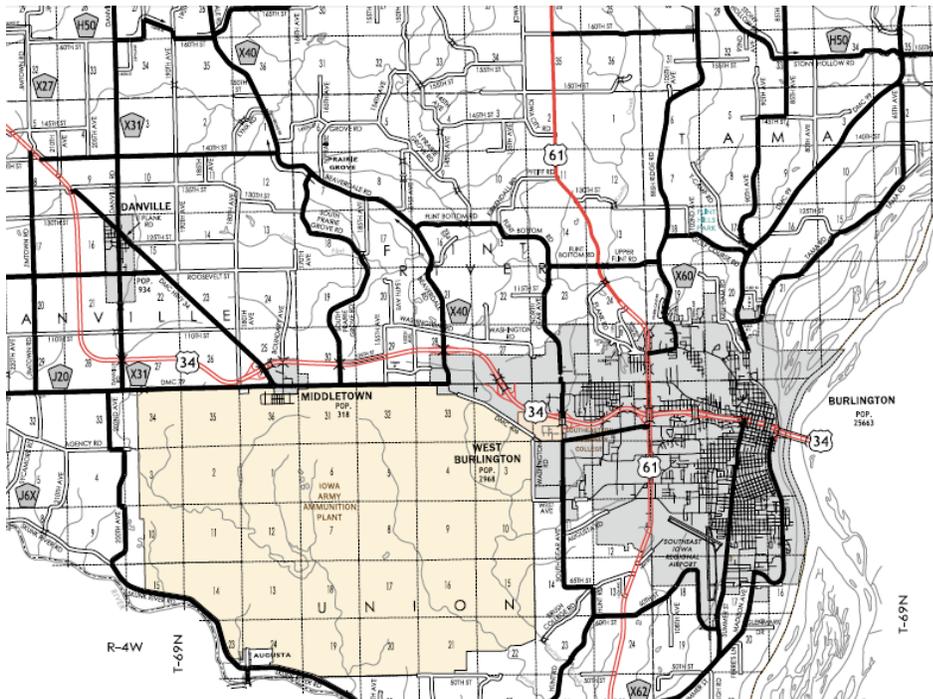
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<sup>6</sup> <http://www.aaroads.com/texas/>

<sup>7</sup> Defined here as freight rail service that provides inter-regional goods movement services.

<sup>8</sup> For more information see The California Inter-Regional Intermodal System (CIRIS) Plan and the Northern California Inland Port/Short Haul Rail Project Plan.

Figure 1: Farm-To-Market Roads - Iowa



Dark black lines delineate farm-to-market roads that lead into Des Moines, Iowa. Source: [http://www.iowadot.gov/systems\\_planning/farm2Market.html](http://www.iowadot.gov/systems_planning/farm2Market.html)

## Resources

Bedsworth, Louise Wells. (2004). Clearing the Air in the San Joaquin Valley: Developing an Action Plan for Regulators, Legislators and the Public. Union of Concerned Scientists. Retrieved on June 13, 2012. Available at:

[http://www.ucsusa.org/assets/documents/clean\\_vehicles/central\\_valley\\_final-new.pdf](http://www.ucsusa.org/assets/documents/clean_vehicles/central_valley_final-new.pdf)

Cambridge Systematics, Inc. (2012a). San Joaquin Valley Interregional Goods Movement Plan: DRAFT Task 6: The Community, Environmental, and Economic Impacts of Freight Movement. Retrieved May 29, 2012. Available at: <http://www.sjvcogs.org/pdfs/2012/2012-03-26%20draft%20Task%20six%20draft.pdf>

Cambridge Systematics, Inc. (2012b). San Joaquin Valley Interregional Goods Movement Plan: Goods Movement Issues. Retrieved May 29, 2012. Available at: <http://www.sjvcogs.org/pdfs/2012/2012-04-02%20PP%20gm%20issues.pdf>

Farm-to-Market Road Systems:

[http://www.sacog.org/rucs/wiki/index.php/Goods\\_Movement\\_in\\_Rural\\_Areas#Farm-to-Market\\_Road\\_Systems](http://www.sacog.org/rucs/wiki/index.php/Goods_Movement_in_Rural_Areas#Farm-to-Market_Road_Systems)

Groundswell SJV: <http://groundswellsjv.org>.

Iowa Farm-To-Market Roads: [http://www.iowadot.gov/systems\\_planning/farm2Market.html](http://www.iowadot.gov/systems_planning/farm2Market.html)

San Joaquin Valley Interregional Goods Movement Plan: <http://www.sjvcogs.org/goods.html>

Northern California's Inland Port/Short Haul Rail Project Plan:  
<http://www.crowsbizpark.biz/Northern%20California%20Inland%20Port%20Short%20Haul%20Rail%20Project%20-%20TCIF%20Application%20%282%29.pdf>

Smart Valley Places: <http://www.smartvalleyplace.org>

STAA Truck Routes: <http://www.msa2.saccounty.net/transportation/Pages/TruckRoutes-STAA.aspx>

The California Inter-Regional Intermodal System (CIRIS) Plan:  
<http://www.sjcog.org/docs/pdf/Regional%20Planning/Final%20CIRIS%20Implementation%20Plan.pdf>

The Rural-Urban Connections Strategy (RUCS), Sacramento Council of Governments:  
<http://www.sacog.org/rucs/>

The Valley Blueprint: <http://www.valleyblueprint.org>

