

# San Joaquin Valley Interregional Goods Movement Plan

*presented to*

## Caltrans Transportation Planning Workshop

*presented by*

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April 10, 2014

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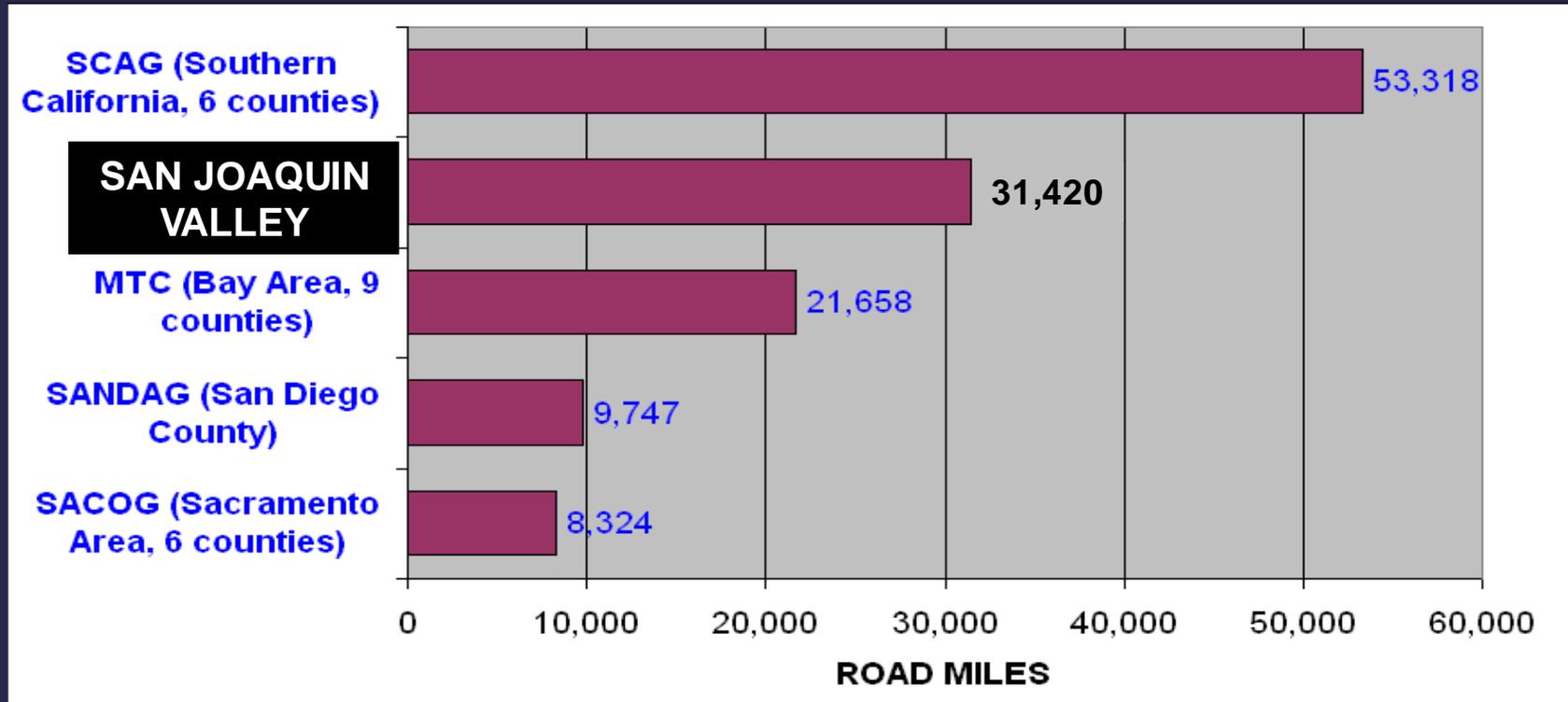
# POPULATION COMPARED TO “BIG FOUR” MPOS

	2010 Population	2050 Population	2010-2050 Growth
<b>SCAG</b> (Southern California, 6 counties)	18,847,967	27,060,027	8,212,060
<b>MTC</b> (Bay Area, 9 counties)	7,459,858	10,294,746	2,834,888
<b>SAN JOAQUIN VALLEY</b>	<b>4,034,478</b>	<b>9,455,181</b>	<b>5,420,703</b>
<b>SANDAG</b> (San Diego County)	3,224,432	4,508,728	1,284,296
<b>SACOG</b> (Sacramento Area, 6 counties)	1,820,814	2,988,711	1,167,897

Ranks third in population

Ranks second in population growth

# ROAD MILES COMPARED TO “BIG FOUR” MPOS



Ranks second in road miles

# What is the San Joaquin Valley Interregional Goods Movement Plan?

- The eight San Joaquin Valley Regional Planning Agencies', together with Caltrans, developed the *San Joaquin Valley Interregional Goods Movement Plan*. The Plan prioritized goods movement investments for the multimodal infrastructure of the entire San Joaquin Valley –including its highways and roadways, rail facilities, air cargo facilities, intermodal centers, and ties to inland and marine ports. In addition to creating a blueprint for future investment into the region's goods movement system, the Plan:

# What is the San Joaquin Valley Interregional Goods Movement Plan?

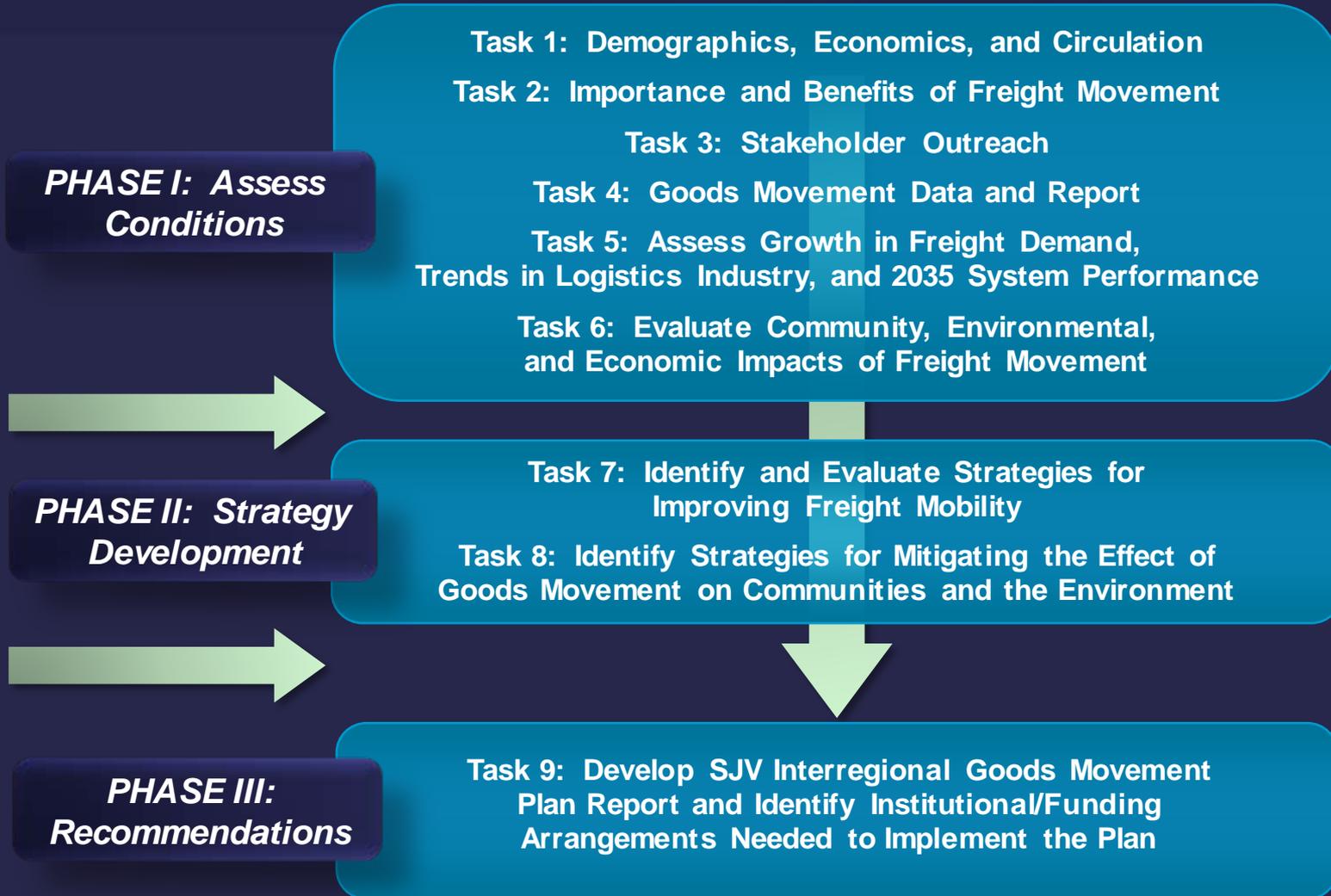
- Worked with regional freight stakeholders to understand the issues, challenges, bottlenecks, and opportunities of the Valley's multi-modal goods movement system,
- Assessed supply chain and logistics trends and how they will impact goods movement in the future,
- Created a prioritized investment plan of project improvements and strategies to increase the efficiency reliability of the region's goods system, and
- Seeks to contribute to economic development, strong industries, and environmental health throughout the entire San Joaquin Valley.



# Project Outcomes

- **A six step, data-driven process to select and prioritize project.**
- **A multimodal priority project list that represents the regional Stakeholders' combined vision – “Efficiency/Economy/Environment” (48 projects)**
- **Strategies that build on regional strengths/address regional competitiveness needs**
- **Funding and implementation strategy**

# Three-Phased Project Approach



# KEY FINDINGS FROM PHASE I: ASSESS CONDITIONS

*presented to*

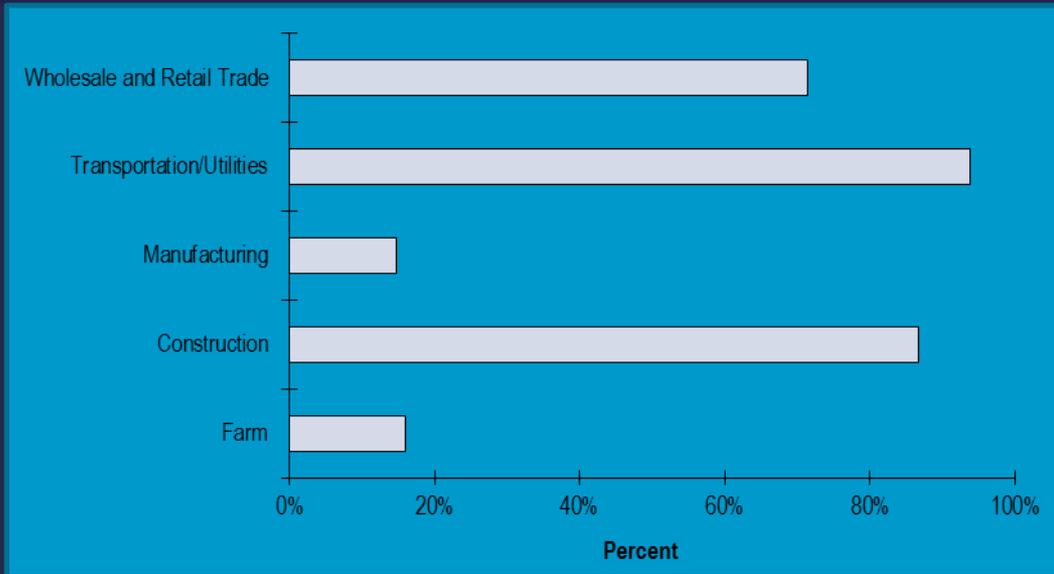
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# Population / Industry Trends Dictate Growth



- Population projected to grow to 6 million by 2040
- Industry employment anticipated to grow to 813,000

- This growth will drive commodity growth- from about 500 million tons in 2007 to over 800 millions tons by 2040

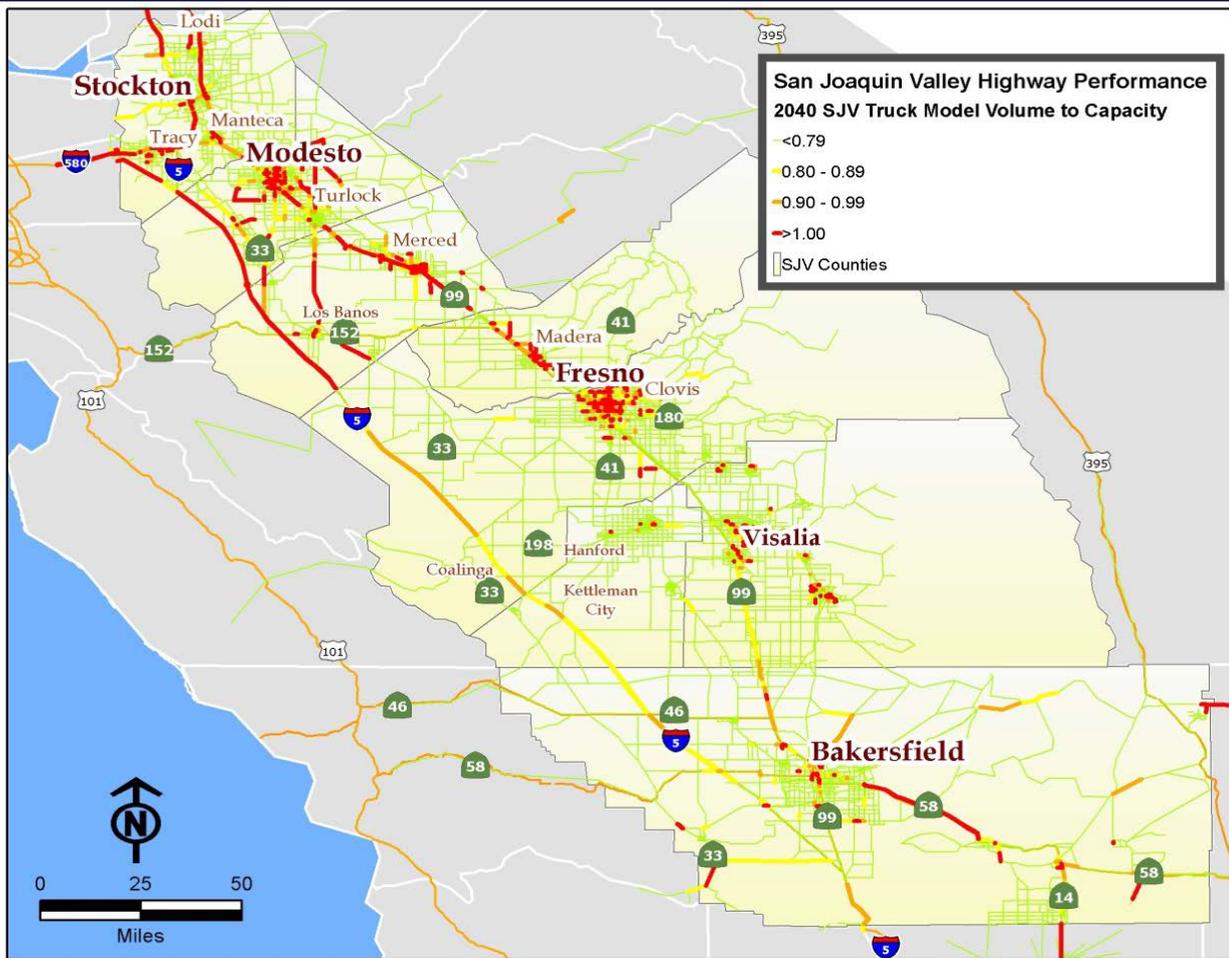
# The Transportation System is Extensive

- Extensive network of highways, east-west connectors and local roads
- Class I & Short line rail
- Port of Stockton
- Seven airports



*However, there are also some issues related to goods movement.....*

# #1: Congested / Deteriorating Infrastructure

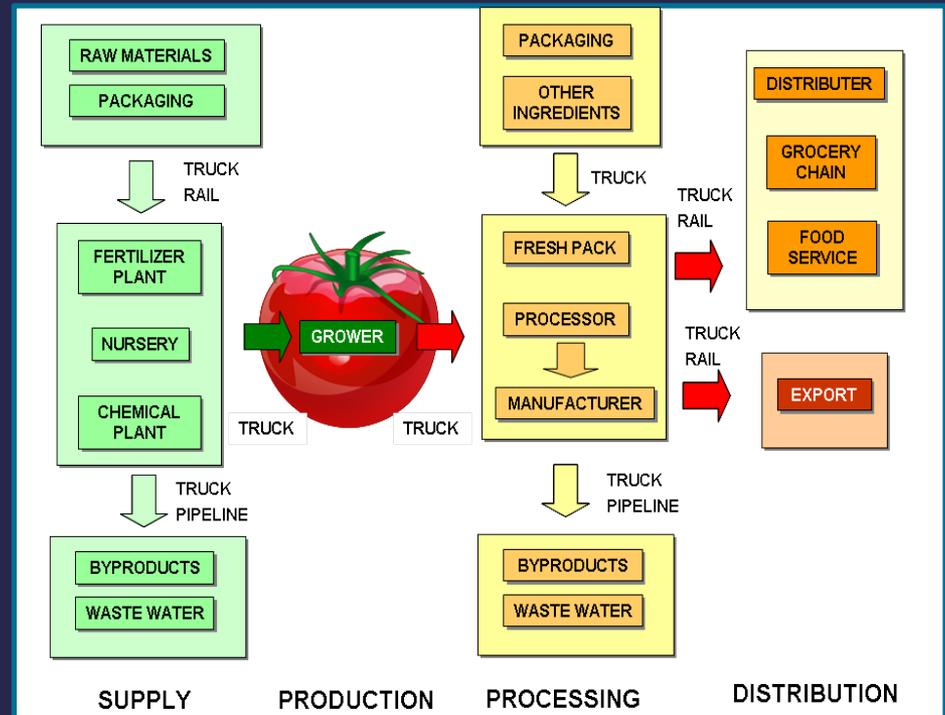
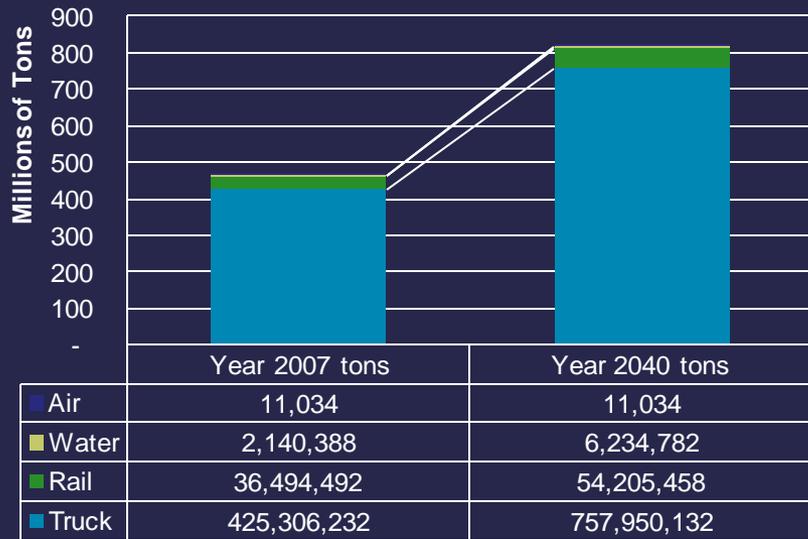


Congestion is growing on many San Joaquin Valley facilities:

- » Key N-S corridors
- » E-W corridors
- » Local roads / “Last mile” connections

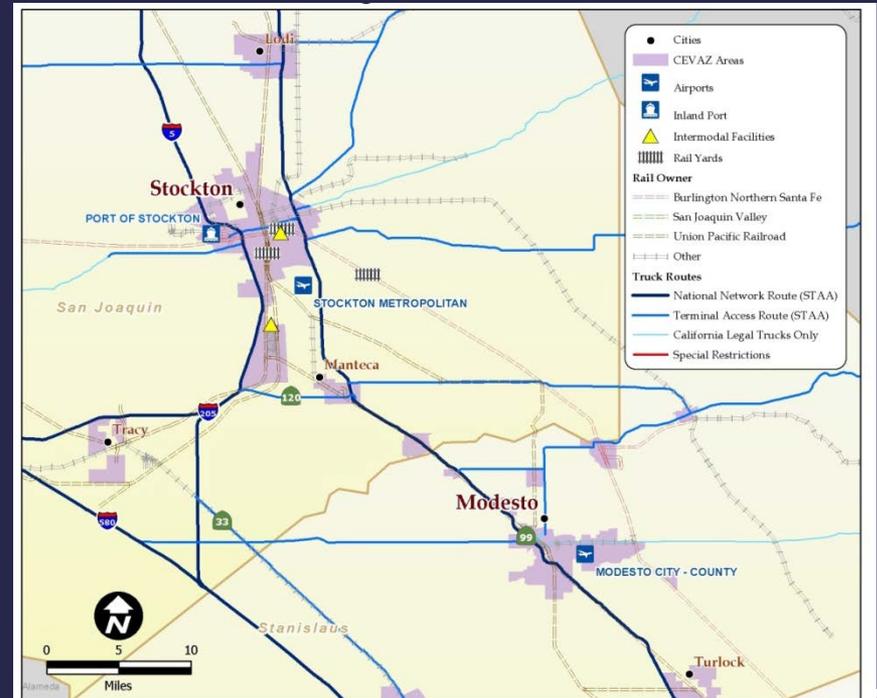
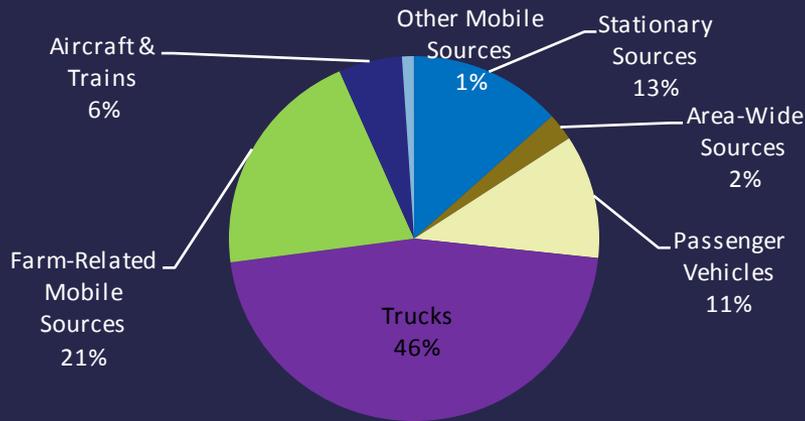
# #2: Transportation Modal Choice

- 90% of commodity movements are by truck. However, key industries depend on other modes (rail & air cargo).



# #3: Environmental / Community Impacts of Goods Movement

- Movement of trucks, trains, and airplanes can negatively impact communities and the environment.
- Freight facilities can cause noise, sound, smell, and visual disturbance.



# #4: Connections to International Markets

- Many of the SJV's products are exported through California marine and air ports.
- This connectivity is crucial to the SJVs economy.

SJV Trading Partner	2040	% of Total	Growth '07-40
<b>Intra-regional Flows</b>	382,633,069	50%	60%
Bay Area	86,256,728	11%	<b>111%</b>
Southern California	75,319,112	10%	<b>78%</b>
<b>Outside of State</b>	74,159,961	10%	<b>75%</b>
Central Coast	70,501,914	9%	74%
<b>Sacramento and Points North</b>	59,760,979	8%	49%
Eastern California Counties	9,318,367	1%	77%

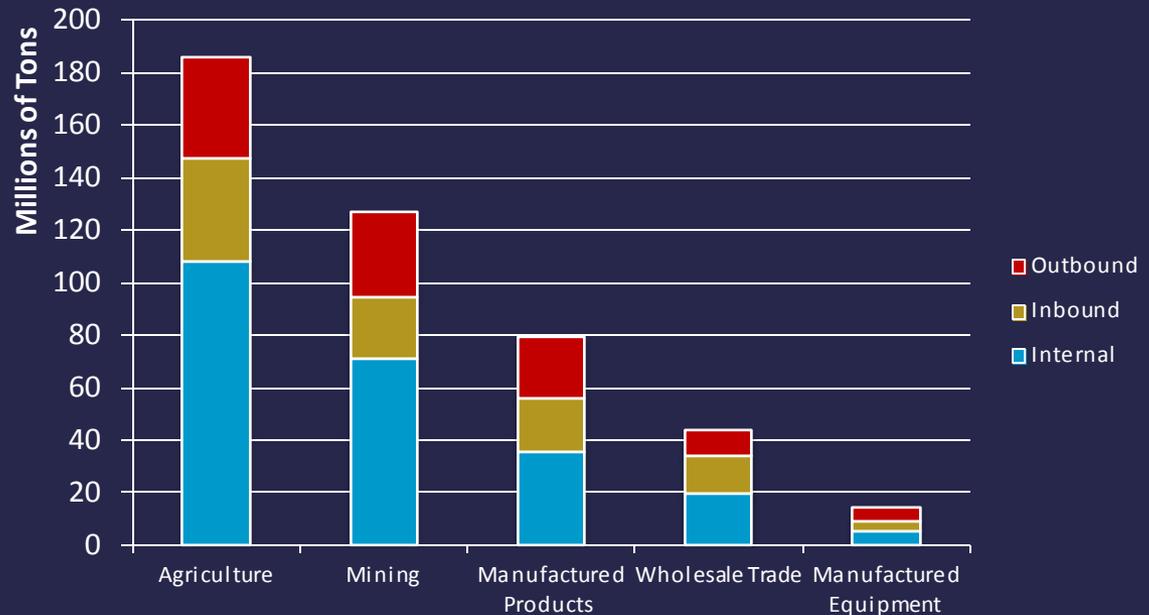
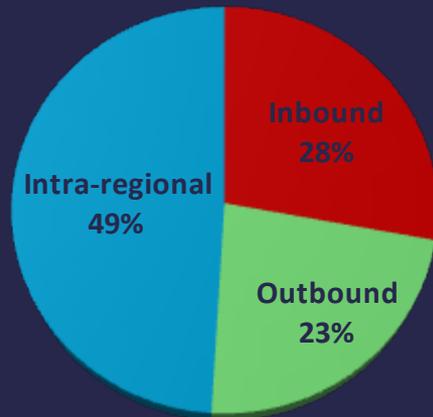


CALIFORNIA'S GREEN TRADE CORRIDOR AT THE PORTS OF OAKLAND, STOCKTON AND WEST SACRAMENTO, CALIFORNIA



# #5: Ensure East-West and Local Connectivity

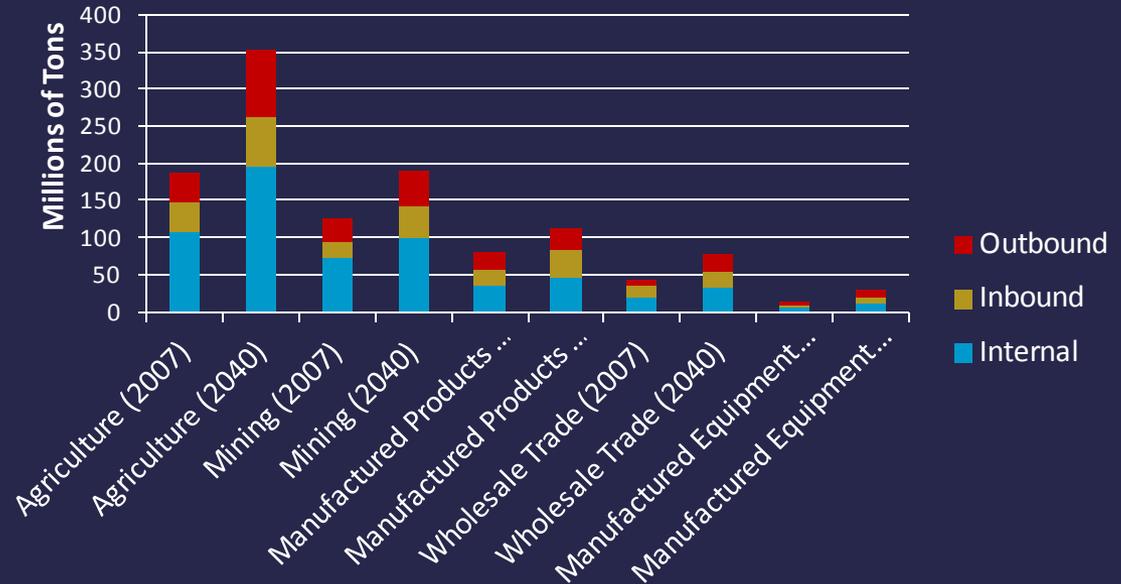
- Almost 50% of all commodity movements are intra-regional. Preserving the regional and local serving infrastructure is essential to supporting SJV industry.



# #6: Build a System to Support Economic Development

Transportation investments should support new industries such as:

- Higher-value crops
- Logistics and warehousing /distribution
- Light manufacturing
- Oil production
- Export Products



# KEY FINDINGS FROM PHASE II: SELECTING AND PRIORITIZING PROJECTS

# High-Level Goals

## Mobility

Improve mobility for both freight and the general public in term of cost, capacity, accessibility, reliability, service, and modal choice.

## Economic Development

Provide opportunities for economic development and maintain competitiveness, balance reliance on the market with social costs and benefits.

## Community/ Environmental Mitigation

Reduce emissions, minimize land-use conflicts, address environmental justice, improve safety.

# The Project List ....

- 1. Offers solutions to the main goods movement issues**
- 2. Is multimodal**
- 3. Represents the combined vision of the eight SJV counties and projects of regional significance**
- 4. Reflects significant stakeholder outreach**
- 5. Is prioritized using clearly identifiable information and data**

# Six Steps to Select Projects

## Step 1: Establish High-Level Goals for Goods Movement in the San Joaquin Valley

- Outreach to shippers, carriers, public agencies, environmental groups, ports, and more

## Step 2: Develop Performance Measures

- Focus on quantitative measures with readily-available data

## Step 3: Create Preliminary "Master" Project List

- Eight County RTPs, stakeholder interviews, TCIF, new projects

## Step 4: Screen the Project List

- Created list of regionally-important projects (on key goods movement infrastructure, supporting key industries, or those identified by stakeholders)

## Step 5: Analyze Project Performance Impacts

- Using Valley-wide Truck Model, Caltrans Cal B-C model, IMPLAN, other sources

## Step 6: Final Prioritization of the Projects / Strategies

- Ranked according to performance impacts, High, Medium, and Low. List refined through extensive outreach and coordination with regional stakeholders.

# Quantitative Analysis

## ● Mobility analysis

- » Valleywide model – delay reduction
- » Last mile connectors – connect to key facilities
- » Reinforcing prior goods movement investments
- » Non-highway improvements in travel times

## ● Economic Analysis

- » Value of mobility improvements and multiplier effects
- » Jobs created or retained and multiplier effects
- » IMPLAN used to estimate multiplier effects

## ● Environmental/Safety Analysis

- » Highway emissions improvements from model
- » Historic accident data

# Qualitative Analysis and Final Assessment

- **Long-term, vision projects and policies**
  - » **Regional significance**
  - » **Addressing critical issues not adequately addressed by conventional projects**
  
- **Project Prioritization**
  - » **Grouped into High, Medium, Low categories by major evaluation criteria**
  - » **Portfolio approach**

# 48 Priority Projects

- 13 Regional Highway projects
- 13 East-west connector projects
- 3 “Last mile” projects
- 5 Alternative modal projects
- 6 Economic development projects
- 2 Inland Port projects
- 6 Strategic programs

**48 Total Priority Projects**

# KEY FINDINGS FROM PHASE III: RECOMMENDATIONS

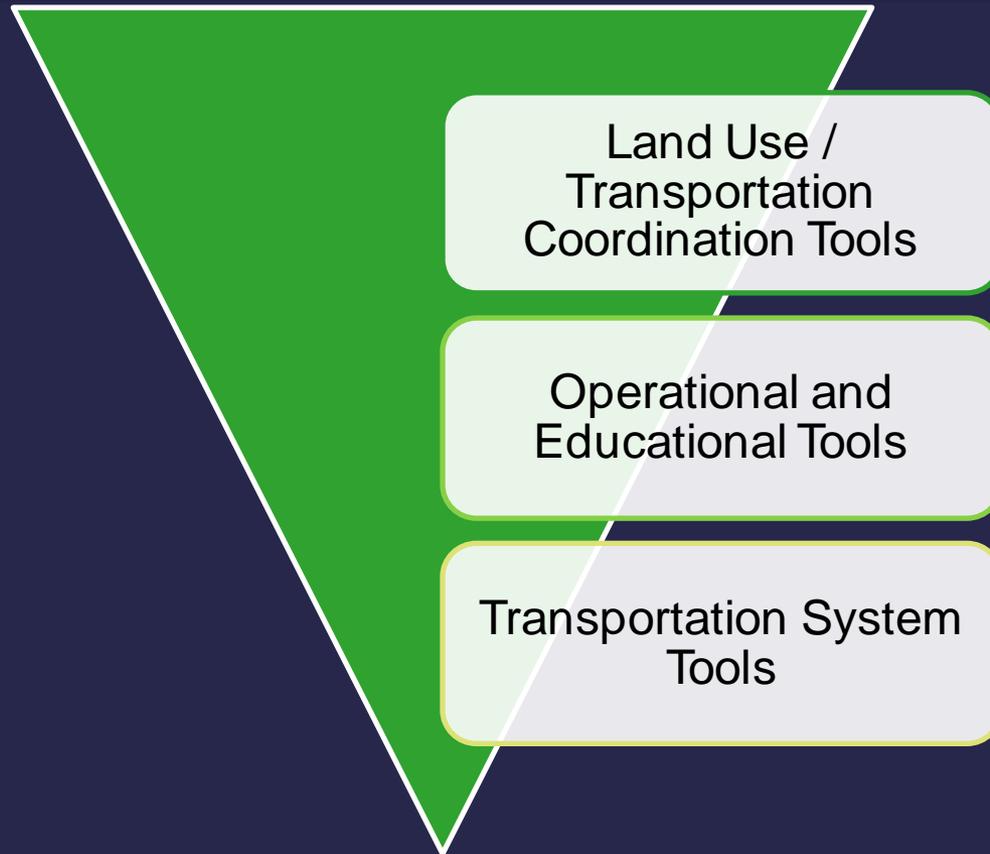
# Recommendation: Air Quality Strategies

Technology Strategies	Anti-Idling Strategies	Energy Efficiency Strategies	Alternative Fuel Strategies
<ul style="list-style-type: none"> <li>• Retrofit older engines with diesel particulate filters or diesel oxidation catalysts</li> </ul>	<ul style="list-style-type: none"> <li>• Truck Stop Electrification</li> </ul>	<ul style="list-style-type: none"> <li>• Truck Speed Reduction</li> </ul>	<ul style="list-style-type: none"> <li>• Ultra Low Sulfur Diesel (ULSD) fuel</li> </ul>
<ul style="list-style-type: none"> <li>• Replace old engines with brand new engines</li> </ul>	<ul style="list-style-type: none"> <li>• Auxiliary Power Units</li> </ul>	<ul style="list-style-type: none"> <li>• Hybrid-Electric Vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Compressed Natural Gas (CNG)</li> </ul>
<ul style="list-style-type: none"> <li>• Retrofit older engines with selective catalytic reduction (SCR) systems</li> </ul>	<ul style="list-style-type: none"> <li>• Anti-Idling Regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Improved Vehicle Aerodynamics</li> </ul>	<ul style="list-style-type: none"> <li>• Liquefied Petroleum Gas (LPG)</li> </ul>
<ul style="list-style-type: none"> <li>• Retrofit older engines with selective catalytic reduction (SCR) systems</li> </ul>	<ul style="list-style-type: none"> <li>• Locomotive Idling Limit Devices</li> </ul>	<ul style="list-style-type: none"> <li>• Improved Tire Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Emulsified Diesel Fuel</li> </ul>
<ul style="list-style-type: none"> <li>• Convert engine to run on alternative fuels or electricity</li> </ul>		<ul style="list-style-type: none"> <li>• Vehicle Weight Reduction</li> </ul>	<ul style="list-style-type: none"> <li>• Biodiesel Fuel</li> </ul>

# Recommendation: Safety Strategies

Engineering Strategies	Education Strategies	Enforcement Strategies	Operations and Management Strategies
<ul style="list-style-type: none"><li>• Improved roadway design</li></ul>	<ul style="list-style-type: none"><li>• Driver training to truck and passenger vehicle operators</li></ul>	<ul style="list-style-type: none"><li>• Hazmat regulation enforcement</li></ul>	<ul style="list-style-type: none"><li>• Adequate truck parking / rest facilities</li></ul>
<ul style="list-style-type: none"><li>• Focus on at-grade crossing safety and design</li></ul>		<ul style="list-style-type: none"><li>• Weight limit enforcement</li></ul>	<ul style="list-style-type: none"><li>• Good wayfinding for trucks</li></ul>

# Recommendation: Land Use



*Decreased Impacts to Communities and the Environment*

# Recommendation: Prepare for MAP-21

Provision	Action
Establishes National Freight Policy	Establishes a national freight policy, including establishing goals for national investment into freight infrastructure.
National Freight Strategic Plan	Calls for development of a National Freight Strategic Plan, that would assess the condition and performance of the national freight highway network. This requires the USDOT to identify highway bottlenecks, issues, and major trade corridors.
State Freight Advisory Committee and State Freight Plans	Encourages states to establish freight advisory committees, and develop state freight plans.
National Freight Network	Calls for the establishment of a National Freight Network. This network would consist of a primary network established by the FHWA, but also portions of the interstate system and critical rural freight corridors.

# Recommendation: Advocate for Short Line Rail Programs

Potential Program	Program Summary
Freight Rail Assistance Program	<ul style="list-style-type: none"><li>• Grant or loan source at the state level to support short line rail maintenance or capacity projects</li><li>• More than 30 states have such a program</li></ul>
Industrial Rail Access Program (IRAP)	<ul style="list-style-type: none"><li>• Provide grants and loans for build-out to rail-served industries</li><li>• Facilitate development of transload and intermodal terminals in agricultural regions</li></ul>
Create Performance Goals for Short Line Rail	<ul style="list-style-type: none"><li>• Create performance targets for short line rail</li></ul>

# Federal Funding Sources

Funding Source	Description
TIGER	The Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program provides funds for road, rail, transit, and port projects. There have been five funding cycles to date, from 2009-2013. Total amount distributed in each funding cycle is between \$473 million and \$1.5 billion.
TIFIA	TIFIA provides Federal credit assistance to nationally or regionally significant surface transportation projects, including highway, transit and rail projects. The program is a low-cost debt program (borrowing tool) that may be accessed by the private sector (and in some cases the public sector). This can help to decrease the overall financing costs of the program. MAP-21 increased the funding for TIFIA to \$750 million for FY 2013.
FRA Grant Programs	Though none of these programs are currently (as of Spring 2013) accepting new applications, the FRA has in the past offered several grant programs to support freight rail safety and maintenance. These include the Railroad Safety Technology Grant Program, the Rail Line Relocations and Improvement Capital Grant Program, and the Disaster Assistance program.
Projects of National and Regional Significance Program	MAP-21 continued this program from SAFETEA-LU as a discretionary grant program. Eligible projects now include certain freight rail, port, and intermodal freight transfer facilities. Funded at \$500 million in FY 2013.

# State Funding Sources

## Funding Source

State Transportation Improvement Program

Interregional Transportation Improvement Program (ITIP)

Cap-and-Trade Program Funds

State Section 190 Grade Separation Program

Infrastructure Financing Districts

E-Commerce Tax revenues

Warehouse Business-Tax Revenues

Public Private Partnerships

# Deliverables to Date / More Information

- » *San Joaquin Valley Interregional Goods Movement Final Report*
- » *San Joaquin Valley Interregional Goods Movement Executive Summary*
  
- » Technical Memos
  - *Economic and Demographic Profile*
  - *Importance of Goods Movement in the Valley*
  - *Commodity Flow Profile*
  - *Commodity Growth Profile*
  - *Industry Profiles*
  - *The Community, Environmental, and Economic Impacts of Freight Movement*
  - *Strategies for Improving Freight Mobility (project list)*
  - *Strategies for Mitigating the Effect of Goods Movement on Local Communities and the Environment*
  
- » <http://sjvcogs.org/goods.html>
  
- » *Michael Sigala - 559.266.6222 - michael@sigalainc.com*

# NEXT STEPS



# Strengthening Economic Development Linkages

1. California Freight Mobility Plan, Member of CFAC
2. 2017 California Rail Plan Update – potential for short line rail support programs
3. U.S. Department of Commerce – Advisory Committee on Supply Chain Competitiveness
4. Applied for additional Caltrans planning grant funds
5. Develop template for logistics-based economic development strategies – demonstration projects
6. Continued inter-regional partnerships with Bay Area and Southern California

# THANK YOU

