APPENDIX G-3:
PUBLIC WORKSHOP MATERIALS

DRAFT

Welcome

- to the -

CALIFORNIA FREIGHT MOBILITY PLAN

Public Workshop

Please visit each station at your own pace to learn more about the California Freight Mobility Plan, ask questions, and provide feedback and comments.

CALIFORNIA FREIGHT MOBILITY PLAN

THE VISION

As the national gateway for international trade and domestic commerce, California enhances economic competitiveness by collaboratively developing and operating an integrated, multimodal freight transportation system that provides safe, sustainable freight mobility. This system facilitates the reliable and efficient movement of freight and people while ensuring a prosperous economy, social equity, and human and environmental health.

THE GOALS

1. Economic Competitiveness

Improve the contribution of the California freight transportation system to support economic efficiency, productivity, and competitiveness.

2. Safety and Security

Improve the safety, security, and resilience of the freight transportation system.

3. Freight System Infrastructure Preservation

Improve the state of good repair of the freight transportation system.

4. Environmental Stewardship

Avoid and reduce adverse environmental and community impacts of the freight transportation system.

5. Congestion Relief

Reduce costs to users by minimizing congestion on the freight transportation system.

6. Innovative Technology and Practices

Use innovative technology and practices to operate, maintain, and optimize the efficiency of the freight transportation system while reducing its environmental and community impacts.

THE OBJECTIVES

1. Build on California's history of investments to seek sustainable and flexible funding solutions with federal, private, and advocacy groups.

2. Invest in freight projects that enhance economic activity, freight mobility, reliability, and global competitiveness.

1. Reduce rates of incidents, collisions, fatalities, and serious injuries associated with freight movement.

2. Utilize technology to provide for the resilience and security of the freight transportation system.

1. Apply sustainable preventive maintenance and rehabilitation strategies.

1. Integrate environmental, health, and social equity considerations in all stages of freight planning and implementation.

2. Conserve and enhance natural and cultural resources.

3. Avoid and reduce air and water pollution, greenhouse gas (GHG) emissions, and other negative impacts associated with freight transportation by transforming the freight transportation system to be cleaner and more efficient.

4. Consider impacts and mitigation relative to the context of the project location.

5. Develop an efficiency metric that captures the intensity of pollutants per unit of freight moved.

1. Identify causes and solutions to freight bottlenecks.

2. Invest strategically to optimize system performance.

3. Develop, manage, and operate an efficient integrated freight system.

1. Support research, demonstration projects, development, and deployment of innovative technologies.

2. Promote the use of advanced technologies within the freight industry to support the State Implementation Plan (SIP), attainment of California greenhouse gas reduction targets, and to reduce local air toxics.

3. Support and incorporate the use of low carbon renewable fuels.

4. Promote innovative technologies and practices utilizing real time information to move freight on all modes more efficiently.

CALIFORNIA FREIGHT MOBILITY PLAN

Policies, Strategies, & Implementation

Strengths

California (CA) has the largest, most diverse economy in the United States, an economy supported by the largest, most diverse freight system in the nation. This status can be attributed to the strengths of the freight system listed below. These strengths are advantages that we need to build upon in order to maintain our status as a leader.

- Geographic position on the Pacific Rim
- Access to the very limited west/east transportation corridors in North America
- Decades of innovation and investment that built the transportation system, created industries, and farmed the land that make California's national and international trade possible
- The freight system is the most extensive, sophisticated, and least polluting in the country
- Strong export economy
- The success of the Trade Corridors Improvement Fund (TCIF) program

Needs

The following are the major needs of the freight system that must be addressed in order to achieve the vision for freight in California.

Funding
Address the lack of a dedicated, reliable, and long-term freight funding program

Impact Reduction
Reduce the negative impacts freight has on communities and the environment

Zero Emissions
Transition fuel types and the vehicle fleet to zero or near-zero emission sources and technology

Maintain Competitive Edge
Respond to competition from other west coast ports and the Panama Canal expansion

Maintain System
Maintain existing facilities

Improve Safety
Improve the safety of the freight transportation system

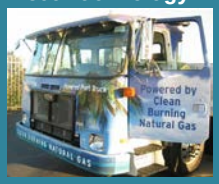
Congestion Reduction
Address congestion and bottlenecks on the freight transportation system

Strategies

Maintain

Maintain and enhance existing assets

Use Technology



Apply new technology and system operation practices to improve the performance of all aspects of the freight system

(Image source: San Pedro Bay Ports Clean Air Action Plan)

Add Capacity

Strategically add new capacity

Reduce Impacts

Address the negative impacts of freight movement through programs and projects

Collaborate

Formalize regional collaboration with freight stakeholders and continue the state level Ca Freight Advisory Committee

Fund

Creation of dedicated, reliable, long-term freight funding programs

Freight Project List

Freight Project Definition

The freight project list contains projects in regional and local transportation or freight plans that generally meet the following definition for a freight project

An improvement that significantly contributes to the freight system's economic activity or vitality; relieves congestion on the freight system; improves the safety, security, or resilience of the freight system; improves or preserves the freight system infrastructure; implements technology or innovation to improve the freight system or reduce or avoid its negative impacts; or reduces or avoids adverse community and/or environmental impacts of the freight system.

Project Types

System Preservation: Preventative maintenance projects, rehabilitation and reconstruction projects, improvements required by regulatory mandates

Community and Environmental Stewardship: Projects in freight corridors that are specifically targeted to avoiding, reducing or mitigating freight impacts on the environment and community

Operations and Management: Low-cost investments on the freight transportation system that can often be made in the near term to help reduce the need for more costly investments later on.

Capacity Expansion: Projects that will expand the freight transportation system's capacity

Implementation

The following are a few of the elements of each project that should be taken into consideration while identifying the most effective and competitive projects for freight improvement in California.

Project Focus Areas: gateways, corridors, last-mile connectors, and regional and statewide initiatives

Goals Alignment: ideally, individual projects will address more than one goal. The most competitive projects will address the most of the six goals and have the greatest measurable impact on those goals.

Project Type: System Preservation, Community and Environmental Stewardship, Operations and Management, Capacity Expansion

CALIFORNIA FREIGHT ADVISORY COMMITTEE

CFAC Member Organizations

Alameda County Transportation Commission
Automobile Club of Southern California
Association of Monterey Bay Area Governments
Bay Area Air Quality Management District
BNSF Railway
California Air Resources Board
California Airports Council
California Association of Port Authorities
California Chamber of Commerce
California Department of Housing and Community Development
California Department of Public Health
California Energy Commission
California Farm Bureau Federation
California Highway Patrol
CA Marine and Intermodal Transportation System Advisory Council (CALMITSAC)
California Natural Resources Agency
California Public Utilities Commission
California Retailers Association
California Short Line Railroad Association
California State Assembly
California State Lands Commission
California State Senate
California Transportation Commission
California Trucking Association
Center for Community Action and Environmental Justice
Coalition for Clean Air
Communities for a Better Environment
Devine Intermodal
FedEx Corporation
Greenlining Institute
Governor's Office of Business and Economic Development
International Brotherhood of Teamsters Joint Council No. 42
International Longshore and Warehouse Union
Los Angeles County Metropolitan Transportation Authority
Los Angeles World Airports
Metropolitan Transportation Commission
Mobility-21
National Association of Industrial Office Properties SoCal Chapter
Native American Advisory Committee
Natural Resources Defense Council
Pacific Merchant Shipping Association
Port of Long Beach
Port of Los Angeles
Port of Oakland
Rural Counties Task Force
Sacramento Area Council of Governments
San Bernardino Associated Governments
San Diego Association of Governments
San Francisco International Airport
San Joaquin Valley Air Pollution Control District
San Joaquin Valley Regional Planning Agencies
Shasta County Regional Transportation Agency
Sierra Club California
Silicon Valley Leadership Group
South Coast Air Quality Management District
Southern California Association of Governments
Union Pacific Railroad
United Parcel Service
US Customs and Border Protection
US Department of Transportation – Federal Highway Administration

California Freight Advisory Committee

The California Freight Mobility Plan (CFMP) development is guided largely by the California Freight Advisory Committee (CFAC). Caltrans, in collaboration with the California State Transportation Agency (CalSTA), established the CFAC in response to guidance provided in the federal legislation, Moving Ahead for Progress in the 21st Century (MAP-21) and Assembly Bill (AB) 14 (Lowenthal, 2013). The first CFAC meeting was held in April of 2013. All CFAC meetings are open to the public.

MAP-21 and AB 14

MAP-21encourages and AB 14 requires the formation of a state freight advisory committee. Both pieces of legislation provide guidance on how the committee should be formed and ask that the CFAC:

- Advise CalSTA on freight-related priorities, issues, projects, and funding needs
- Serve as a forum for discussion for state transportation decisions affecting freight mobility
- Communicate and coordinate regional priorities with other organizations
- Promote the sharing of information between private and public sectors on freight issues
- Participate in the development of the state freight plan

CFAC Purpose

The CFAC meets quarterly, or as needed, to participate in the development of the CFMP, to serve as a forum for the discussion of freight-related topics, to help coordinate regional freight priorities with other organizations, and to advise the State on freight-related priorities, issues, projects, and funding needs.

The committee is entirely advisory in nature, and has no governmental powers in and of itself. Although the input of the CFAC members is integral to the development of the California Freight Mobility Plan (CFMP), participation of organizations on the committee doesn't necessarily mean that the organizations agree with the draft freight plan or related products.

CFAC Meeting, Sacramento, April 2013

CFAC Meeting, Stockton, August 2013

CFAC Meeting, Long Beach, June 2013

CFAC Membership

Consistent with MAP-21 and AB 14's guidance, the CFAC consists of a representative cross section of public and private sector freight stakeholders including representatives of:

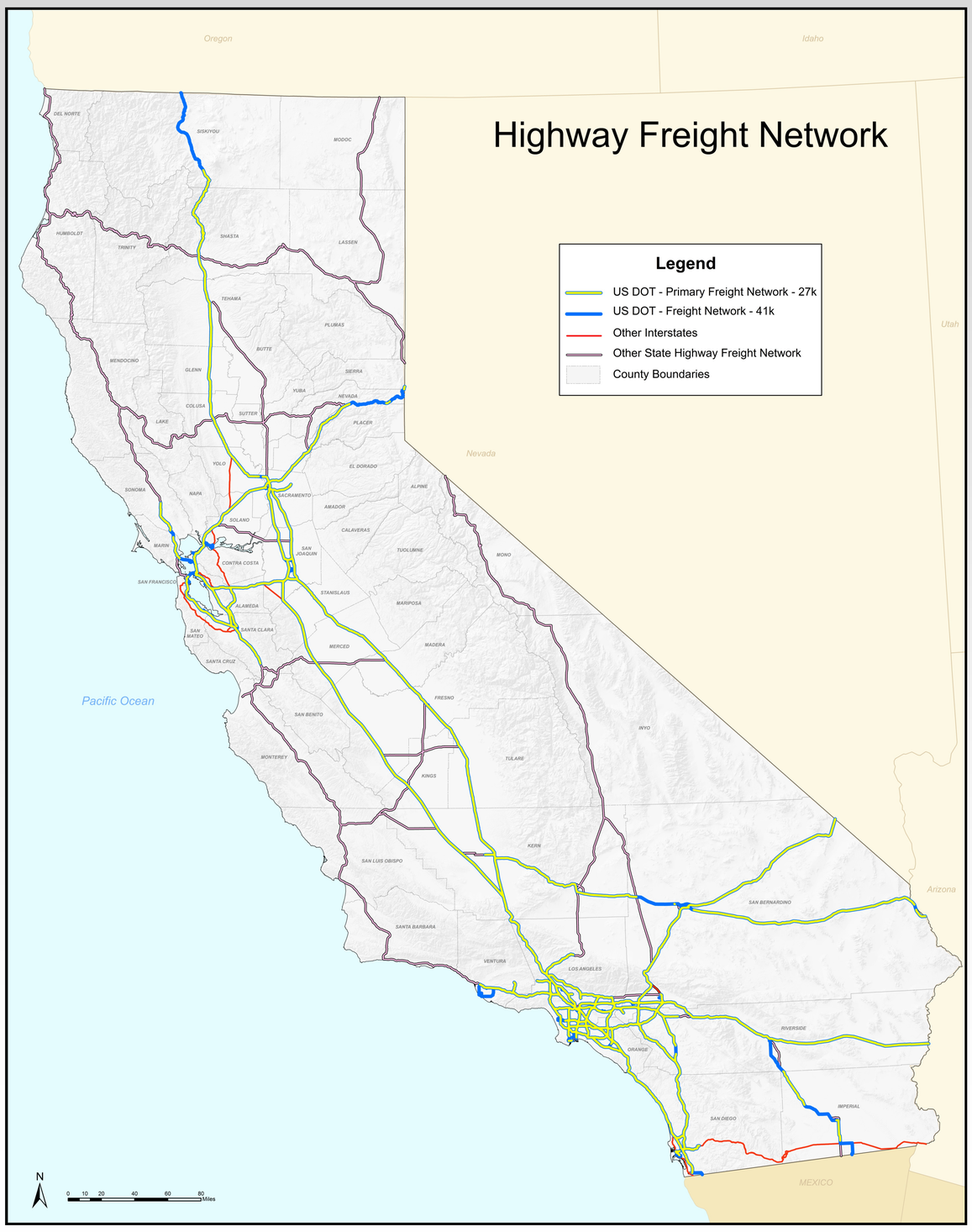
- Seaports
- Railroads
- Airports
- Trucking
- Shippers
- Carriers
- Freight-Related Associations
- Freight Industry Workforce
- Regional Governments
- Local Governments
- State Agencies
- Federal Agencies
- Tribal Governments
- Environmental Organizations
- Safety Organizations
- Community Organizations

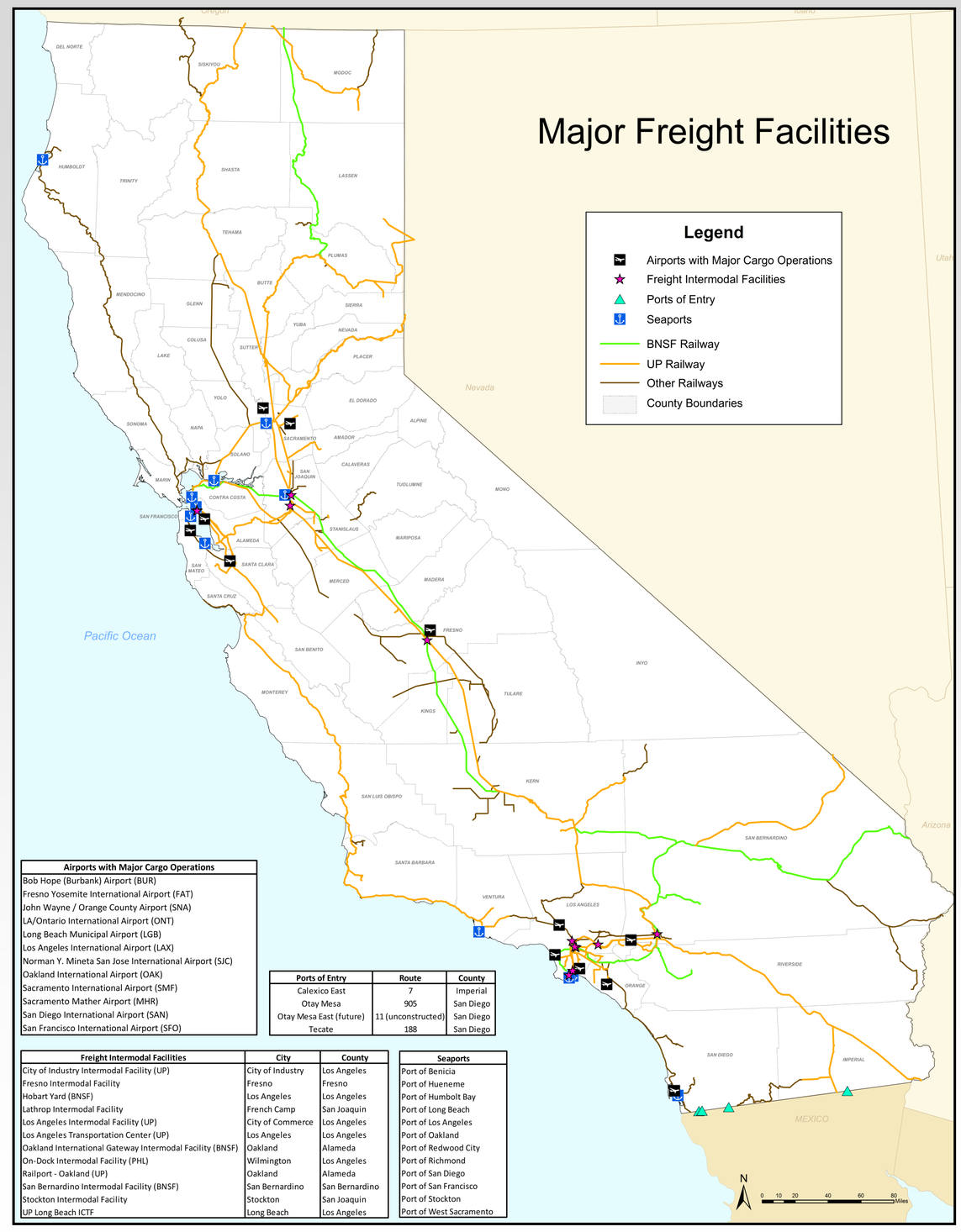
For a complete list of member organizations see the "CFAC Member Organizations" column to the left.

CALIFORNIA FREIGHT MOBILITY PLAN

Freight System Assets, Condition, Performance, and Forecast

California's Multimodal State Freight System





Airports with Major Cargo Operations
Bob Hope (Burbank) Airport (BUR)
Fresno Yosemite International Airport (FAT)
John Wayne / Orange County Airport (SNA)
LA/Ontario International Airport (ONT)
Long Beach Municipal Airport (LGB)
Los Angeles International Airport (LAX)
Norman Y. Mineta San Jose International Airport (SJC)
Oakland International Airport (OAK)
Sacramento International Airport (SMF)
Sacramento Mather Airport (MHR)
San Diego International Airport (SAN)
San Francisco International Airport (SFO)

Ports of Entry	Route	County
Calexico East	7	Imperial
Otay Mesa	905	San Diego
Otay Mesa East (future)	11 (unconstructed)	San Diego
Tecate	188	San Diego

Freight Intermodal Facilities	City	County
City of Industry Intermodal Facility (UP)	City of Industry	Los Angeles
Fresno Intermodal Facility	Fresno	Fresno
Hobart Yard (BNSF)	Los Angeles	Los Angeles
Lathrop Intermodal Facility	French Camp	San Joaquin
Los Angeles Intermodal Facility (UP)	City of Commerce	Los Angeles
Los Angeles Transportation Center (UP)	Los Angeles	Los Angeles
Oakland International Gateway Intermodal Facility (BNSF)	Oakland	Alameda
On-Dock Intermodal Facility (PHL)	Wilmington	Los Angeles
Railport - Oakland (UP)	Oakland	Alameda
San Bernardino Intermodal Facility (BNSF)	San Bernardino	San Bernardino
Stockton Intermodal Facility	Stockton	San Joaquin
UP Long Beach ICTF	Long Beach	Los Angeles

Seaports
Port of Benicia
Port of Hueneme
Port of Humbolt Bay
Port of Long Beach
Port of Los Angeles
Port of Oakland
Port of Redwood City
Port of Richmond
Port of San Diego
Port of San Francisco
Port of Stockton
Port of West Sacramento

Condition and Performance

The following interim performance measures are being proposed to help guide investments on the freight system while we await final federal guidance. Each measure category corresponds to one of the six CFMP goals. Data for some measures is currently available; and for others, systems and processes for gathering the data will need to be developed.

INFRASTRUCTURE PRESERVATION
- Pavement Condition
- Roadway Bridge Condition
- Road and Rail Height Allowances
- Weight Accommodation
- Navigation Channel and Berth Depths
- Waterway Bridge Clearance

CONGESTION RELIEF
- Truck Travel Speed
- Truck Hours of Delay
- Posted Maximum Train Speed
- Highway Bottlenecks/ Chokepoints
- Rail Bottlenecks/Chokepoints
- Corridor Reliability Buffer Index

SAFETY
- Roadway Truck Related Collision Fatalities and Injuries
- Railroad Grade Crossing Related Fatalities and Injuries

ECONOMIC COMPETITIVENESS
- Freight cost per ton-mile

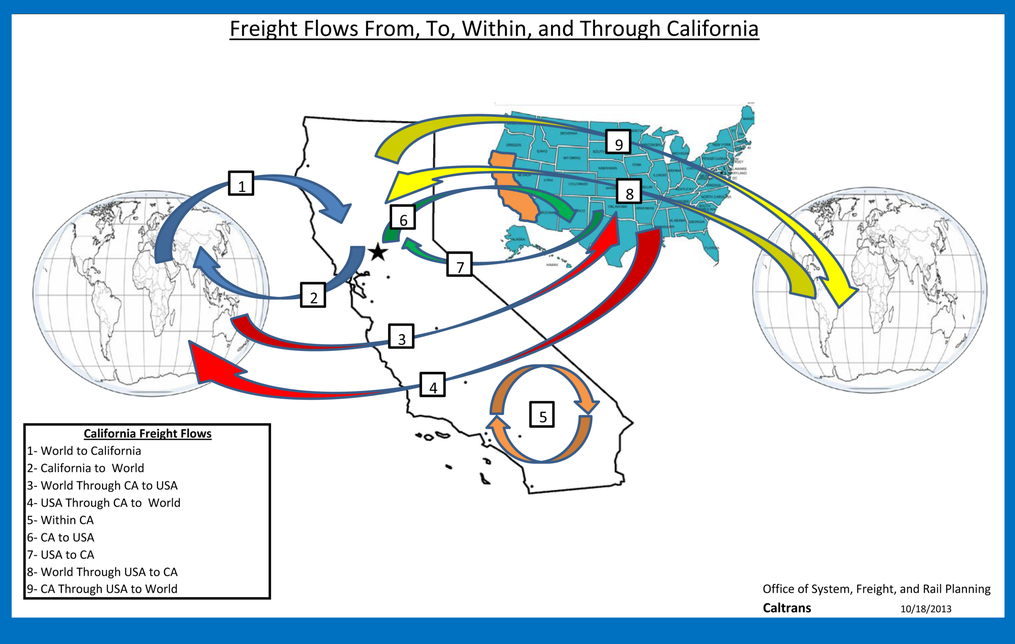
INNOVATIVE TECHNOLOGY
- Efficiency comparison before and after technology implementation

ENVIRONMENTAL STEWARDSHIP
- Criteria pollutant emissions
- Greenhouse gas emissions

Freight Forecast

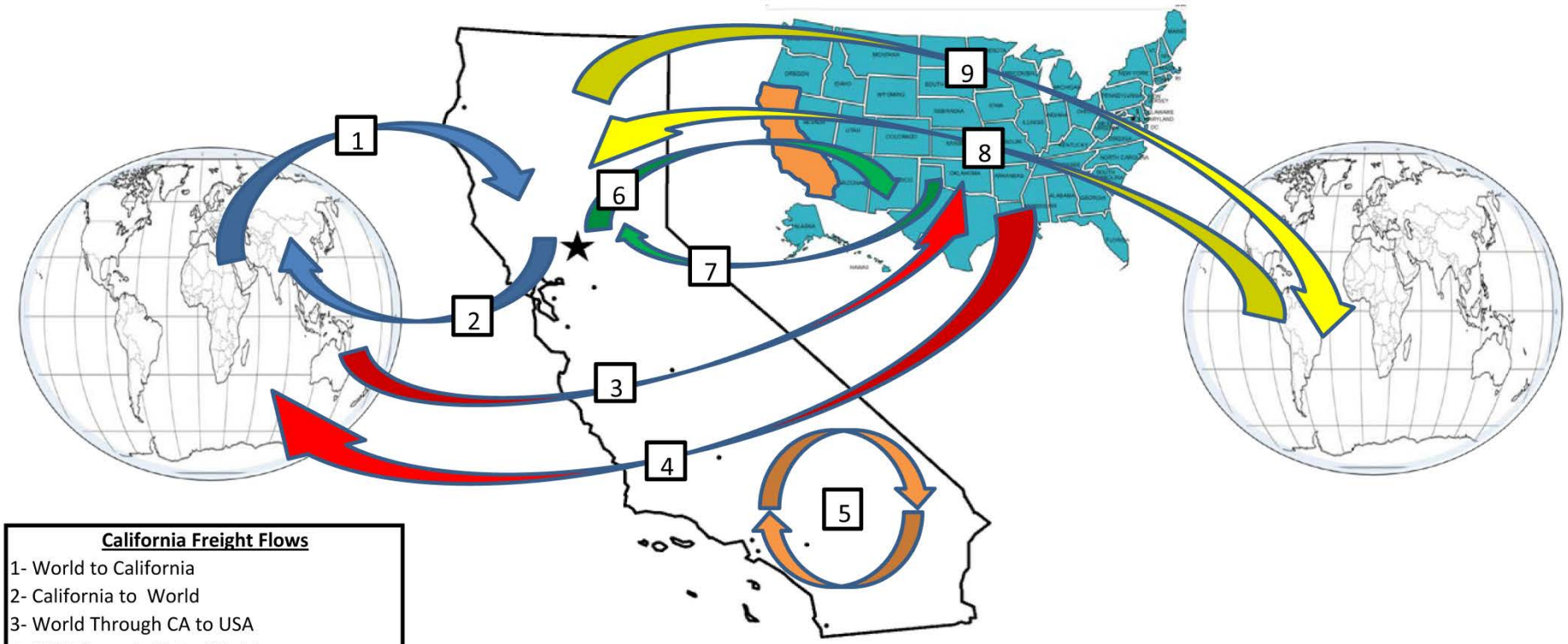
Forecasting international trade and freight flows is fraught with uncertainty. Still, it is important to anticipate the future so that appropriate programs and facilities can be ready when needed. The following are some of the most significant trends for freight movement in California (CA).

TRENDS
- Total shipments by weight (into, out of, and within CA) are projected to grow approx. 180% statewide between 2012 and 2040
- Domestic and International outbound shipments from CA will grow faster than inbound shipments
- Trucking is currently the predominant freight mode and carries the largest amount of goods, and this is forecast to continue through 2040
- Freight moved by truck is expected to increase
- Value of shipments is expected to grow two or three times as fast as the weight being transported
- Because of rise in value of shipments, cost of trucks in congestion will rise accordingly
- Because of increase in number of truck trips, damage to roadways will increase accordingly
- Projected growth cannot be accommodated on the current system as currently developed and operated.
- Increasing congestion will significantly impact quality of life and CA's ability to maintain and



CALIFORNIA FREIGHT MOBILITY PLAN

Freight Flows From, To, Within, and Through California



California Freight Flows

1- World to California
2- California to World
3- World Through CA to USA
4- USA Through CA to World
5- Within CA
6- CA to USA
7- USA to CA
8- World Through USA to CA
9- CA Through USA to World

Office of System, Freight, and Rail Planning
Caltrans 10/18/2013

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CalSTA · Caltrans · California 2040 Transportation Plan · FREIGHT PLAN

CALIFORNIA FREIGHT MOBILITY PLAN

Policies, Strategies, & Implementation

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Strategies

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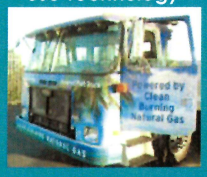
Maintain and enhance existing assets

Use Technology



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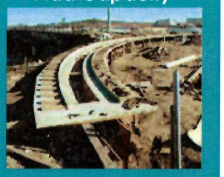
(Image source: San Pedro Bay Ports Clean Air Action Plan)

Add Capacity



Strategically add new capacity

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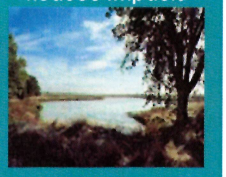

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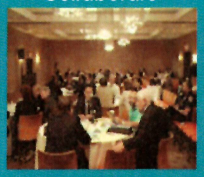
Collaborate



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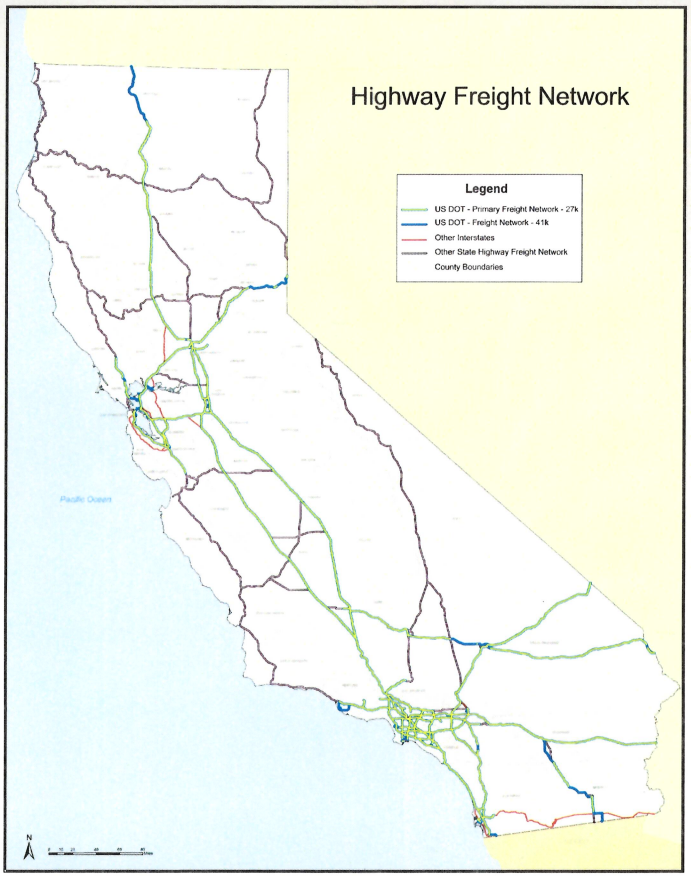
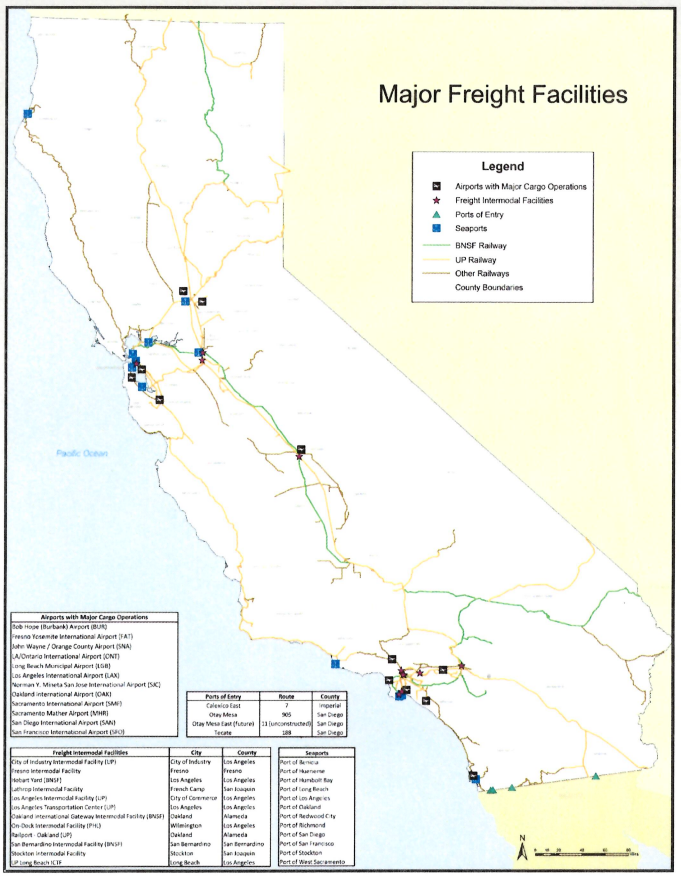
CALIFORNIA FREIGHT MOBILITY PLAN

Freight System Assets, Condition, Performance, and Forecast

California's Multimodal State Freight System





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Freight Intermodal Facilities	City	County
City of Industry Intermodal Facility (UP)	City of Industry	Los Angeles
Fresno Intermodal Facility	Fresno	Fresno
Hobart Yard (BNSF)	Los Angeles	Los Angeles
Lathrop Intermodal Facility	French Camp	San Joaquin
Los Angeles Intermodal Facility (UP)	City of Commerce	Los Angeles
Los Angeles Transportation Center (UP)	Los Angeles	Los Angeles
Oakland International Gateway Intermodal Facility (BNSF)	Oakland	Alameda
On-Dock Intermodal Facility (PHL)	Wilmington	Los Angeles
Seaport - Oakland (UP)	Oakland	Alameda
San Bernardino Intermodal Facility (BNSF)	San Bernardino	San Bernardino
Stockton Intermodal Facility	Stockton	San Joaquin
UP Long Beach ICTF	Long Beach	Los Angeles

Seaports
Port of Benicia
Port of Hueneme
Port of Humboldt Bay
Port of Long Beach
Port of Los Angeles
Port of Oakland
Port of Redwood City
Port of Richmond
Port of San Diego
Port of San Francisco
Port of Stockton
Port of West Sacramento

Condition and Performance

The following interim performance measures are being proposed to help guide investments on the freight system while we await final federal guidance. Each measure category corresponds to one of the six CFMP goals. Data for some measures is currently available; and for others, systems and processes for gathering the data will need to be developed.

INFRASTRUCTURE PRESERVATION
- Pavement Condition
- Roadway Bridge Condition
- Road and Rail Height Allowances
- Weight Accommodation
- Navigation Channel and Berth Depths
- Waterway Bridge Clearance

CONGESTION RELIEF
- Truck Travel Speed
- Truck Hours of Delay
- Posted Maximum Train Speed
- Highway Bottlenecks/ Chokepoints
- Rail Bottlenecks/Chokepoints
- Corridor Reliability Buffer Index

SAFETY
- Roadway Truck Related Collision Fatalities and Injuries
- Railroad Grade Crossing Related Fatalities and Injuries

ECONOMIC COMPETITIVENESS
- Freight cost per ton-mile

INNOVATIVE TECHNOLOGY
- Efficiency comparison before and after technology implementation

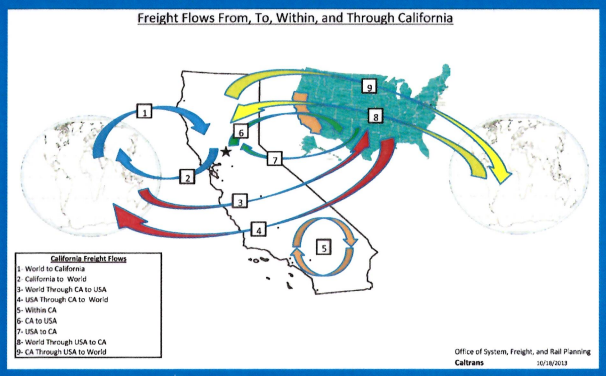
ENVIRONMENTAL STEWARDSHIP
- Criteria pollutant emissions
- Greenhouse gas emissions

Freight Forecast

Forecasting international trade and freight flows is fraught with uncertainty. Still, it is important to anticipate the future so that appropriate programs and facilities can be ready when needed. The following are some of the most significant trends for freight movement in California (CA).

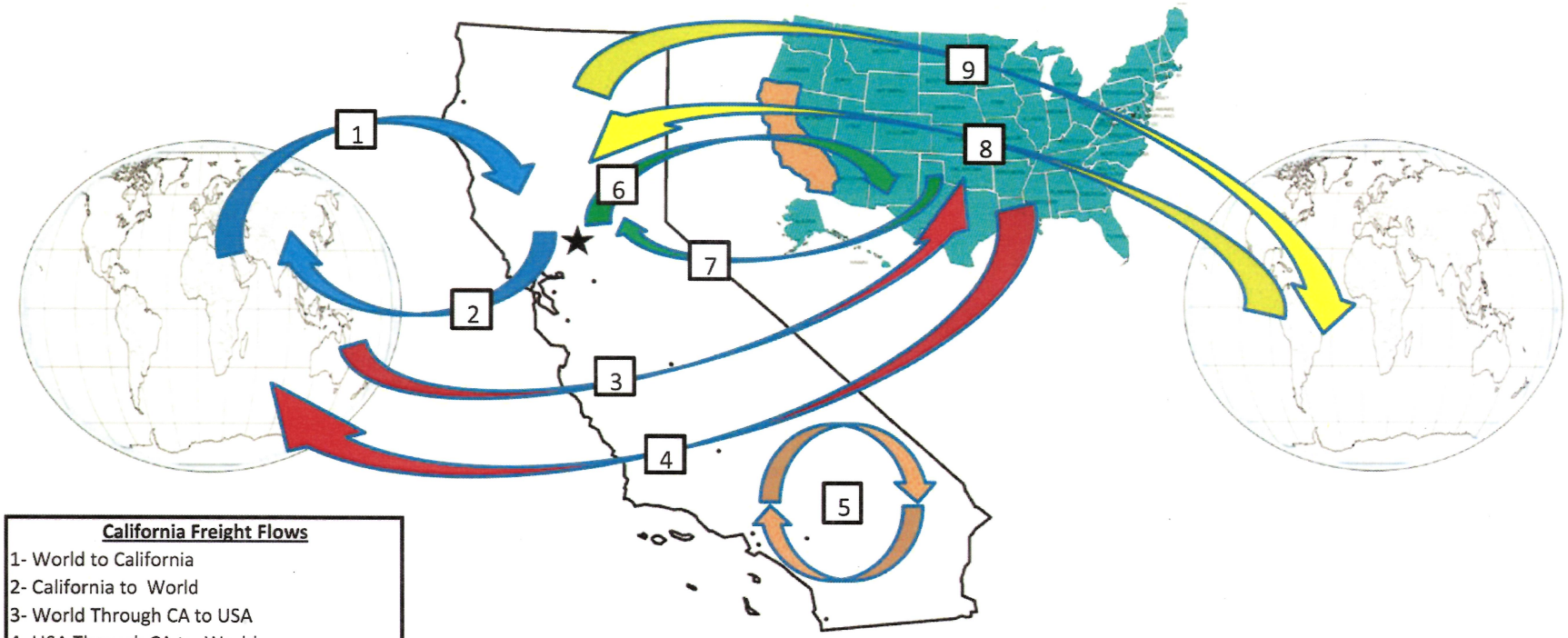
TRENDS
- Total shipments by weight (into, out of, and within CA) are projected to grow approx. 180% statewide between 2012 and 2040
- Domestic and International outbound shipments from CA will grow faster than inbound shipments
- Trucking is currently the predominant freight mode and carries the largest amount of goods, and this is forecast to continue through 2040
- Freight moved by truck is expected to increase
- Value of shipments is expected to grow two or three times as fast as the weight being transported
- Because of rise in value of shipments, cost of trucks in congestion will rise accordingly
- Because of increase in number of truck trips, damage to roadways will increase accordingly
- Projected growth cannot be accommodated on the current system as currently developed and operated.
- Increasing congestion will significantly impact quality of life and CA's ability to maintain and

Freight Flows From, To, Within, and Through California



CALIFORNIA FREIGHT MOBILITY PLAN

Freight Flows From, To, Within, and Through California



California Freight Flows

1- World to California
2- California to World
3- World Through CA to USA
4- USA Through CA to World
5- Within CA
6- CA to USA
7- USA to CA
8- World Through USA to CA
9- CA Through USA to World

Office of System, Freight, and Rail Planning
Caltrans 10/18/2013

Native American Trust Lands
and
Major Freight Facilities
Legend
Native American Trust Lands
No Registered Trust Land - Tribal Offices
* Ione Band of Miwok Indians
* Lower Lake Rancheria
* Mechoopda Indian Tribe of the Chico Rancheria
* Potter Valley Tribe
* Tejon Indian Tribe
Airports with Major Cargo Operations
Freight Intermodal Facilities
Ports of Entry
Seaports
BNSF Railway
UP Railway
Other Railways
County Boundaries
Data Source for Native American Trust Lands: Bureau of Indian Affairs, January 2009
Pacific Ocean
California Department of Transportation
Division of Transportation Planning
Office of System and Freight Planning
June 2014
N

Native American Trust Lands and Highway Freight Network

CALIFORNIA FREIGHT MOBILITY PLAN

Context of Freight Issues

Freight Policy and Decision-Making

The following provided direction for the development of the California Freight Mobility Plan (CFMP).

FEDERAL AND STATE POLICY
- Moving Ahead for Progress in the 21st Century Act (MAP-21)
- Assembly Bill 14 (Lowenthal, 2013)

STAKEHOLDER COLLABORATION AND PUBLIC OUTREACH
- California Freight Advisory Committee (CFAC)
- Tribal Consultation
- CFMP Focus Groups with env. justice and community orgs.

ASSOCIATED STATEWIDE PLANS, PROGRAMS, AND POLICIES
- Goods Movement Action Plan (GMAP)
- California Transportation Plan (CTP)
- California State Rail Plan (CSRP)
- Proposition 1B and Trade Corridor Improvement Fund (TCIF)

CALIFORNIA'S AIR QUALITY POLICY AND PROGRAMS
- Assembly Bill 32, Global Warming Solutions Act of 2006
- Senate Bill 375, Sustainable Communities and Climate Protection Act of 2008
- CA Air Resources Board's (ARB) Vision for Clean Air
- ARB Sustainable Transport Initiative
- Various state incentive programs for emission reduction

REGIONAL FREIGHT POLICY AND PLANS
- Various CA regional freight plans

Economy, Labor, and Workforce

8th Largest World Economy

California (CA) was the 8th largest economy in the world in 2012

40% U.S. Container Trade

The San Pedro Ports handle 40% of U.S. container trade imports

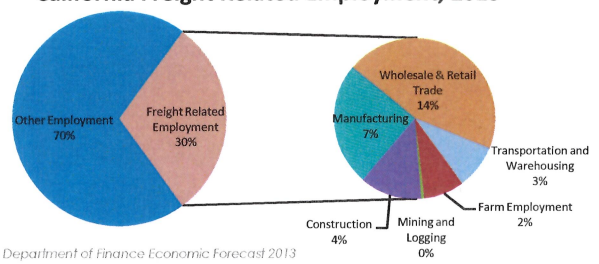
$145 Billion

CA manufactured $145 billion in exports in 2013

ECONOMIC TRENDS
- Freight system investments have not kept pace with the maintenance, preservation, and upgrades needed to keep the system efficient and reliable
- CA's ports faced with competition from Canada, Mexico, East Coast, and Gulf Coast – which have all gained in import volume
- Panama Canal expansion could intensify loss of CA's market share

LABOR TRENDS
- The trucking industry is facing a driver shortage and is finding it difficult to recruit and train entry level drivers
- Increased costs associated with requirements for newer trucks are making it economically challenging for small, independent trucking companies
- To remain competitive globally, CA faces challenge of transitioning industry to more efficient operations while retaining jobs

California Freight Related Employment, 2013



Source: Department of Finance Economic Forecast 2013

Native American Freight Connections

California is home to 110 federally-recognized Native American Tribal Governments. Like all communities, Native American reservations and Rancherias need access to the freight system and at the same time may be negatively impacted by the freight system.

Rural location of most communities means less freight related employment opportunities

Many rural and Tribal roads do not allow full size, 53-ft. truck trailers, adding cost and time to deliveries

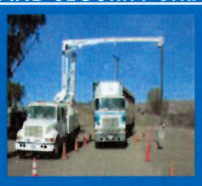
To ensure that the CA Multimodal State Freight System serves all of California's federally-recognized Native American Tribal Governments, major freight connectors to the Native American Trust Lands are being identified.

Safety and Security

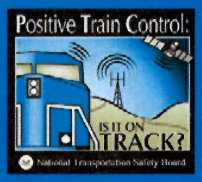
CONCERNS
- Increasing transportation safety and transportation security in the face of limited funding
- Crimes committed on the premises of transport operators (break-ins)
- Robbery of valuable cargo in transit
- Armed piracy in the air or on the high seas
- Infrastructure disruption can have massive economic costs

SAMPLE OF SAFETY AND SECURITY STRATEGIES

Crude oil tank car and operations safety improvements



Certified Cargo Screening Program



Positive Train Control

Truck safety improvements, including devices to limit max. speed and a national clearinghouse to track positive drug and alcohol test results

ITS and Technology

WHAT IS ITS?

Intelligent Transportation Systems (ITS) are a collection of roadway, communications, and computer technologies that are used to improve the operation of roadway, rail, air, and maritime systems. They are intended to:

- **Increase travel safety**
- **Minimize environmental impact**
- **Improve traffic management**
- **Maximize the benefits of freight facilities**

COMMON FREIGHT ITS ELEMENTS
- Traffic control and monitoring
- Weigh-In-Motion (WIM)
- Delivery space booking
- Vehicle and container location and condition monitoring
- Route planning
- Driving behavior monitoring and controlling
- Freight status monitoring
- Rail management and rail crossing safety

CURRENT AND DEVELOPING ITS EFFORTS
- Truck Enforcement Networks
- Smart Truck Parking on California's I-5 Corridor
- Electronic Freight Management Initiative
- State Route 11/Otay Mesa East Port of Entry ITS
- Regional Integration of Intelligent Transportation Systems (RIITS)
- Performance Measurement System (PeMS)
- Gateway Cities Technology Plan for Goods Movement

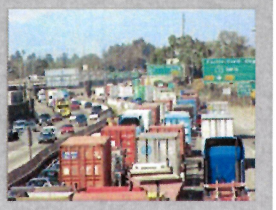
CALIFORNIA FREIGHT MOBILITY PLAN — Community & Environment

Freight Impacts on Communities and the Environment

Emissions

Emission related impacts include incidence of serious health problems such as asthma, other respiratory ailments, cancer, cardiovascular disease, and premature death.

Congestion



Congestion related impacts include increased idling and emissions, reduced economic productivity, increased fuel costs, and stress.

Noise

Noise related impacts include hearing loss, sleep disruption, interference with the learning process, and an increase in antisocial behavior.

Quality of Life

Other freight impacts include water quality degradation, blight, and vibrations.

Proximity

Communities close to heavy freight industry activity are disproportionally impacted by freight.

Significant Progress in Freight Impact Reduction

California has the most aggressive environmental goals, policies, and regulations in the United States. These policies set the stage for California to be a leader in reducing freight impacts on the communities and the environment.

MARITIME

The 11 publicly owned California deepwater seaports and their partners have implemented strategies including clean air programs, shore side power options, and ship speed reduction.

70%
Reduction in PM* emissions at the largest ports since 2005

FREIGHT RAIL

Union Pacific (UP) and Burlington Northern Santa Fe (BNSF) voluntarily agreed to reduce diesel emissions through the use of new technologies, engines, and practices.

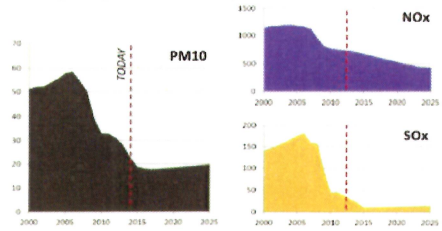
50-70%
Reduction in PM emissions at the highest risk rail yards since 2005

TRUCKING

CA has multiple regulations that apply to on-road diesel trucks including: Truck and Bus Regulation, Tractor-Trailer Greenhouse Gas Reduction, Periodic Smoke Inspection Program, Emission Control Label, and Commercial Vehicle Idling.

98%
Less PM and NOx* emissions, and 97% less SOx*, with new diesel truck engines

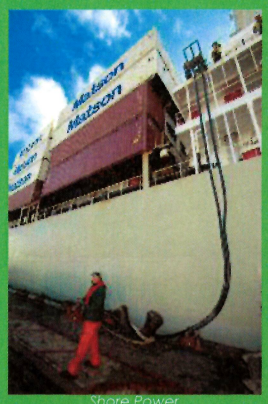
Progress in Reducing Freight Emissions in CA with Existing Programs (Tons/Day)



Source: ARB January 2014;
http: www.arb.ca.gov board books 2014 012314 14-1-5pres.pdf

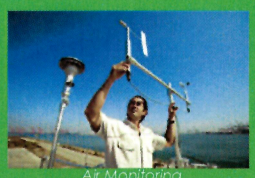
* Particulate Matter (PM)
Nitrogen Oxides (NOx)
Sulfur Oxides (SOx)

Looking Forward



Shore Power

Clean Fuel



Air Monitoring

Images Source: Port of Long Beach

Much has already been achieved to reduce freight impacts through better engines, cleaner fuels, infrastructure changes, and improved operations practices. But more improvement is still needed.

- Transition from the existing diesel-dependent freight system into one with significant numbers of zero and near-zero emission engines for trucks, locomotives, cargo-handling equipment, ships, and aircraft.
- Support the parallel development of the necessary supporting infrastructure, and implement logistical/efficiency improvements to reduce the emissions impact of moving freight.
- Incentivize and prioritize freight projects that maximize greenhouse gas (GHG), criteria pollutants, and air toxics emission impact reductions.
- Implement projects in designated freight corridors or regions to meet established State targets and establish a location specific impact reduction program to avoid, reduce or mitigate freight impacts on the community and environment.

How do you feel about the California Freight Mobility Plan Goals?

Please use one sticker to indicate your level of support for each of the goals.

	Strongly Support	Generally Support	Somewhat Support	Don't Support	Have No Opinion
1. **Economic Competitiveness:** Improve the contribution of the California freight transportation system to support economic efficiency, productivity, and competitiveness.					
2. **Safety and Security:** Improve the safety, security, and resilience of the freight transportation system.					
3. **Freight System Infrastructure Preservation**: Improve the state of good repair of the freight transportation system.					
4. **Environmental Stewardship**: Avoid and reduce adverse environmental and community impacts of the freight transportation system.					
5. **Congestion Relief:** Reduce costs to users by minimizing congestion on the freight transportation system.					
6. **Innovative Technology and Practices**: Use innovative technology and practices to operate, maintain, and optimize the efficiency of the freight transportation system while reducing its environmental and community impacts.					

Where would you invest in freight improvements?

Please use one sticker to show your highest priority investment in the freight system.

Increase Freight Related Jobs	
Safety Improvement	
System Preservation and Maintenance	
Community and Environmental Mitigation	
Congestion Relief Through Infrastructure Projects	
Congestion Relief Through Innovative Technologies	
Expand Freight System Capacity	
Separation of Freight Travel (trucks and trains) from Automobiles	