

CALIFORNIA

SUSTAINABLE FREIGHT INITIATIVE



Public Workshops September 2014

California Environmental Protection Agency

 **Air Resources Board**

Freight Transport System

Modes:



Facilities:

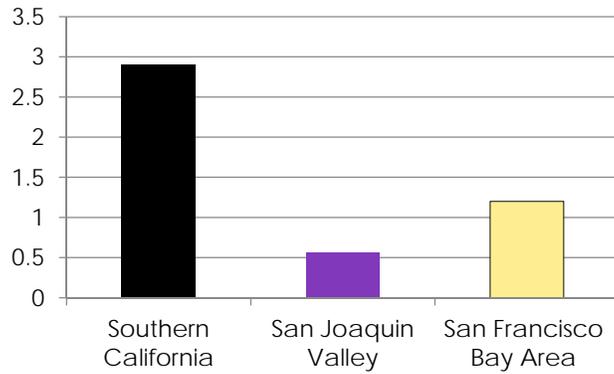
- Seaports
- Airports
- Rail yards & lines
- Distribution centers
- Warehouses
- High traffic roads
- Border crossings

California Environmental Protection Agency
 **Air Resources Board**

2

Freight Is Important to California's Economy

Jobs (millions)



California Environmental Protection Agency
Air Resources Board

3

Freight Impacts at Many Levels

Localized health risk

Regional air pollution

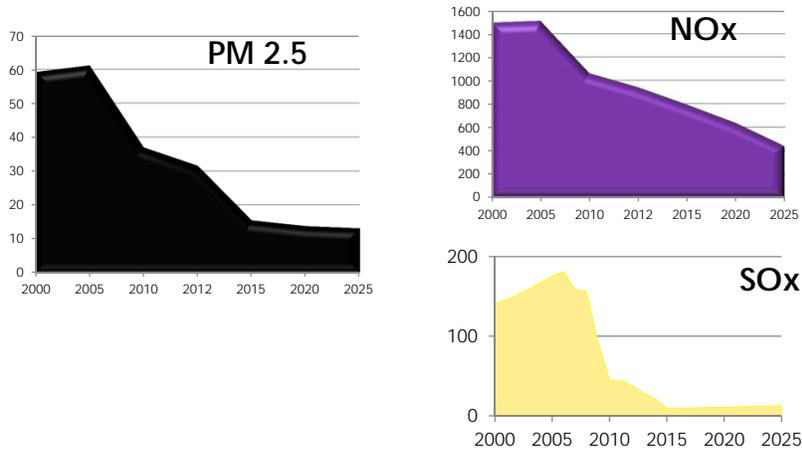
Climate change

The slide features three distinct images illustrating different levels of freight impact. On the left, a photograph of a baseball field with several players on the field is labeled 'Localized health risk'. In the center, a photograph of a city skyline obscured by a thick layer of smog is labeled 'Regional air pollution'. On the right, a satellite image of the Earth from space is labeled 'Climate change'.

California Environmental Protection Agency
Air Resources Board

4

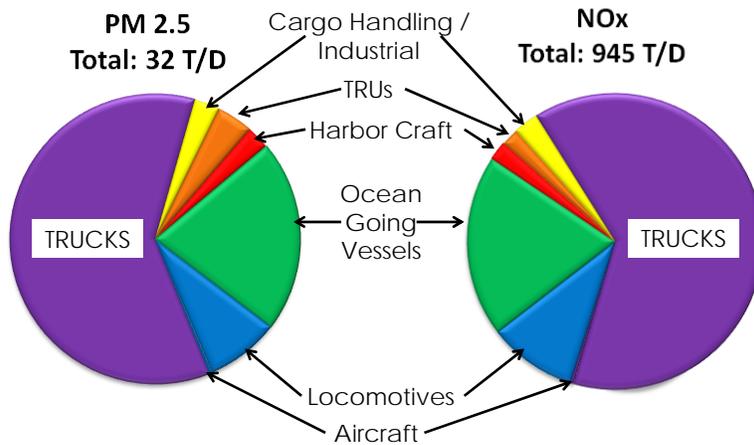
Progress in Reducing Freight Emissions in California (Tons/Day)



California Environmental Protection Agency
Air Resources Board

5

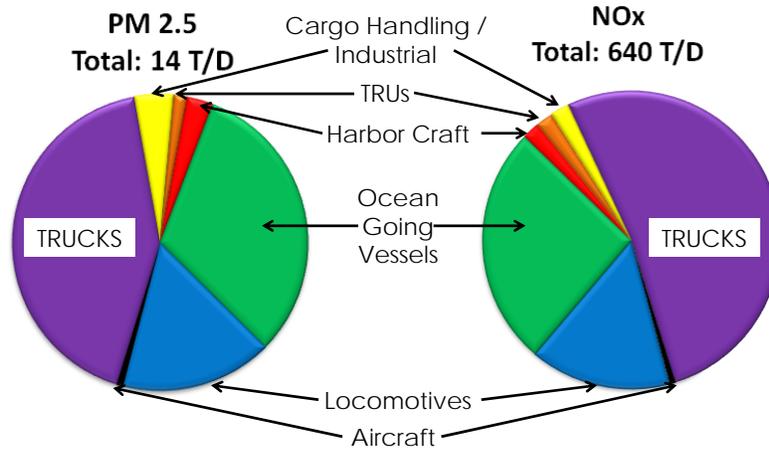
2012 Freight Sector Contributions



California Environmental Protection Agency
Air Resources Board

6

2020 Freight Sector Contributions



California Environmental Protection Agency
Air Resources Board

7

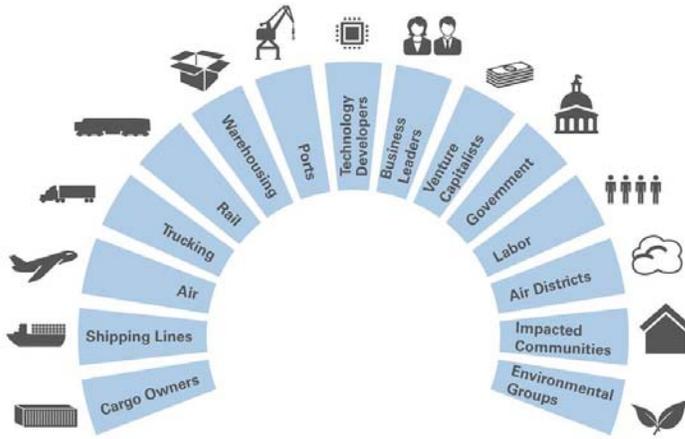
Sustainable Freight Strategy Document

- Sustainable Freight Initiative vision
- Freight fundamentals
- Stakeholder concepts
- Technology assessment findings
- Actions needed over next 5 years for ARB and other public and private entities

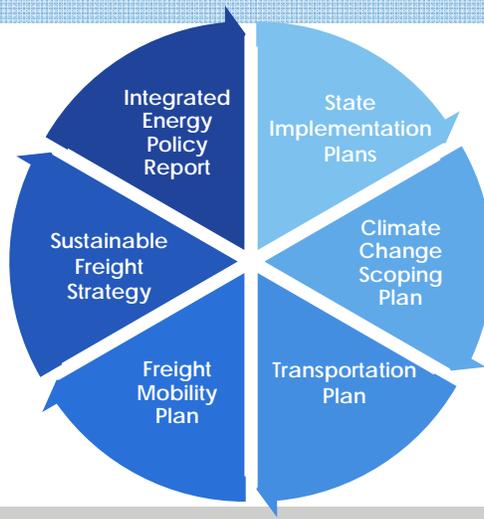
California Environmental Protection Agency
Air Resources Board

8

Stakeholder Engagement is Critical



Related State Planning Efforts



Sustainable Freight Strategy Tentative Milestones

2014

September: Public Workshops

Late October: Release draft technology assessments for freight-related sources

Late November: Release discussion draft of Strategy with concepts

December 11-12: Board Informational Update on discussion draft of Strategy

2015

Release draft document with preliminary staff recommendations

Hold public workshops

Release draft environmental analysis, economic analysis, and proposed Strategy

Board Hearing to consider proposed Strategy and final environmental analysis

Stakeholder Engagement Process

- Initiated in January
- Wide variety of stakeholders
 - 150+ smaller focus groups, individual meetings, and calls
 - 200+ Organizations
- Generated many discussion concepts

California Sustainable Freight System

Increases efficiency and uses of zero or near-zero emission equipment powered by renewable energy sources; improves mobility; provides reliable velocity and expanded system capacity; improves competitiveness of California's logistics system and creates jobs; and supports clean air and healthy communities

Concept Sorting

Staff sorted concepts based on eight categories and an initial assessment of their potential for near-term development. Concepts are not staff recommendations

Concepts Categories

-  Logistics and Infrastructure Efficiencies
-  Engines and Equipment
-  Energy and Fuel
-  Other Emission Reduction Approaches
-  Land-use
-  Monetary Incentives
-  Non-monetary Incentives
-  Economy and Jobs



Logistics and Infrastructure Efficiencies

Achieve efficiency gains within the California freight system from 2012 to 2020, 2030 and 2050 that provide time and/or cost savings, and reduce air pollution



Logistics and Infrastructure Efficiencies

Concepts under analysis:

- Develop efficiency metric to assess and set goals
- Maximize trailer/container use
- Reduce truck queuing and idling
- Increase efficiency of last-mile delivery
- Consider mode-shift
- Increase capacity using intelligent transportation systems
- Provide "Eco driver" training
- Demonstrate clean truck corridors



Engines and Equipment

Develop, demonstrate, and deploy zero emission technology where feasible; technology capable of zero emission miles; and cleanest combustion everywhere else



Engines and Equipment

Concepts under analysis:

On-road

- Prioritize zero emission vehicles
- Ensure the cleanest, most efficient new vehicles
- Reduce in-use emissions from existing and future engines

Off-road

- Ensure the use of zero emission cargo handling and ground support equipment

Both (trucks, locomotive, marine and air)

- Focus on battery, fuel cell and hybridization in vocational applications where technology is likely to reach commercialization first
- Increase demonstration and pilot projects



Energy and Fuel

Transition to a freight system powered by renewable, low carbon energy



Energy and Fuel

Concepts under analysis:

- Accelerate the availability of the cleanest low carbon biofuels
- Enhance and strengthen the Low Carbon Fuel Standard
- Support actions to further ultra-low sulfur diesel use in Mexico



Other Emission Reduction Approaches

Other approaches to reduce emissions and/or health risk from California's freight system



Other Emission Reduction Approaches

Concepts under analysis:

- Implement freight facility reporting requirements
- Consider emission caps to cut community exposure to emissions from freight facilities
- Continue to partner with additional agencies to implement ARB regulations



Land-Use

Develop and use sustainability principles, criteria, and tools for new and expanded freight facilities, and freight transportation infrastructure projects, that put air quality and public health considerations on an equal footing with other considerations in the siting, design, and operation of projects



Land-Use

Concepts under analysis:

- Develop freight handbook to provide guidance for siting, design and operational characteristics of freight facilities and freight-related infrastructure projects



Monetary Incentives

Seek private and public investment to fund projects that will increase efficiency and advance the California freight system towards zero emissions



Monetary Incentives

Concepts under analysis:

- Seek ongoing funding program for equipment and infrastructure to help transform freight system
- Support incentives and low-cost loans to accelerate development/purchase/use of advanced technologies including associated infrastructure
- Determine priorities for public funding and how to more efficiently use all pots of funds



Non-Monetary Incentives

Develop and implement programs that provide significant non-monetary incentives to achieve increased efficiencies and accelerated emission reductions from the California freight system



Non-Monetary Incentives

Concepts under analysis:

- Establish public recognition programs
- Provide preferential freight facility and corridor access



Economy and Jobs

Recognize regional economies and current workforce training levels. Improve the competitiveness of California's logistics system to support regional and State economies. Identify workforce development needs, including education and job training to provide a reliable workforce for logistics operations



Economy and Jobs

Concepts under analysis:

- Develop economic goals for the logistics industry in California, including in-state manufacture of advanced freight equipment and complementary strategies to increase competitiveness of California businesses in the national/international freight system
- Identify actions needed to prepare for a growing freight system including: educating and expanded the existing workforce, and ensuring the necessary equipment and infrastructure is in place
- Expand the truck driver pool

We Need Your Input

ARB staff is seeking input on:

- Definition for sustainable freight
- Our initial categorization of concepts, including which should move forward
- Additional discussion concepts that need to be included
- Sources of data to help analyze discussion concepts

CALIFORNIA



SUSTAINABLE FREIGHT INITIATIVE



California Environmental Protection Agency

 **Air Resources Board**

www.arb.ca.gov/gmp/sfti/sfti
freight@arb.ca.gov