



Caltrans Division of Research,
Innovation and System Information

Research



Results

Planning, Policy,
and Programming

UC Davis 2 White Papers on Emission Reducing Efficiency Strategies to Incorporate into the California Sustainable Freight Strategy

In July 2015, Governor Jerry Brown issued Executive Order B-32-15, directing several state agencies to work together in developing an integrated action plan that will “establish clear targets to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California’s freight system” and that the plan should “identify state policies, programs, and investments to achieve these targets”.

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Project Title:

UC Davis 2 White Papers on Emission Reducing Efficiency Strategies to Incorporate into the California Sustainable Freight Strategy

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WHAT IS THE NEED?

In response to this need, an interagency group was formed to oversee the development of the California Sustainable Freight Action Plan (CSFAP). Members of the interagency group include the California Air Resources Board, the California Department of Transportation (Caltrans), the California Energy Commission (CEC), and the Governor’s Office of Business and Economic Development (GO-Biz). As part of developing the plan, the interagency group solicited feedback from a broad range of stakeholders through a variety of engagement activities and outreach efforts. A component of this engagement was the development of the Freight Efficiency Strategies Development Group (FESDG) made up of freight experts from academia, industry, and government. The purpose and main task of this group was to produce a series of white papers that identify promising strategies for increasing the efficiency of the freight system.

WHAT WAS OUR GOAL?

The objective of this research was to identify a set of potential strategies that could improve California’s freight system performance and efficiency. The white papers focused on those strategies aimed at maximizing asset utilization by fostering



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collaborative logistics (CL) practices and/or freight demand management (FDM). In general, trying to achieve the goal of improving freight efficiency will require coordinated efforts between the public and private sectors, academia, communities, and any other relevant stakeholders. As there are numerous different types of issues identified within the freight system, it is not likely that a single strategy will result in significant improvements. This is a complex system requiring multi-part complex solutions.

WHAT DID WE DO?

A number of stakeholders met with the ultimate goal of identifying inefficiencies faced by the freight system and putting forward a set of strategies to achieve a more efficient freight system. In doing so, a key first step was to provide insight as to the possible root cause(s) of major inefficiencies affecting the system.

In addition to assessing inefficiencies, this research describes some of the aspects and necessary conditions that need to be considered when defining or identifying remediating strategies. Moreover, the research discusses a number of efficiency improvement strategies. These include:

- Voluntary Off-Hour Delivery Programs.
- Receiver-led Consolidation.
- Development of a Chassis Pool of Pools Fully Integrated System.
- Improvement of Traffic Mitigation Fee Programs.
- Implement Advanced Appointment/Reservation Systems.
- Developing an Integrated System for Dray Operations and Services.
- Load Matching and Maximizing Capacity.
- Evaluation of Revised Vehicle Size and Weight Restrictions.

The white papers provide a brief overview of the California freight system, emphasizing key stakeholders, their roles and interactions and discusses major inefficiencies affecting the system. The white papers also provide a summary and discusses crucial points to be considered in the development of improvement strategies.

WHAT WAS THE OUTCOME?

In light of the Governor's Executive Order, it is imperative that the various public agencies in the State initiate, continue or reinforce efforts to address some of these issues. In general, these efforts should concentrate on: conducting sound freight planning at all levels; planning efforts will allow identifying the types of freight behaviors that need to be fostered or mitigated among the various stakeholders; participatory stakeholder engagement; fostering information sharing; and investing in research.

WHAT IS THE BENEFIT?

The anticipated benefits of these strategies will be able to address specific issues and inefficiencies based on the benefits they are expected to bring about. Benefits may include:

- Reduced Congestion
- Increased Environmental Sustainability
- Enhanced Safety
- Enhanced Security
- Enhanced Economic Competitiveness
- Increased Revenue Generation
- Enhanced Livability

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