MULTI-COUNTY GOODS MOVEMENT ACTION PLAN

EXECUTIVE SUMMARY
APRIL 2008



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Introduction



Purpose

The Multi-County Goods Movement Action Plan (MCGMAP or Action Plan) represents an unprecedented partnership between county, regional, and state transportation agencies to address the goods movement challenge faced by the Southern California counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura, and Imperial (See Figure 1). Collectively, these counties comprise the United States' premiere international commerce gateway, handling 44 percent of the Nation's containerized imports. This preeminence reflects Southern California's competitive advantage derived from its unique combination of large deep-water ports, the California/Mexico border crossings, the West Coast's largest population concentrations, one of the Nation's largest densities of transloading, consolidation, and distribution warehouses, and intermodal facilities. The region also has unparalleled connectivity by all-weather Interstate freeways and transcontinental rail lines to all points within the United States.

However, the rising tide of goods moving through the region imposes multiple mobility, environmental, and community impacts that degrade the region's quality of life and threaten the continued growth of the Southern California freight movement industry on which most of the nation relies. The MCGMAP identifies actions to be undertaken by the partner agencies, together with state and federal agencies and the private sector, to maintain Southern California's role as a center for international trade, commerce and manufacturing by planning for freight growth while simultaneously and aggressively mitigating environmental and local community impacts. The Action Plan sets forth a way to structure and understand the issues and defines actions that should be taken to address infrastructure needs, environmental concerns, and community impacts within the context of that structure. It incorporates and builds on existing studies and initiatives already in progress, and from them develops an integrated, comprehensive, regional approach.

This Executive Summary provides an overview of the region's goods movement challenges, the MCGMAP vision, principles, plan approach, and recommended actions. Also included are the lists of goods movement projects needed to maintain mobility in the face of forecasted demand. Specific and detailed information is contained within the topical chapters of the Action Plan. Additional information is also provided within the contents of technical appendices and memoranda (Tech Memos) prepared throughout the course of this effort, which are available on the project website (http://www.metro.net/mcgmap).

Figure 1: Southern California County Boundary Map



MCGMAP - The Master Plan for Goods Movement in Southern California



The Action Plan is the master plan for goods movement in Southern California and is intended to be used as a guide in preparation of state, regional, and local transportation plans. The objectives of the MCGMAP are to develop strategies that: 1) address the goods movement infrastructure capacity needs of the region; 2) reduce goods movement emissions to help achieve air quality goals; and 3) improve the quality of life and community livability for Southern California residents. The Action Plan is regional in scope, so that the Plan's analyses of potential strategies and investments are at a corridor rather than a local or project-specific level. While detailed project-level analyses were not part of this effort, they are nevertheless critical and will be conducted as part of subsequent project development efforts. The MCGMAP is intended to be a living document that will be revised and updated when major changes occur and if resources are available.

MCGMAP Partner Agency Roles

Goods movement is a diverse industry with a broad and disparate group of public and private sector stakeholders, each with its own roles and responsibilities. The MCGMAP partners are the transportation and planning agencies that co-manage the development of the Action Plan: Los Angeles County Metropolitan Transportation Authority, Orange County Transportation Authority, Riverside County Transportation Commission, San Bernardino Associated Governments, San Diego Association of Governments, Southern California Association of Governments, Ventura County Transportation Commission, and Caltrans Districts 7, 8, 11, and 12. The MCGMAP partners plan, fund, maintain, operate, construct and implement multi-modal transportation projects and influence the goods movement system through the regional planning and programming of funds to transportation projects.

Other organizations, such as the Ports of Los Angeles and Long Beach, have authority to plan and construct transportation and facility improvements within the Ports' jurisdiction, while the South Coast Air Quality Management District (AQMD) develops and implements plans to improve the region's air quality. Decisions regarding land use, arterial improvements and the permitting of warehouses and transloading centers are made by local municipalities.

Regional, state, and federal agencies have varying regulatory authorities over the trucking and rail industries, but the MCGMAP partners have little ability to regulate the operations, business practices, or pollutant emissions of the private sector goods movement operators, and no authority to regulate shippers and ocean carriers. As a result, the MCGMAP partners have focused primarily on goods movement infrastructure while acknowledging the essential roles to be played by the regulatory agencies, the Ports Clean Air Action Plan (CAAP), and public or private technology initiatives.

Given their defined roles and responsibilities, the MCGMAP partners cannot fully implement many of the plan's recommended strategies on their own. Therefore, to fully realize the benefits of this plan, continued collaboration and consensus building among the MCGMAP partners and other public and private sector stakeholders will be critical.





MCGMAP - The Master Plan for Goods Movement in Southern California

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Simultaneous and Continuous Improvement – An Overarching Strategy

The vision of the Action Plan – a cleaner and healthier environment, alternative mobility strategies, and fair-share investment approaches - must be implemented through simultaneous and continuous improvement of the environment and infrastructure. Figure 2 depicts the concept and importance of a simultaneous and continuous approach. Environmental mitigation, including significant cleanup of emissions from ships, trains, and trucks, is critical to reduce the impact of existing and increased freight flows and to reach the region's air quality attainment targets. Expanded marine terminals, and inter-modal, rail, and highway infrastructure are needed to accommodate the growing freight volume. The freight growth that is accommodated through these actions provides the economic base for public and private investment in infrastructure and the environmental cleanup. The vision of the MCGMAP is to implement these elements in parallel – capacity, investment, and mitigation – each of which is necessary for the other to succeed.

Figure 2: MCGMAP Simultaneous and Continuous Approach



Core Mandates and Implementation Principles



The project partners developed four core mandates and six implementation principles to provide the guiding framework for the development of the MCGMAP.

CORE MANDATES

ENVIRONMENT: **Avoid, Reduce, and Mitigate Environmental, Community, and Health Impacts**

Environmental and community impacts must receive equal attention in the implementation of solutions.

MOBILITY: **Promote the Safe and Efficient Movement of All Transportation Modes and Reduce Congestion**

Existing and projected traffic growth will result in the significant deterioration of the region's highway and rail system's performance capabilities. The region's transportation system presents significant safety concerns for the public, particularly at-grade crossings and truck accidents, and increasing truck traffic in neighborhoods.

ECONOMY: **Ensure the Economic Well-Being of the Region and the State**

Goods movement is an important segment of the MCGMAP region and the U.S. trade economy. Goods movement and the associated industries (e.g., logistics) provide direct and indirect benefits to the region's economy. Each new logistics job supports two new jobs in the economy.

FUNDING: **Secure the Region's Fair Share of Public and Private Funds for Investment in the Freight Transportation System**

Although the region's goods movement system serves markets within and outside of California, these markets and associated system users are not paying their fair share to offset the costs of regional freight congestion and related health impacts. While still advocating for dedicated federal and state funding sources, user-based public-private funding arrangements must be a major component of the financing for critical projects.





Source: CALTRANS District 7



Core Mandates and Implementation Principles



IMPLEMENTATION PRINCIPLES

The MCGMAP builds upon the principles set forth in the Statewide Goods Movement Action Plan (January 2007). The following represent implementation principles specific to MCGMAP:

1. Guideline: The Action Plan is the master plan for goods movement in Southern California and is intended to be used as guidance in the preparation of state, regional, and local transportation plans. The Action Plan can also be a tool for local jurisdictions to make informed land use decisions.

2. Investment: Investments in goods movement infrastructure will be implemented on a simultaneous and continuous basis with investments in environmental/community mitigation.

3. Cost Distribution: A fair share of the cost of the impacts of goods movement on transportation infrastructure, environment, and communities must be borne by those benefiting from it.

4. Management: The need for institutional mechanisms for financing or implementing projects, will be defined as such needs are clearly identified.

5. Public Benefit: Projects supported by public/private partnerships and private projects supported by public funding should demonstrate a clear public benefit.

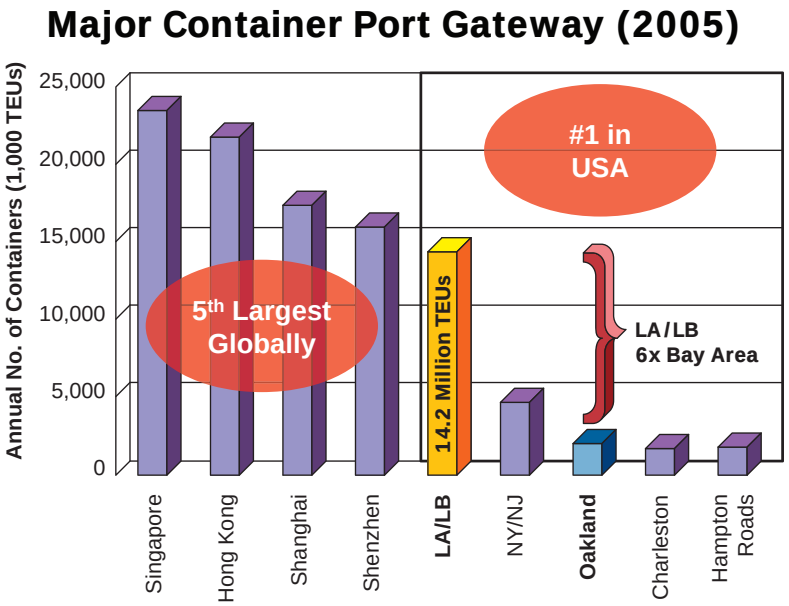
6. Land Use Compatibility: Partner agencies shall encourage land use decisions that will result in buffers – both open and developed – that separate goods movement infrastructure and sensitive receptors such as residential areas, schools, and hospitals.



CHALLENGES FOR THE NATIONAL TRADE GATEWAY

Currently, the Ports of Long Beach and Los Angeles (San Pedro Bay ports) accommodate more than 40 percent of all international containerized cargo into and out of the U.S. and were ranked 5th in the world in 2005 (see Figure 3). All indications point to a future demand in international freight flows that will exceed even the most aggressive efforts by the ports, railroads, and transportation agencies to accommodate it. Container volumes through the San Pedro Bay ports are projected to nearly triple from **15.7 million TEUs** (twenty-foot equivalent units) in 2006 to **42.5 million TEUs** by 2030. These forecasts are constrained by anticipated port capacity at a level significantly below the TEU demand projected for the ports in federally sponsored analyses. A large portion of this trade is simply "through-traffic," degrading air quality and impacting the region's quality of life, while providing limited economic benefit to the region. Approximately 77% of the container-based goods handled by the San Pedro Bay ports are consumed outside the Southern California region. Only 23% are consumed within the region. Freight flowing through the Ports of Los Angeles and Long Beach, which totaled $256 billion in 2005, reaches every state in the continental U.S. as shown in Figure 4.

Figure 3: Major Container Port Gateways



Trucks traversing the California/Mexico border crossing area utilize three primary ports of entry (POE) – Otay Mesa, Tecate, and Calexico East. Mexico is California's number one export market and the fastest expanding component of the San Diego regional economy. The Otay Mesa-Mesa de Otay Port of Entry is the busiest commercial border crossing between California and Mexico, handling more than 1.4 million trucks and $28.6 billion worth of goods in both directions in 2006. This trade represents the third highest dollar value of trade among all land border crossings between the United States and Mexico. Another $1.2 billion in merchandise and more than 140,000 trucks crossed at the Tecate-Tecate POE. For Imperial County, the Calexico East/Calexico II POE processed $11.3 billion in goods and 614,000 trucks in 2006. Nearly 80% of these truck trips stay within the state.

Figure 4: Total Value of Containerized Trade Moving through the Ports of Los Angeles and Long Beach, 2005



Source: Port of Los Angeles, Port of Long Beach, and Alameda Corridor Transportation Authority



The Crisis

The region is faced with multiple mobility, environmental, community impact, funding, and economic challenges:

Mobility Challenge - The study area's ports, airports, rail lines and inter-modal terminals have existing capacity constraints that undermine the efficiency and productivity of the system as a whole. Furthermore, the existing roadway and rail networks are reaching capacity. As a result, the system today is susceptible to disruptions to the movement of goods, causing delays that reduce the quality of services and increase costs to consumers. The mobility challenge is further exacerbated by the fact that the roadways, and rail networks that accommodate the movement of goods are often the same as those utilized by motorists and passengers for the movement of people.

Modeling for the SCAG region (defined as Los Angeles, Orange, San Bernardino, Ventura, Riverside, and Imperial Counties) forecasts that truck vehicle miles of travel (VMT) will increase by over 110% by 2030, growing from a level of 22.4 million VMT in 2000 to 48.4 million VMT by 2030. Some freeways in the region currently handle up to 40,000 trucks per day, and it is projected that these freeways may have to handle up to 80,000 trucks per day by 2025. As a result of the growth in passenger and truck traffic, the highway system's performance will deteriorate significantly. In fact, average speeds will drop from 35.9 mph in 2005 to 31.9 mph in 2030, resulting an average of 5.4 million hours of delay daily for all traffic. Furthermore, freight rail volume is projected to increase from 112 trains per day in 2000 to 250 trains per day in 2025 along the BNSF and Union Pacific mainline rail network. The current and future mobility challenges for the region are daunting and require immediate action as well as proactive steps to address future needs.

Environmental and Community Challenges - The goods movement system directly affects quality of life. This includes traffic congestion, truck intrusion into neighborhoods, safety, land use incompatibility, poor air quality and related health impacts, restricted mobility and delay at rail crossings, noise and vibration impacts, and visual impacts.

The dimensions of these impacts are staggering when viewed within the context of Southern California's designation as a non-attainment region for air quality. The use of bunker and diesel fuels, predominantly for the transport of freight by ocean going vessels, is a large contributor to the deterioration of the region's air quality. Furthermore, new health studies are drawing ever stronger conclusions about the association of air pollution with public health effects such as asthma, reduced lung function, and cancer risk that target the most vulnerable in the port communities and around other logistics centers - children. Implications of these findings are reflected in the estimated public health impacts summarized by California Air Resource Board (CARB) in Table 1.

Solving the challenge of moving freight is greatly complicated by the knowledge that failure to convert large proportions of the railroad engines and truck fleet to low-emitting or zero-emitting engines in the near future will result in missing the regional emission reduction targets needed by 2014 to meet the federal annual PM 2.5 standard, and by 2019 to meet the federal 24-hour PM 2.5 standard. Failure to meet the budget for the State Implementation Plan for air quality could result in a cessation of the flow of federal funds for highway projects. Thus, mobility and environmental challenges are heavily intertwined.



Source: CALTRANS District 7

Table 1: CARB Annual (2005) Health Effects of PM and Ozone Pollution

Annual (2005) Health Effects of PM and Ozone Pollution from Freight Transport in California		
Health Outcome [A]	**Cases per Year**	**2005 Valuation ($ Millions)**
Premature Death [B]	2,400	19,000
Hospital Admissions (respiratory causes)	2,000	67
Hospital Admissions (cardiovascular causes)	830	34
Asthma and Other Lower Respiratory Symptoms	62,000	1.1
Acute Bronchitis	5,100	2.2
Work Loss Days	360,000	65
Minor Restricted Activity days	3,900,000	230
School Absence	1,100,000	100
Total	**NA**	**19,499**

Source: California Air Resources Board, March 2006

A Does not include the contributions from particle sulfate reformed from SOx emissions, which is being addressed with several ongoing emissions, measurement, and modeling studies.

B Includes cardiopulmonary- and lung cancer-related deaths.



Funding Challenges- The goods movement system is significantly underfunded. Projects and programs identified in this Action Plan show funding needs on the order of $50 billion over the next 25 years. Despite accommodating most of the nation's international trade volumes, Southern California has received a disproportionately low share of federal and state funding for goods movement. Moreover, the private sector's role in funding regional and nationally significant goods movement projects to date has been limited.

Economic Challenges - Despite its impacts, international trade provides significant benefits to the region. The logistics industry provides both direct and indirect benefits to the region's economy. Economic studies show that logistics activity is responsible for $90.7 billion, or 6.6%, of the nearly $1.4 trillion in economic activity annually in Southern California. The indirect or induced impact represents another $170 billion or 12.4%. Each logistics job supports 2.2 new jobs in the economy. This contribution to the economy is significant and is important to achieving the MCGMAP vision.

Conversely, the economic benefits of goods movement can be negatively impacted by delays and congestion. At the Otay Mesa and Tecate international border crossings, inadequate and aging infrastructure and more stringent security requirements caused the U.S. and Mexico binational economy to lose $3.9 billion and about 21,900 jobs during 2007. The border delays in freight movement result in increased transportation costs and interruptions in manufacturing and delivery cycles.

In order to maintain the economic vitality of the region, the economic benefits of goods movement must be leveraged and expanded. One of the challenges for the region is to translate a portion of these economic benefits into a stream of funding that addresses the infrastructure improvements made necessary by the increased movement of goods within and through Southern California. In addition, the economic growth attainable through increased logistics activity is needed to finance the cleanup of environmental problems that have been allowed to accumulate.



Source: CALTRANS District 7



Understanding Freight Flows


Source: CALTRANS District 7

Currently, goods passing through the Southern California seaports and land ports of entry with Mexico belong to one of three modal "market segments": 1) On-dock and off-dock/near-dock; 2) distribution/delivery; and 3) transload. By identifying the modes of travel for goods, a market segmented approach can be developed that will allow for the region to better target improvements and funding sources for goods movement projects and associated environmental and community impact mitigation measures.

Understanding the Market Segments

Figure 5 depicts the three primary market segments. Note that the specific percentages listed may vary on a daily basis and do not account for domestic goods movement, which represents a significant share of truck VMT in Southern California.

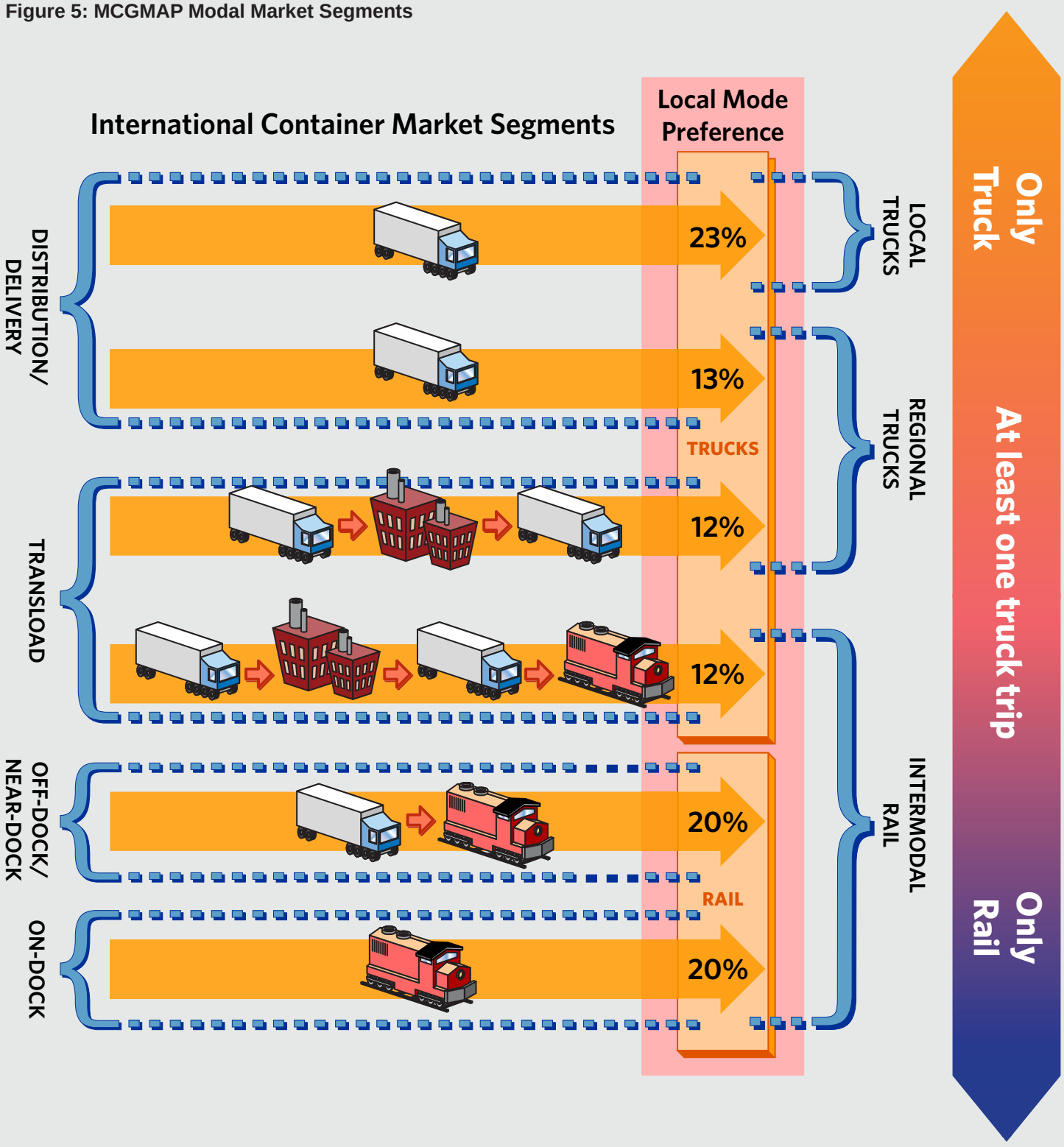
- Direct Shipment from on-dock and off-dock/near-dock - Approximately 40% of containers passing through the Ports of Los Angeles/Long Beach leave the region by rail utilizing either on-dock rail at the marine terminals or off-dock/near-dock rail inter-modal facilities. These goods are destined for areas outside the MCGMAP region, including the central and eastern United States. As a result, funding sources for goods movement can be better targeted since the direct benefits to shippers and the nation can be clearly shown. This includes additional state and federal goods movement funding, as well as container fees levied on shippers who receive direct benefits from improved efficiency of the goods movement system.

- Transload - Approximately 37% of containers passing through the Ports of Los Angeles/Long Beach are either trucked directly out of the region or leave the region after an intermediate stop at a warehouse or distribution center. These goods may arrive at the ports as a single container, be transported to an inland distribution center by truck, be broken down into smaller units while at a warehouse or distribution center, then loaded onto either truck or rail to be moved to their final destinations. Such goods use more specific routes through the MCGMAP region and provide better opportunities for targeting of specific routes, users, or impacts relative to local distribution/delivery. This includes truck replacement/retrofit programs, the development of separated corridors that move between clustered warehouse and distribution centers, and concepts such as inland ports and virtual container yards (yard operations to reduce the number of unproductive container truck trips).

- Distribution/Delivery – Approximately 23% of containers passing through the Ports of Los Angeles/Long Beach stay within the Southern California region, with the associated benefits and impacts. Because the origins and destinations for these goods are as dispersed as the people and communities that rely on them, the trucks transporting these goods use various roadways and routes for travel and blend into all other vehicular traffic within the region. Domestic goods movement, such as local delivery, construction, manufacturing, and service/utility trucking exhibit similar travel patterns. Because the users and shippers of this modal market are so widely varied, it is difficult to target individual users for funding without ignoring other users. Traditional funding sources for roadway improvements and alternative funding approaches for roadway tolling or congestion pricing will be needed to address this market segment.



Figure 5: MCGMAP Modal Market Segments

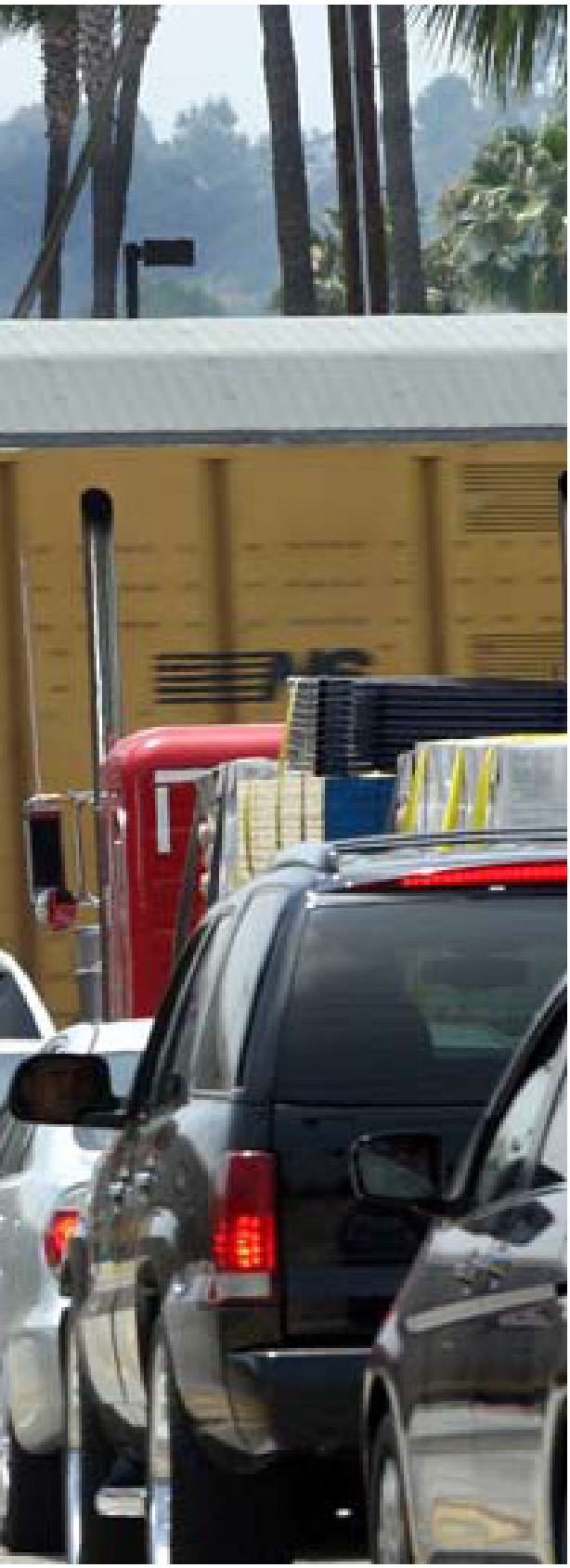





RAIL ROAD
CROSSING
2
TRACKS



Action Plan Framework



The MCGMAP is structured around four sets of actions, each of which is related to a component or segment of the goods movement market. Pages 10 and 11 discuss the concept of market segmentation of the goods movement flows within and through Southern California. It is a concept for structuring the problem in a way that lends itself to more targeted and cost-effective solutions. The three basic market segments of freight flows are:

- Direct intermodal rail shipment from on-dock and off-dock/near-dock to locations outside the region
- Transload (regional trips with an intermediate stopping point)
- Local distribution/delivery by trucks

The MCGMAP strategy distributes four "action sets" across the three basic market segments. This represents the basic structure upon which MCGMAP is built. The four action sets include:

1. Accelerate regional environmental mitigation
2. Relieve congestion and improve mobility
3. Improve operational efficiency
4. Develop equitable public/private funding strategy

Table 2 illustrates the core elements of the MCGMAP strategy by identifying the types of actions appropriate to address the needs of each market segment. In some cases, such as the environmental strategies, similar actions cut across all the market segments, but the appropriate source of funding from which to draw resources may vary.



Table 2: Example Actions Targeted by Market Segment

FREIGHT MODAL MARKET SEGMENTS	*ACTION 1 -Accelerate Regional Environmental Mitigation*
Freight moves destined outside of Southern California (~52%) - No Stops within Region –" Intermodal Rail"	
Freight loaded onto trains at the dock (~20%) Freight transported to near dock facility then onto a train (~20%) Freight transported directly out of the region by truck (~12%)	• Accelerate emission reduction measures in CAAP, AQMD, and state plans • Use clean technology shuttle to intermodal facilities • Use low emission train engines or electrification • Construct grade separations in ACE corridor
Freight moves destined outside of Southern California (~25%) – With at Least One Stop within Region – "Regional Trucks"	
Freight trucked to a warehouse, an intermodal facility and then loaded onto a train (12%) Freight trucked to warehouse, then trucked to a final destination outside of the region (13%)	• Accelerate emission reduction measures in CAAP, AQMD, and state plans • Use clean technology shuttle to inland ports • Use low emission train engines or electrification • Coordinate community impact mitigation and land use planning • Adopt incentive programs for turnover of truck fleet to clean technology
Local freight moves within Southern California (~23%) – Multiple Stops within Region – "Local Trucks"	
Freight trucked to numerous locations within the region	• Accelerate emission reduction measures in CAAP, AQMD, and state plans • Continue project-specific impact analysis and mitigation measures



Action Plan Framework

ACTION 2 - Relieve Congestion and Increase Mobility	ACTION 3 - Improve Operational Efficiency	ACTION 4 – Develop Equitable Public/ Private Funding Strategy
• Construct rail mainline capacity improvements • Construct Colton Crossing • Use clean technology shuttle to intermodal facilities	• Increase on-dock loading • Expand hours of port operation (PIERPASS) and intermodal terminals operation	• Railroad (private) funding and public funding proportional to benefit • User fees (e.g., container fees) • Increase federal participation
• Construct highway capacity improvements • Study feasibility of dedicated freight guideway(s) • Use clean technology shuttle to inland ports	• Adopt flexible hours of operation (warehouse/ distribution centers) • Study feasibility of virtual container yards • Expand use and integration of Intelligent Transportation Systems for highways and vehicles	• Railroad funding and public funding proportional to benefit • Traditional highway funding • Possible truck tolling on dedicated failities • Container fees • Increase federal and state participation • Conditions of approval and development fees for community mitigation
• Construct highway capacity improvements • Study dedicated freight guideway(s) on freeways and roadways	• Adopt flexible hours of operation (delivery) • Expand use and integration of Intelligent Transportation Systems for highways and vehicles • Alleviate physical factors and conditions that may constrain operations of trucks(ie. lane widths, vertical and horizontal constraints and curvature, shoulders, pavement)	• Traditional highway funding • Possible truck tolling on dedicated facilities • Conditions of approval and development fees for community mitigation

Accelerate Environmental Mitigation | ACTION SET 1



Goods movement imposes significant costs on community livability and the environment. Therefore, the MCGMAP partners consider air quality improvements and regional environmental mitigation an intrinsic part of a regional goods movement system.

The Action Plan recognizes that a regional approach is necessary, with the focus on cleaning up emissions at the source (i.e. the powertrains of ships, locomotives, trucks, and harbor equipment) not one based simply on project-by-project mitigation. The simultaneous and continuous implementation of environmental mitigation strategies is a leading imperative for this Action Plan and will require action at two levels: 1) Region-wide approaches; and 2) project-specific mitigation measures.

Region-wide Approaches

A systems approach is required to reduce the air quality, community and environmental impacts of goods movement flowing into and through the region. This approach has three components – acceleration of the funding and implementation of air quality plans already prepared, strengthening of fuel and engine standards, and institutional policies.

- ***Acceleration of funding and implementation of air quality plans -*** Some of the nation's most aggressive clean air improvement plans are now in place in Southern California: the San Pedro Bay Ports Clean Air Action Plan (CAAP), the 2007 South Coast Air Quality Management Plan (AQMP), and the California Air Resources Board (CARB) Emission Reduction Plan. The MCGMAP supports these plans and proposes to accelerate the implementation of the strategies in those plans. Accelerating the environmental cleanup from goods movement sources is one of the principle themes of the environmental actions in the MCGMAP.
- ***Strengthening of fuel and engine standards -*** Regulations that promote the use of clean fuels and engine standards/technologies should be strengthened beyond those currently proposed. This will need to be supported by accelerated research and development of cleaner technologies by private industry, and by implementation assistance from state and federal regulatory agencies. These actions by private industry and regulatory agencies will allow regional and local strategies and incentive programs in the CAAP and AQMD to have greater effect.
- ***Institutional policies –*** Cooperative and coordinated institutional and development policies enacted by local jurisdictions and the development industry could result in environmental and community benefits. Such policies could include: 1) Designating quiet zones for rail corridors; 2) amending zoning and land use regulations to better avoid non-compatible land uses (separating goods movement activities from residential areas; buffering); and 3) establishing mitigation banking and/or development of pooled funds for mitigation (e.g., land use changes, purchasing green space along freight corridors, diesel truck retrofits, funds for health clinics, etc.). The partner agencies have embarked on a collaborative effort with community stakeholders and the private sector to develop such guidelines (see first bullet under specific actions).

Project Specific Mitigation Measures.

While the proposed broader regional strategies will result in significant reductions in emissions for the study area as a whole, project specific mitigation measures are often most effective at the local level, resulting in more tangible benefits for local neighborhoods and communities. Therefore, the Action Plan supports the use of project-specific revenue mechanisms to help fund mitigation efforts. Examples include:

- Use of best available technology and best practices for project construction and operational impacts.
- Compliance with natural resource statutes (e.g., federal and state Endangered Species Acts and Clean Water Acts, Migratory Bird Treaty Act)
- Inclusion of "smart" design and good planning principles, such as landscaped buffering, noise barriers, exterior light shielding and positioning, separation of incompatible land uses, and wetlands protection.

SPECIFIC ACTIONS

- Develop guidelines for local jurisdictions to use in siting and designing goods movement related land uses and transportation facilities. (Consultant activity is underway)
- Encourage federal participation in developing guidelines and international agreements that regulate vessels (and other stationary sources of diesel emissions) used for transporting goods to and through U.S. ports.
- Support clean lease arrangements made by the ports for reducing ship emissions.
- Initiate a follow-on effort to identify more aggressive goods movement initiatives to achieve regional air quality attainment, including the identification of sources of funding to accelerate the environmental cleanup.



ACTION SET 2 | Relieve Congestion and Improve Mobility

Region-wide congestion relief and increased mobility cannot be achieved without significant investment in infrastructure, coupled with improvements in efficiency and productivity. Utilizing the market segmentation approach, various crucial capital improvements were identified for each of the modes involved in the movement of goods.

Increased Intermodal and Mainline Rail Capacity

Increases in mainline rail capacity and on-dock rail improvements at the ports are critical to the efficient transport of intermodal freight bound for destinations outside the region. The Action Plan recommends implementation of rail improvements in accordance with the San Pedro Bay Ports Master Plans as well as triple tracking the BNSF mainline from Los Angeles to San Bernardino and double tracking the two Union Pacific corridors. These improvements must be done in concert with the grade separations and safety improvements outlined in the multi-county Alameda Corridor East (ACE) Trade Corridor program. Implementing the mainline rail capacity enhancements together with the grade separation of railroad crossings can maximize efficiency and cost-effectiveness while also providing an opportunity to maximize funding from federal and state sources and accelerate the delivery of the needed improvements. Grade separation of the rail-to-rail Colton crossing as well as other rail-roadway grade separations near the the Ports of Los Angeles, Long Beach, Hueneme, and San Diego, and at other key Los Angeles County locations are also critical.

Improved Highways/Roadways

The Plan recommends three tiers of highway actions. The **Tier one** includes major improvements on roadways and bridges in proximity to the ports/border crossings and other major freight activity centers (examples include the Gerald Desmond Bridge replacement project, the SR-47 Expressway, I-110 connectors, High Desert Corridor, SR-78 Brawley Bypass, and the San Diego Border Corridors). **Tier two** is comprised of corridor-level investigation of alternative technologies, separated mass flow applications (e.g., the I-710 Corridor Improvements) as well as dedicated freight guideways/truck lanes with the use of clean engine trucks and/or clean Long Combination Vehicles (LCVs), if such vehicles could be authorized to operate on dedicated facilities in California safely with minimal impacts on surrounding communities. Further consideration of LCVs will require a detailed analysis of potential capital and operational impacts. This tier focuses on new technologies as well as new application of methods not widely used in California. Consequently, these projects will require additional detailed analysis before they can proceed. **Tier three** projects encompass capital and operational improvements that in addition to assisting with the efficient movement of goods, are also beneficial to mixed flow traffic. Such improvements include modification of key freeway-to-freeway interchanges to alleviate operational and geometric bottlenecks, addition of auxiliary lanes, shoulder improvements and other safety and operational improvements on roadways heavily used by trucks.



SPECIFIC ACTIONS

- Complete the ACE Trade Corridor railroad grade crossing improvement program in Los Angeles, Orange, Riverside, and San Bernardino Counties.
- Continue with analysis and planning of I-710 dedicated freight guideway facility.
- Further investigate the feasibility of inland port / concentrate inland warehouse and distribution locations.
- Increase border trade capacity and efficiency.
- Implement key projects listed in the regional and county-specific Tables 5 and 6.
- Participate with the railroads in eliminating key bottlenecks and increasing capacity along the mainline rail system as outlined in the Los Angeles-Inland Empire Railroad Mainline Advanced Planning Study.
- Develop the appropriate institutional arrangements and negotiating framework to provide simultaneous and continuous improvement to mainline track improvements, the Colton Crossing grade separation, highway-rail grade separations, locomotive emission reductions, and other rail corridor related mitigations.
- Initiate a Regionally Significant Transportation Investment Study (RSTIS) to evaluate the feasibility of implementing a Dedicated Freight Guideway System/Regional Truck Lanes (I-710 From Port of Long Beach to SR-60; East-West Corridor between the I-710 and to I-15; and I-15 to Victorville) inclusive of potential non-freeway implementation.

Improve Operational Efficiency | ACTION SET 3



Any comprehensive strategy to address mobility, improve predictability and enhance safety needs to address system and corridor capacity. This includes improvements to the operational efficiency of the region's goods movement system. The operational efficiency of various segments of the goods movement system can be improved based on specific modal market segments.

Improve Marine Terminal Productivity, Truck Turn Times, and Intermodal Operations

In order to meet the future demand, the Ports of Los Angeles and Long Beach will increase their operational productivity from the existing level of 4,700 TEUs per acre per year to almost 11,000 TEUs per acre per year. The current focus is on increasing on-dock rail use and extending hours of operation to off-peak time periods (PIERPASS). Additional strategies include the transport of unsorted containers from the ports to inland railyards separated from residential areas for the creation of destination trains, as well as introducing new technologies such as optical character recognition (OCR) and radio frequency identification tags (RFID), and the evaluation of the feasibility of a virtual container yard to reduce the number of unproductive empty container truck trips.

Improve Highway Operations

Increased implementation of Intelligent Transportation Systems (ITS), weigh-in-motion (WIM) systems, highway pricing such as Open Road Tolling (ORT) collection systems, improved incident management, and enforcement of driver and operating restrictions can improve highway operations. ITS solutions allow for truck routing, traffic control during construction or maintenance, as well as the shifting of truck movement to off-peak times. WIM bypass systems are an effective means of traffic management in the proximity of weigh stations. The system helps maintain normal traffic flow and prevents traffic backup onto the mainline freeway resulting from commercial vehicles entering and exiting weigh stations. Open Road Tolling allows users to travel at highway speeds on the mainline while their tolls are collected electronically overhead, reducing congestion and travel times for passenger and commercial vehicles. California has established a statewide standard for use at all toll roads and bridges utilizing the "FasTrak" device.



SPECIFIC ACTIONS:

- Implement efficiency improvements contained in the San Pedro Bay Ports Master Plans that reduce impacts from trucks and containers on the transportation system and community.
- Improve terminal productivity, truck turn times, and inter-modal operations.
- Implement the highway operational improvements listed in Table 6.
- Develop partnerships between public and private entities to research and develop advances in goods movement transportation technologies.



ACTION SET 4 | Develop Equitable Public/ Private Funding Strategy

Funding and implementation of the recommended actions, projects, and programs and their associated mitigations will require a coordinated effort by the private sector and public sector at all levels of government. It is critical that all beneficiaries of goods movement participate in funding infrastructure improvements as well as environmental mitigation. Beyond its value to the regional economy, the existing border crossings and commercial trade with Mexico are also critical to the regional and bi-national economies. Cross-border goods have origins and destinations to California/regional retail markets and manufacturers to shipping beyond California through the San Pedro Bay Ports and the Inland Empire Rail/Intermodal distribution centers.

To illustrate the shortfall in public funding, the Alameda Corridor-East Trade Corridor, which would provide much needed grade-separation projects to reduce congestion and emissions throughout the region, has an 83% funding shortfall - $3.8 billion out of the $4.4 billion total.

Maximize the Study Area's Fair Share of State and Federal Funds

Federal assistance is essential to compensate for the disproportionate local and regional costs for the goods movement infrastructure (and associated regional environmental and community impacts and necessary mitigations) provided to the rest of the nation. The next national transportation funding reauthorization legislation must recognize the importance of funding a national goods movement system, establish appropriate levels of federal funding support, and provide further opportunity for flexibility in the use of federal funds. The four freight-related programs of key relevance are 1) Projects of National and Regional Significance, 2) National Corridor Infrastructure Improvement Program, 3) Freight Intermodal Distribution Pilot Program, and 4) Truck Parking Facilities Program. Though state and federal funds are needed, any funding for private infrastructure to increase capacity and facilitate the throughput of goods must ensure that public dollars are used in return for public benefits, not merely for benefits to the private logistics system. The development of public-private benefit assessments among the private beneficiaries and public agencies is one method to address this issue.

Private Sector Contribution

Recognizing funding shortfalls for infrastructure projects and the fact that private industry benefits from an improved goods movement system, the MCGMAP recommends efforts to secure private revenue sources including user fees. This could be done through pending legislative efforts or by other means such as ongoing efforts by the San Pedro Bay ports to negotiate cargo fees for infrastructure and environmental mitigation projects. The types of user fees that should be considered include congestion pricing, port-assessed cargo or container fees, industry-supported programs similar to PIERPASS, and VMT-based taxes or gas taxes for trucks. The Action Plan addresses the need to convert the value of improvements to the study area's goods movement system into revenue for improving infrastructure and mitigating impacts. Federal and state funds require local/private matching funds, thus private sector contributions will add strength to applications for leveraging federal and state funds.

Stakeholders in San Diego and Baja California, Mexico are investigating the potential for use of public funds together with private financing and toll fees for a new border crossing, highways, and federal inspection staffing at Otay Mesa East, California / Mesa de Otay II, Baja California. Similar pursuits for new border crossings or expansions are also projected along the Imperial County, California / Mexicali, Baja California border.

SPECIFIC ACTIONS

- Maximize Southern California's fair share of state and federal funds through ongoing and coordinated legislative efforts.
- Provide input to legislation focused on user fees and to any ongoing efforts to negotiate user fees with industry that can be included in a specific plan of finance for goods movement and air quality improvements.
- Pursue public-private funding arrangements for specific facilities, where appropriate .
- Implement the Cooperation Agreement among regional, state, and federal agencies to facilitate the actions contained in the MCGMAP.
- Develop structure for managing user fees and revenues for goods movement infrastructure and community/environmental mitigation projects.



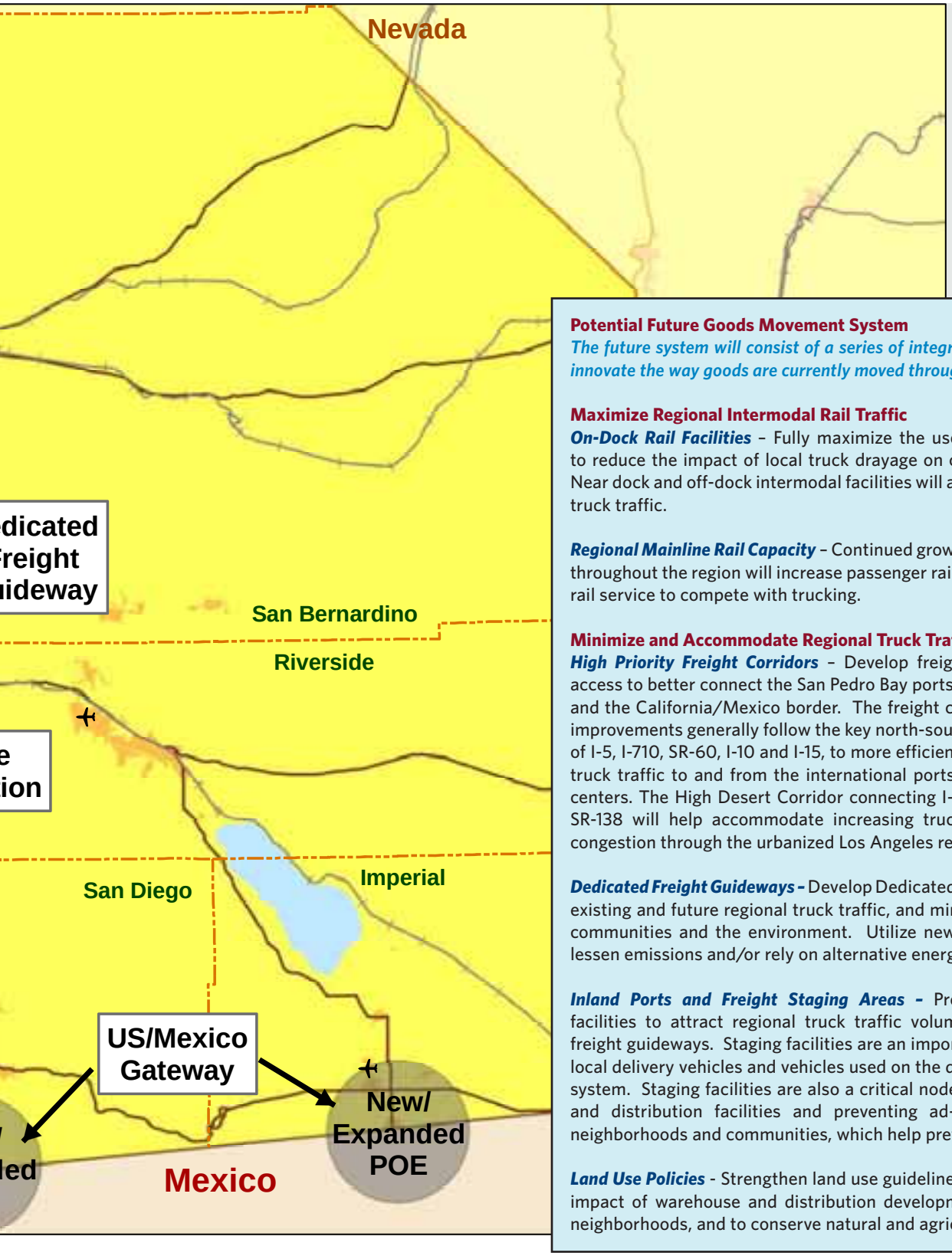
Figure 6: Map of Potential Future System

The mitigation of environmental and community impacts associated with goods movement must occur simultaneously and continuously with any future system improvements. A future system that serves the various modal markets of the goods movement industry can provide a more targeted approach to mitigation of environmental and community impacts.

The federal government, regulatory agencies and private industry must play a proactive role in identifying dedicated funding sources and encouraging acceleration of innovations that reduce or eliminate emissions and other goods movement related environmental impacts.



Potential Future System



Potential Future Goods Movement System

The future system will consist of a series of integral components designed to innovate the way goods are currently moved through the region.

Maximize Regional Intermodal Rail Traffic

On-Dock Rail Facilities – Fully maximize the use of on-dock rail facilities to reduce the impact of local truck drayage on congestion and emissions. Near dock and off-dock intermodal facilities will also be expanded to reduce truck traffic.

Regional Mainline Rail Capacity – Continued growth in mainline rail capacity throughout the region will increase passenger rail services as well as freight rail service to compete with trucking.

Minimize and Accommodate Regional Truck Traffic

High Priority Freight Corridors – Develop freight corridors and improve access to better connect the San Pedro Bay ports, the Inland Empire region, and the California/Mexico border. The freight corridor and border access improvements generally follow the key north-south and east-west corridors of I-5, I-710, SR-60, I-10 and I-15, to more efficiently accommodate regional truck traffic to and from the international ports of entry and distribution centers. The High Desert Corridor connecting I-5 and I-15 generally along SR-138 will help accommodate increasing truck traffic by avoiding the congestion through the urbanized Los Angeles region.

Dedicated Freight Guideways – Develop Dedicated facilities to accommodate existing and future regional truck traffic, and minimize the impact on local communities and the environment. Utilize new modes that eliminate or lessen emissions and/or rely on alternative energy sources.

Inland Ports and Freight Staging Areas – Promote dedicated staging facilities to attract regional truck traffic volumes to use the dedicated freight guideways. Staging facilities are an important interchange between local delivery vehicles and vehicles used on the dedicated freight guideway system. Staging facilities are also a critical node for attracting warehouse and distribution facilities and preventing ad-hoc location throughout neighborhoods and communities, which help prevent land use conflicts.

Land Use Policies - Strengthen land use guidelines and policies to minimize impact of warehouse and distribution development on communities and neighborhoods, and to conserve natural and agricultural lands.

Stakeholder Outreach



This section summarizes the stakeholder outreach efforts of the MCGMAP project, which occurred throughout the development of the Action Plan. The purpose of these outreach activities was to gather comments and input on the Draft Action Plan. Written and oral comments/questions about the Draft Action Plan along with topical responses are included in Appendix C of the Final Action Plan.



Stakeholder participation was an essential component throughout the development of the MCGMAP. In doing so, the project partners attempted to reach as broad a cross-section of stakeholders as possible through the following outreach mediums:

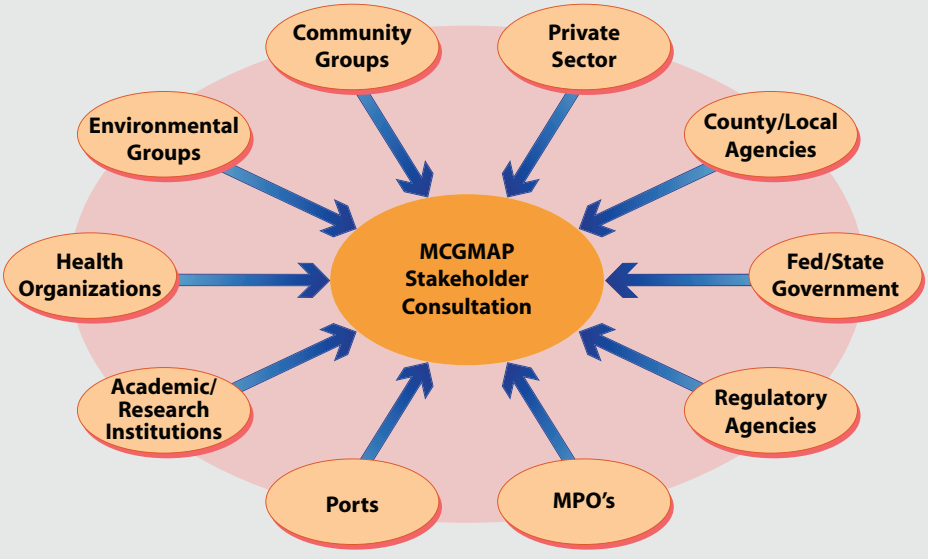
- Project Website;
- Eight (8) Stakeholder Advisory Group (SAG) Meetings;
- Two (2) Public Surveys;
- Presentations to boards, committees and organizations; and
- Twelve (12) Public workshops.

Two survey instruments were utilized and a project website (http://www.metro.net/mcgmap) was established to inform and engage stakeholders. Meetings and workshops were convened to gather input and share findings. The Stakeholder Advisory Group meetings were an important mechanism through which key stakeholders across region were informed and had an opportunity to vocalize concerns to the MCGMAP planners. Representatives from community advocacy and health organizations, air quality regulatory agencies, the ports, the trucking and railroad industries and other transportation agencies at all levels of government were invited to participate in the Stakeholder Advisory Group (SAG) meetings. Additionally, smaller one-on-one meetings were held with many of these groups to confirm data and obtain their individual perspectives on issues related to goods movement. Stakeholder Advisory Group meetings and county workshops provided a forum for stakeholders to comment on the content of the action plan and to express concerns about the impact on local communities, air quality, the environment and the transportation system.

In general, the stakeholders support a coordinated effort among the agencies and stakeholders to solve goods movement challenges facing the region. Stakeholders expressed the following specific concerns:

- Having more aggressive environmental mitigation strategies to reduce current levels of goods movement impacts before any new infrastructure projects are built;
- Dedicating new private/public funding sources to reduce health and environmental impacts of goods movement in the region;
- Providing for more aggressive use of alternative fuels and alternative technologies to address goods movement impacts;
- Questioning whether we need to meet unlimited goods movement demand - all costs and benefits should be studied first; and
- Considering placement of limits on trade growth and diverting it to other ports and instead investing in clean industries as a more cost-effective approach.

Some stakeholders indicated that regional environmental and community impacts must be addressed and mitigated to a level beyond existing air quality attainment goals. However, the authority to increase air quality attainment goals rests with regulatory agencies such as the SCAQMD and CARB, not the MCGMAP partner agencies. For more information, please see Chapter 2 – Stakeholder Outreach in the Action Plan.





Analysis Approach

This section briefly describes the approach to evaluating goods movement projects and strategies. This approach included an analysis of three Port of Los Angeles/Long Beach container volume growth and two levels of infrastructure investment scenarios, a qualitative evaluation of goods movement projects/strategies, and a detailed analysis of twelve bundles of projects, including regional truck lanes.

Analysis of growth scenarios

Four scenarios encompassing three levels of Port of Los Angeles/Long Beach container volume growth and two levels of infrastructure investment were analyzed to determine their economic impact. Table 3 provides a summary of the employment impacts of each scenario. In addition, an attempt was made to estimate the regional mobility impacts of the four scenarios; however, due to data limitations, the regional transportation demand model does not adequately project the linkage between regional truck trips and port container volumes. Consequently, the model could only be used for scenarios 1 and 4.

Table 3: MCGMAP Freight Growth Scenarios

Scenario	*Assumptions*	*2030 Employment impact (number of jobs)*	*Change relative to Scenario 1*
1	San Pedro Bay port growth of 42.5 million TEUs by 2030; SCAG 2004 Regional Transportation Plan baseline implementation	1,601,476	-
2	San Pedro Bay port growth of 24 million TEUs by 2030; SCAG 2004 Regional Transportation Plan baseline implementation	1,013,101	-36.7%
3	San Pedro Bay port growth of 33 million TEUs by 2030; SCAG 2004 Regional Transportation Plan baseline implementation	1,303,490	-18.6%
4	San Pedro Bay port growth of 42.5 million TEUs by 2030; SCAG 2004 Regional Transportation Plan baseline implementation supplemented by additional projects and private investment sources and fees	1,601,476	0.0%

Evaluation of goods movement strategies

A qualitative evaluation of goods movement projects/strategies was also conducted. This analysis grouped a comprehensive list of 249 projects/strategies (the complete list is included in the Action Plan) into 15 categories of projects ranging from increased highway and rail capacity to changes in operational and institutional practices. The 15 categories of projects were then qualitatively evaluated using 26 evaluation criteria. For more detailed information on this analysis, please refer to Technical Memorandum 6A. In addition, 12 bundles of potential freight improvements including nine dedicated truck lane bundles (bundles 2 through 9) and one dedicated freight guideway were modeled using the SCAG Travel Demand Forecasting model. The model was used to quantify truck volumes using the region's highway network and estimate the number of daily hours of delay reduced for both autos and trucks. Furthermore, for each bundle the potential cost (which was kept at a constant per mile basis), the number of warehouse acres in proximity to each corridor, the number of schools within 1/3 mile of each bundle, and the number of residential acres within 1/2 mile of each bundle was calculated. Results from this analysis are summarized in Table 4.

When interpreting the analysis in Table 4, please note the following:

- Due to the limitations of the analytical tools available, all bundles were modeled using a container forecast volume of 42.5 million TEUs by 2030.
- All analyses were completed from a regional perspective. Analyses were completed with the understanding that further future detailed corridor-specific analyses would be required prior to project implementation. Future detailed analysis should quantify factors not included as part of this effort, such as design, right-of-way considerations including number of displaced properties, impact on commercial properties adjacent to corridors, etc.
- The macro-level analysis of dedicated truck lane systems, advanced technology and other bundles rendered preliminary information that also warrants further investigation and outreach to affected communities to be conclusive.

Further information about the scenarios, project bundles and other model criteria and findings can be found in Chapter 6 of the Action Plan and the technical appendices.



Table 4: MCGMAP Bundle Analysis Results

Bundle	*Description*	*Distance (mi)*	*Reduction of Daily Hours of Delay (vs. 2030 Baseline)*		*Schools**	*Residential* (Acres)*	*Warehouse* (Acres)*
			Autos	*Trucks*			
1	Operational and safety improvements	N/A	-42,000	-1,000	N/A	N/A	N/A
2	I-710 to SR-60 to I-15	101.5	203,000	78,000	35	9,933	6,290
3	I-710 to I-10 to I-15	98.7	289,000	83,000	60	11,329	3,135
4	I-710 to SR-91 to I-15	87.5	192,000	87,000	48	8,684	4,716
5	I-710 to I-10 (WB) / SR-60 (EB) to I-15	100.1	252,000	81,000	77	16,702	6,767
6	I-710 to SR-91 to SR-57 to SR-60 to I-15	110	207,000	76,000	41	10,533	5,057
7	I-710 to SR-91 to I-605 to I-10 to I-15	96.1	273,000	83,000	57	11,177	2,691
8	I-5 (I-710 to Kern County)	74.6	347,000	89,000	31	4,979	579
9	I-5 (U.S./Mexico Border to Kern County)	204.6	112,000	122,000	78	12,806	3,054
10	Mixed-flow toll express-ways: I-710 > SR-60 > I-15	101.5	225,000	32,000	35	9,933	6,290
11	Alternative technologies (e.g. Shuttle Trains, Mag-lev) between POLA/POLB and inland destinations	N/A	98,000	23,000	N/A	N/A	N/A
12	I-15 (U.S./Mexico Border to Victorville)	161.7	185,000	76,000	23	5,500	3,151

Note: *Data does not include San Diego County information.



Project Descriptions and Lists

Project Identification Process

In support of the actions and vision, and market segmentation approach, the partner agencies identified a regional and county specific list of projects or strategies, presented in **Tables 5 and 6**. Many of these projects can be implemented in the short-term while others require additional planning and project development. The projects on these lists are considered essential; neither list should be viewed as taking precedence over the other but rather as complementary efforts to address the effects of goods movement in the region. Given the multi-county nature of this study, the majority of the regional and county Goods Movement Projects/Strategies will require coordination among the multi-county partners and stakeholders.

Table 5, the "Regional Goods Movement Projects/Strategies" represents a short-term to long-term vision for improving the system with primary focus on region-wide projects that provide environmental mitigation or ground access (rail, highway, and intermodal) improvements to and from the international gateways and the multi-county goods movement distribution centers and corridors (existing and proposed) within the Southern California region, (i.e., the San Pedro Bay Ports, the Port of Hueneme, Inland Empire Rail/Intermodal Facilities, the Alameda Corridor and the California/Mexico Ports of Entry). This system is also graphically depicted and further described in Pages 18 and 19.

Table 6, the "County-Specific Goods Movement System Projects/Strategies" includes improvements that are located within a single county and connect with the regional goods movement system of corridors and distribution centers and the statewide goods movement system as identified by Caltrans. Table 6 comprises a list of efforts that: 1) Support the regional projects in Table 5; 2) mitigate environmental and/or community impacts in a shorter horizon; 3) correct short-term system deficiencies; and 4) are recommended in advance or in conjunction with the regional projects based on local needs and project readiness. The County-Specific list, in essence, fills critical gaps in the goods movement network.

As can be seen in the two project lists, an investment of over $50 Billion over the next 25 years is necessary to accommodate the projected growth of freight within the region and to mitigate related impacts. This will require funding commitments from all levels of government as well as the private sector. In addition to this list, a series of actions focused on reducing congestion and environmental impacts are identified in the Action Plan. Each of the County chapters also contains additional projects, strategies and vision for localized improvements identified for future implementation.





Table 5: MCGMAP Preliminary Regional Goods Movement Projects/Strategies

(REGIONAL AND COUNTY-SPECIFIC LISTS ARE BOTH CONSIDERED TO BE OF EQUAL PRIORITY IN MCGMAP. MODES AND PROJECTS ARE NOT LISTED IN PRIORITY ORDER. ALL PROJECTS WILL REQUIRE FURTHER STUDY PRIOR TO IMPLEMENTATION UNLESS ALREADY COMPLETED.)

Environmental mitigation or Mode/System	*Description*	*2007 Cost*[1] *(in millions)*	*Committed Funds (in millions)*	*Time-frame*[2]
Regional and project specific mitigation and emissions reduction	• Implementation of Goods Movement Infrastructure Projects Could Require Mitigation of Project Specific Impacts	TBD	TBD	S, M, L
	• San Pedro Bay Ports Clean Air Action Plan	$2,067	$464	S
	• Other Goods Movement Emission Reduction Plans and Identified Needs	TBD	TBD	S, M
RAIL				
Grade Separations	• Alameda Corridor East (ACE) Grade Separations and Grade Crossings Improvements	$4,510	$961	S, M
	ACE County subtotals:			
	▪ *Los Angeles County – San Gabriel Valley*	*$1,891*	*$343*	*S, M*
	▪ *Orange County*	*$731*	*$115*	*S, M*
	▪ *Riverside County*	*$1,048*	*$257*	*S, M*
	▪ *San Bernardino County*	*$840*	*$168*	*S, M*
	• Gateway Cities BNSF Mainline Grade Separations (on ACE list)	$196	$78	S, M
Mainline capacity enhancements	• Rail Capacity Improvements (e.g., double and triple tracking; Colton Crossing)[3]	$2,200	$0	S, M
Regional Freight Links	• Reconnect Santa Paula Branch Rail Line	$450	$0	M
INTERMODAL GROUND ACCESS				
On Dock Rail	• San Pedro Bay Ports Rail Systems	$631	TBD	S, M
Intermodal Yards/Facilities	• Ports of Los Angeles/Long Beach Union Pacific Intermodal Container Transfer Facility Modernization[4]	$300	$0	S
	• BNSF Port of Los Angeles/Long Beach Near Dock Facility (Southern California International Gateway – SCIG) [4]	$300	$0	S
Inland port	• Further investigation of Inland Port Strategy	TBD	$0	M
ALTERNATIVE TECHNOLOGY				
Truck Lanes/Dedicated Freight Guideway System	• Dedicated Freight Guideway System/Regional Truck Lanes (I-710 From Port of Long Beach to SR-60; East-West Corridor between the I-710 and I-15; and I-15 to Victorville) inclusive of non-freeway corridors	$18,268	$35	M, L
FREEWAY/HIGHWAY				
Freight Corridor Capacity Enhancement and Operational Improvements	• High Desert Corridor[5] (SR-14 to I-15)	$5,600	$0	M, L
	• Alameda Corridor SR-47 Expressway	$662	$265	S
	• SR-60/I-10 Truck Climbing Lane	$55.3	$0	S
	• Replace/Reconstruct Gerald Desmond Bridge	$800	$337	S
	• I-710 Early Action Projects - City of Long Beach (3 Projects)	$500	$12	S
	• I-5 Truck Lanes Projects – North Los Angeles County (2 Projects)	$392	$12	S, M
	• SR-86 NAFTA Corridor Interchange Construction	$150	$0	M
	• SR-58 Corridor Widening Projects (2 Projects)	$301	$0	M, M
Border Crossing Improvements	• Access Improvements to the California/Mexico Ports of Entry at Otay Mesa, Otay Mesa East, and Calexico East Projects (3 Projects)	$1,699	$524	S
	Total	***$39,081.3***	***$2,610***	

Notes: 1. All figures include environmental mitigation costs.
2. S=Short-term (2007-2015); M=Mid-term (2015-2025); L=Long-term (post 2025).
3. Project must demonstrate regional public benefit to qualify for public funds.
4. Private sector fund sources.
5. Require further analysis west of US-395, private sector primary fund source, with possible exception of short-term project to construct section between Phantom East and I-15 ($350 million)



Project Descriptions and Lists

Table 6: MCGMAP Preliminary County Goods Movement System Improvements

(REGIONAL AND COUNTY-SPECIFIC LISTS ARE BOTH CONSIDERED TO BE OF EQUAL PRIORITY IN MCGMAP. MODES AND PROJECTS ARE NOT LISTED IN PRIORITY ORDER. ALL PROJECTS WILL REQUIRE FURTHER STUDY PRIOR TO IMPLEMENTATION UNLESS ALREADY COMPLETED.)

Mode/System	*County*	*Description*	*2007 Cost[1] (in millions)*	*Time-frame[2]*
RAIL				
Grade Separations	VEN	• Construct Rice Avenue/UP Grade Separation	$45	TBD
	VEN	• Construct Rose Avenue/UP Grade Separation	$45	TBD
	VEN	• SR-118/Coast Line – Construct Grade Separation	TBD	TBD
	LA	• Nogales Street (LA Subdivision) grade separation project	$29	S
	OR	• LOSSAN Corridor Grade Separations	$655	L
Mainline Capacity Enhancement	LA	• Relief siding (2 projects) and upgrade sidings (1 project) on the Antelope Valley Line	$15	S
	SD	• Construct Coastal Rail Corridor	$1,350	S,M
	SD	• Construct South Line Rail/Trolley	$328	S,M
INTERMODAL GROUND ACCESS				
Intermodal Yards/ Facilities	SBD	• Build New BNSF Intermodal Yard in Victorville	TBD	TBD
Maritime	LA	• Shuttle Train Intermodal Service to Inland Empire; Inland Terminal	$60	TBD
	SD	• San Diego Port District Marine Terminal Ground Access	$822	S, M
ALTERNATIVE TECHNOLOGY				
ITS Applications	LA	• San Pedro ATSAC System in City of Los Angeles	$6	TBD
	LA	• Wilmington ATSAC System in City of Los Angeles	$7	TBD
	LA	• Transportation Management, Information and Security System	$10	TBD
FREEWAY/HIGHWAY				
Freight Corridor Capacity Enhancement and Operational Improvements	VEN	• Reconstruct US 101/Rice Avenue IC	$75	M
	LA	• Key Goods Movement Arterial Improvements	TBD	TBD
	LA	• Reconstruct SR-91/I-605 interchange	$240	S
	LA	• Reconstruct I-605/SR-60 interchange	$1,000	S
	LA	• Reconstruct I-605/I-10 interchange	$1,000	S
	LA	• Reconstruct SR-60/SR-57 interchange	$550	S
	LA	• I-110 8th/9th Street Interchange – Add Auxiliary Lanes and Modify/Reconstruct Ramps (Two Projects)	$39	TBD
	LA	• Washington Blvd. Widening and Reconstruction project	$14	S
	LA	• Alameda Street Widening and Reconstruction in Los Angeles (101 Freeway to 7th Street; I-10 to 7th Street)	$29	TBD
	LA	• Seaside Avenue/Ocean Blvd (SR-47) and Navy Way Interchange	$43	TBD
	LA	• I-110 Connector Improvement Program (4 Projects)	$134	TBD
	OR	• I-5 From the I-5/SR-22/SR-57 Interchange to SR-91 add a general purpose lane in each direction	$430	M
	OR	• I-5 Reconstruct El Toro Road Interchange	$120	S
	OR	• I-5 between SR-55 and the SR-133 (near El Toro "Y") add one general purpose lane in each direction and improve interchanges in the vicinity	$319.2	M
	OR	• I-5 between the vicinity of El Toro "Y" to near SR-73 add new lanes in each direction	$315	M

Notes: 1. All figures include environmental mitigation costs.
2. S=Short-term (2007-2015); M=Mid-term (2015-2025); L=Long-term (post 2025).



Table 6: MCGMAP Preliminary County Goods Movement System Improvements (Continued)

(REGIONAL AND COUNTY-SPECIFIC LISTS ARE BOTH CONSIDERED TO BE OF EQUAL PRIORITY IN MCGMAP. MODES AND PROJECTS ARE NOT LISTED IN PRIORITY ORDER. ALL PROJECTS WILL REQUIRE FURTHER STUDY PRIOR TO IMPLEMENTATION UNLESS ALREADY COMPLETED.)

Mode/System	County	Description	2007 Cost[1] (in millions)	Time-frame[2]
FREEWAY/HIGHWAY (Continued)				
Freight Corridor Capacity Enhancement and Operational Improvements (cont.)	OR	• I-5 Northbound Extend Existing Truck Bypass Lane From Crown Valley to El Toro Road. Add Auxiliary lane where needed.	$240	L
	OR	• I-5 Southbound From Alicia Parkway to the Crown Valley Interchange add a Lane	$411	M
	OR	• I-5 Construct new interchange at Crown Valley (Saddleback) and reconstruct interchange at Avery Parkway with collector distributor road between Crown Valley and Avery	$260	L
	OR	• SR-57 Northbound From Lambert Road to Tonner Canyon (LA County Line) interchange add truck climbing lane	$157	M
	OR	• SR-57 Northbound From Orangethorpe to Lambert Road, Add Auxiliary Lane & 5th through lane	$140	S
	OR	• SR-57 in the Northbound Direction Extend General Purpose Lane #5 Between Orangewood and SR-91 and Add Auxiliary Lane	$190.8	S
	OR	• SR-91 Westbound From SR-57 to I-5 – Add General Purpose Lane & Auxiliary Lane	$152	S
	OR	• SR-91 Westbound – Provide a General Purpose Lane from SR-55 to SR-57 and add auxiliary lane	$120	M
	OR	• SR-91 Eastbound Add a Lane Between SR-55 (Lakeview and SR-241 and Westbound From SR-241 to Imperial Highway).	$96	S
	OR	• I-405 from the I-5 to SR-55 add 1 general purpose lane in each direction	$328.9	L
	RIV	• SR-60 Construct Truck Climbing Lane through Badlands to I-10	$114	L
	RIV	• March Inland Cargo Port Airport I-215/Van Buren Blvd. Ground Access Improvement Project	$97.6	S
	RIV	• I-10/SR-60 New Interchange Construction	$100	L
	RIV	• I-215 Widening to SBD County Line	$1,400	S,M
	SBD	• I-15 Widening and Devore Interchange (at I-215) Reconstruction	$200	S
	SBD	• Interstate 10 Widening and Interchange Improvements (LA Co. Line to I-215)	$700	S
	SD	• I-5 Widen/Managed Lanes (From La Jolla Village Dr. to Vandergrift)	$962	S
	SD	• I-15 Widen/Managed Lanes & Operational Improvements (From SR-163 to SR-78)	$608	S
	SD	• I-805 Widen/Managed Lanes (From SR-905 to I-5)	$1,801	S
	SD	• San Diego International Airport Truck Access to I-5 (Truck route/ Interchange improvements)	$32	M
	SD	• Pipeline Truck Access (Petroleum Terminal) to I-15 (Truck route/ Interchange improvements)	$32	M
		Total	***$15,822.5***	

Notes: 1. All figures include environmental mitigation costs.
2. S=Short-term (2007-2015); M=Mid-term (2015-2025); L=Long-term (post 2025).



Next Steps

The MCGMAP is not an end point. Rather, it is the beginning of a more comprehensive regional approach to keep freight moving within and through the region and to reduce the environmental and community impacts caused by the movement of that freight. Going forward, stakeholders will play an integral role in the next steps in the areas of partnership and advocacy, environmental and community impacts, mobility and funding. Based on feedback from stakeholders and Action Plan recommendations, the MCGMAP project partners are committed to taking the following next steps:

Partnership and Advocacy

- Implement the Southern California National Freight Gateway (SCNFG) Cooperation Agreement among federal, state, regional, and other implementing agencies to maintain dialogue to address the challenges outlined in MCGMAP.
- Request the incorporation of MCGMAP strategies and actions into other state, regional and local plans.
- Continue to convene multi-county meetings to monitor the progress on the Action Plan and provide annual reports to the CEOs and to the boards of the partner agencies.
- Support and propose legislation that: 1) Provides funding mechanisms for goods movement projects/strategies; and 2) improves mobility and facilitates regional multi-county goods movement goals without undermining local community priorities and quality of life.
- Support groups such as Mobility 21 and the Coalition for America's Gateways and Trade Corridors in developing dedicated federal and state goods movement funding sources.
- Continue to work closely with all stakeholders including the Councils of Governments, community groups, environmental regulatory agencies and academia.
- Seek goods movement and logistics industry involvement throughout planning and project development phases.

Environmental and Community Impacts

- Through the SCNFG Cooperation Agreement and other related activities, develop a specific set of feasible actions to accelerate implementation of the strategies contained in the various air quality and emission reduction plans that are within the scope of responsibility of the project partners.
- In partnership with CARB, air districts, the logistics industry, and local governments, initiate an activity to generate public and/or private funds to accelerate implementation of air quality improvement strategies being undertaken by these and other entities. Examples may include: Container fees that provide a revenue stream to fund emissions reduction projects, impact fees paid by entities contributing to the goods-related air quality problem, supplemental transportation infrastructure project mitigation (to add to an air quality funding pool), mitigation banking, market-based strategies, and other vehicle-based fees commensurate with the impacts attributed to those vehicles.
- Continue and Complete the Environmental Justice Analysis and Outreach for the MCGMAP in Fall 2007. This effort will develop a guidebook for local jurisdictions and the private sector to use in avoiding, minimizing, and mitigating the effects of goods movement infrastructure and to assist local jurisdictions make informed land use decisions.

Mobility

- Initiate a study to investigate the linkage between industry supply chain trends and port and trade related transportation patterns and movements.
- Continue project development efforts, including planning, design, funding, and implementation, of the regional and county-specific projects listed in the Action Plan, including the mitigation of the impacts of those projects.
- Initiate a Regionally Significant Transportation Investment Study (RSTIS) to evaluate the feasibility of implementing a Dedicated Freight Guideway System/Regional Truck Lanes (I-710 From Port of Long Beach to SR-60; East-West Corridor between I-710 and I-15; and I-15 to Victorville) inclusive of potential non-freeway implementation.
- Initiate localized studies, as appropriate.

Funding

- Pursue new avenues of goods movement funding for projects, including the region's fair share of state appropriations, federal funds, and private sector contributions consistent with the impacts of the benefits they derive from the use of the transportation system.
- Continue fair share and user fee discussions with private sector stakeholders to seek their support in addressing goods movement impacts and filling funding gaps. Develop a clear and concise message on this subject and communicate this to the public, policy and funding decision makers at all levels of government.
- Establish structures to manage user fees and revenue that are acceptable to both public and private sector stakeholders.

