



Greenhouse Gases & Transportation Planning – New Opportunities for  
State and Local Government

# **LESSONS LEARNED FROM CALIFORNIA'S SUSTAINABLE COMMUNITIES ACT**



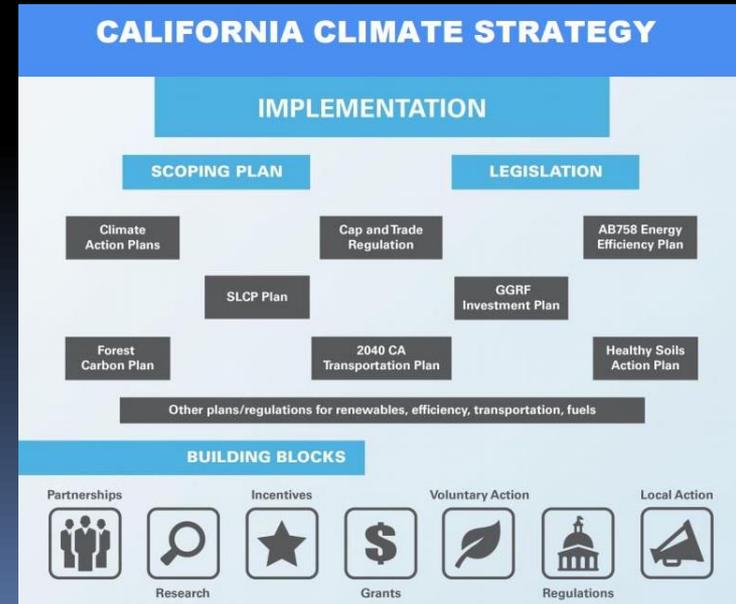
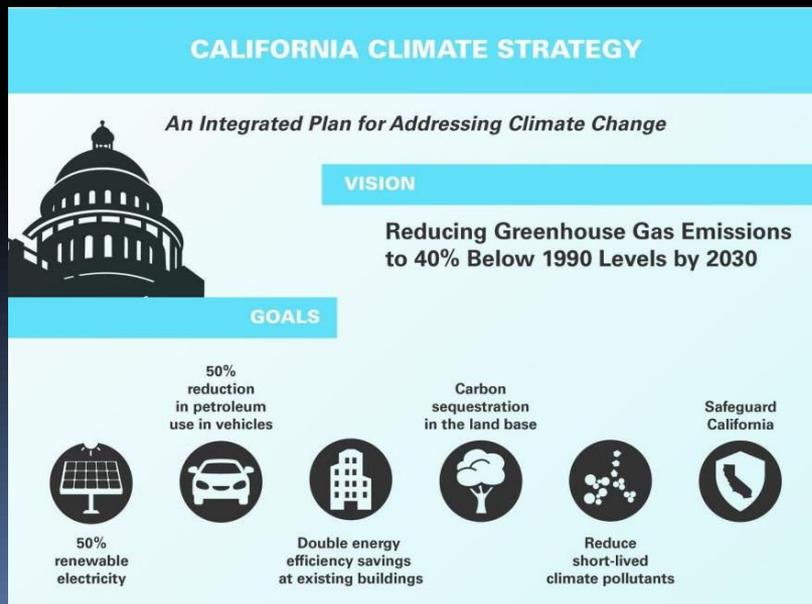
MSTRS Meeting – June 16, 2016

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# Ingredients for Success: Leadership and Vision

- The Global Warming Solutions Act (Assembly Bill 32, 2006)
- Sustainable Communities and Climate Protection Act (Senate Bill 375, 2008)



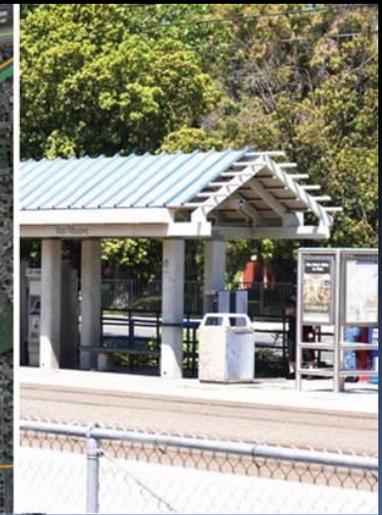
# Benefits of Sustainable Communities and Climate Protection Act (SB 375)

- Public health/air quality
- Natural resource conservation
- Economic opportunity
- Accessibility
- Mobility and housing choices



# Ingredients for Success: Collaboration and Public Process

- Increased coordination within MPO regions and inter-regionally
- Increased public dialogue
- Shared knowledge of modeling and data



# Ingredients for Success: Research

<http://arb.ca.gov/cc/sb375/policies/policies.htm>

## Land Use and Transportation Planning Research

*This page last reviewed January 25, 2016*



In 2008, California passed Senate Bill 375 requiring metropolitan planning organizations (MPO) to develop Sustainable Communities Strategies to illustrate how integrated land use, transportation, and housing planning will achieve regional greenhouse gas emission reduction targets. ARB's research program seeks to better understand strategies on travel behavior, greenhouse

**Analyzing the Economic Benefits and Costs of Smart Growth Strategies** This project is conducting retrospective case studies to explore successful implementation of economically beneficial smart growth obstacles to such implementation.

**Effects of Complete Streets on Travel Behavior** This project is conducting several analyses comparing near-roadway exposure between complete streets and non-complete streets in Southern California.

**Modeling Household Vehicle and Transportation Choice and Usage** This project will identify the demographic characteristics of low transportation emission households. It will also model the consumption when to buy a vehicle, what type to buy, and how much to drive the vehicle.

**Displacement and Regional Transportation Planning** This project will examine the relationship between development and displacement and the impacts of displacement on travel behavior in California. Par MTC/ABAG, this project will advance modeling efforts to better assess the potential for displacement Transportation Plan/Sustainable Communities Strategy, and will assess potential solutions aimed at reducing impacts.

**Effectiveness of Sound Wall-Vegetation Combination Barriers as Near-Roadway Pollutant Mitigation Strategies** This project will evaluate the effectiveness of sound and vegetative barriers in dispersing and removing traffic-related pollutants in several basins in California.

Check out ARB's list of all active and completed research projects related to land use and transportation.

### Related Resources

**Climate and Energy Impacts of Automated Vehicles:** A white paper that assesses the current and future impacts of automated vehicle technology and explores its potential impact on some of California's climate projections.

**Policy Review Papers:** A series of literature reviews evaluating the impact of key land use and transportation policies on greenhouse gas emission reduction for automobiles and light trucks.

**Health Impacts of Traffic:** An overview of ARB research on the health impacts of traffic on major roads.

**Reducing Traffic Pollution Exposure:** A review of the status of research on potential mitigations to reduce traffic pollution.

**ARB Air Quality and Land Use Handbook:** A general reference guide for evaluating potential air quality impacts on land use planning decisions.

For more information on Land Use and Transportation Planning Research, please contact Maggie...

Policy	Research Results
Traffic Operations Strategies	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Roundabouts	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Fleet Turnover Strategies	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Gas Price	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Highway Capacity and Induced Travel	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Car Sharing	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Eco-Driving	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Parking Pricing	Policy Brief <b>UPDATED!</b> Technical Background Document
Road User Pricing	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Employer-Based Trip Reduction	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Pedestrian Strategies	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Bicycle Strategies	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Transit Service	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Telecommuting	Policy Brief Technical Background Document
Voluntary Travel Behavior Change Programs	Policy Brief Technical Background Document
Traffic Incident Clearance Programs	Policy Brief Technical Background Document

Employment Density	Policy Brief <b>NEW!</b> Technical Background Document <b>NEW!</b>
Residential Density	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Distance to Transit (Transit Access)	Policy Brief Technical Background Document
Land-Use Mix	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Network Connectivity	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>
Regional Accessibility	Policy Brief Technical Background Document
Jobs-Housing Balance	Policy Brief <b>UPDATED!</b> Technical Background Document <b>UPDATED!</b>

### Complete Research Projects

**Evaluating the Travel Impacts and Co-benefits of Light Rail Transit** This project is evaluating the travel impacts and co-benefits of the light rail transit (LRT) line, which began service in south Los Angeles in 2012, on those who moved to the area after service began.

**The Role of Land Use Planning in Reducing Residential Energy Consumption** This project is developing a preliminary spreadsheet-based modeling tool that local governments can use to estimate the GHG emissions due to residential building new growth in different land use types.

**Quantifying the Effect of Local Government Actions on Vehicle Mileage** This project is developing a spreadsheet tool that estimates how VMT elasticities and marginal effects household types, and local contexts.

### Active Research Projects

**Identifying, Evaluating and Selecting Indicators, Indices and Data for Sustainable Communities Strategies** This project will identify, evaluate and select indicators, indices and data for use in a future monitoring system for sustainable communities strategies. This system will help the state evaluate progress toward achieving greenhouse gas emission reduction targets.

**Identifying Urban Designs and Traffic Management Strategies for Sustainable Communities** This project will evaluate features that may play a major role in reducing greenhouse gas emissions that can be modified through local planning and transportation decisions.

# Early Successes

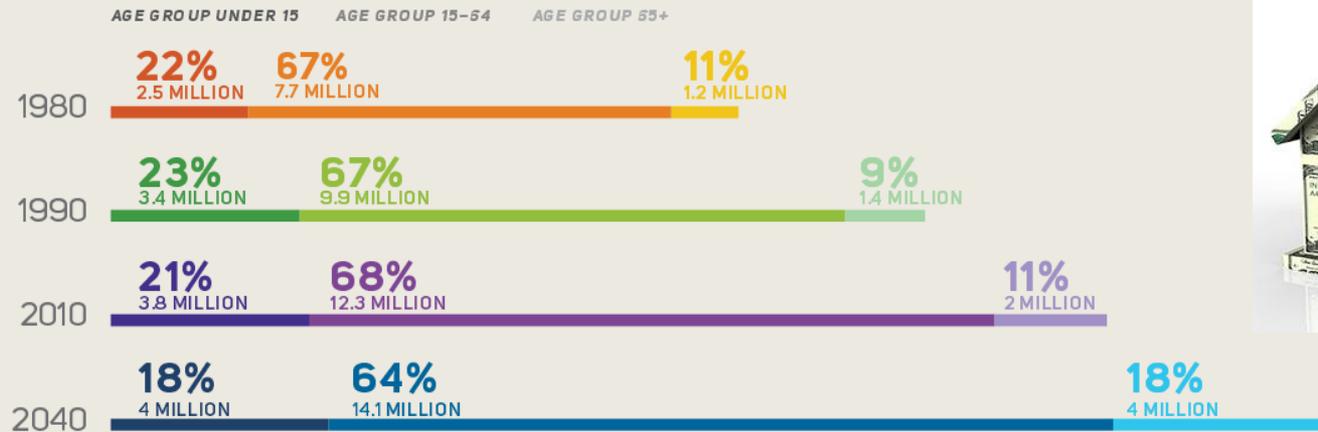
- Complete streets
- Multi-family housing
- More transit funding



# Challenges:



## More Baby Boomers Will Age & Retire



Source: US Census Bureau, SCAG

# Opportunities:

Almost 40 percent of trips are less than three miles and the majority of these trips (78 percent) are made by driving.

*\*data from SCAG's 2016 RTP/SCS*

## SEPTA and Uber Announce Transit Partnership

Pilot Program Aims to Increase Transportation Access Throughout the Region

BUSINESS | AUTOS & TRANSPORTATION | AUTOS

## GM, Lyft to Test Self-Driving Electric Taxis

REPORT

Jun 9th 2016 at 6:13PM

## Fiat seeking autonomous partnerships with Uber and Amazon



**SANDAG**

The Regional  
Comprehensive Plan

**2012-2013 Biennial  
Performance Monitoring Report**



**MEASURING WHAT WE VALUE**

SETTING PRIORITIES AND  
EVALUATING SUCCESS IN TRANSPORTATION

FEBRUARY 2015

**Transportation  
for America**

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**THANK YOU**

California Environmental Protection Agency  
 **Air Resources Board**

