THE CENTER FOR RESOURCE EFFICIENT COMMUNITIES

Leveraging a New Law

Reducing greenhouse gas emissions under Senate Bill 375

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CREC

UNIVERSITY OF CALIFORNIA BERKELEY - COLLEGE OF ENVIRONMENTAL DESIGN

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List of acronyms

3 Ds	density, diversity of uses, and pedestrian design (sometimes includes a fourth D, access to destinations)
AB 32	Assembly Bill 32
ABAG	Association of Bay Area Governments
AMBAG	Association of Monterey Bay Governments
APS	alternative planning strategy
ARB	California Air Resources Board
BCAG	Butte County Association of Governments
Caltrans	California Department of Transportation
CDE	California Department of Education
CEQA	California Environmental Quality Act
CMA	congestion management agency
CMAQ	Congestion Mitigation and Air Quality
CAG	county association of governments
COG	council of governments
CTA	county transportation authority
CTC	California Transportation Commission or county transportation commission
EIR	environmental impact report
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
HCD	Dept. of Housing and Community Development
HOT	high-occupancy toll
HOV	high-occupancy vehicle
ITE	Institute of Transportation Engineers
ITS	intelligent transportation systems
LA Metro	Los Angeles County Metropolitan Transportation Authority
LOS	level of service
MCAG	Merced County Association of Governments
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
RHNA	regional housing needs allocation
RPA	regional planning agency
RSTP	Regional Surface Transportation Program
RTAC	Regional Targets Advisory Committee
RTIP	Regional Transportation Improvement Plan
RTP	regional transportation plan
SACOG	Sacramento Council of Governments
SANDAG	San Diego Association of Governments
SB 375	Senate Bill 375
SBCAG	Santa Barbara County Assn. of Governments
SCAG	Southern California Assn. of Governments
SCRTPA	Shasta County Regional Transportation Planning Agency
SCS	sustainable communities strategy
SGC	Strategic Growth Council
SJCOG	San Joaquin Council of Governments
SLOCOG	San Luis Obispo Council of Governments
StanCOG	Stanislaus Council of Governments
TDM	transportation demand management
TE	Transportation Enhancement
TIP	transportation improvement plan
TMPO	Tahoe Metropolitan Planning Organization (TMPO)
TOD	transit-oriented development
VMT	Vehicle miles traveled

Leveraging a New Law

Reducing Greenhouse Gas Emissions under Senate Bill 375

Executive Summary

California Senate Bill 375 of 2008 aims to reduce greenhouse gas (GHG) emissions from the transportation sector by reducing the amount that Californians drive. Transportation accounts for the largest share (37 percent) of California's total emissions. Research suggests that if vehicle travel continues to increase, policies to increase the efficiency of vehicles and reduce the carbon content of fuel will be insufficient to meet the state's long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. The goal of SB 375 is to cut down on driving by curbing the sprawling, auto-dependent development patterns that characterize California's urban areas and instead focusing development in areas where residents can travel by foot, bicycle, or transit.

In all 18 of California's metropolitan areas with populations over 200,000, metropolitan planning organizations (MPOs) are responsible for preparing a regional transportation plan (RTP) describing how transportation revenues across the region will be spent over the next 25 years. SB 375 requires that MPOs include a regional land use strategy in their RTP, known as the sustainable communities strategy (SCS), which, in combination with the transportation projects and policies in the RTP, meets regional GHG reduction targets. SB 375 does not change the fact that local governments have exclusive authority over land use changes. Instead, the bill aligns other planning process with the SCS and creates a set of incentives that MPOs and local governments can offer in order to implement the strategy:

1. SB 375 requires MPOs to spend the federal and state transportation funds that they allocate in support of the SCS.
2. The bill amends the California Environmental Quality Act (CEQA) to limit the environmental review for some projects that conform to the SCS.
3. Finally, SB 375 aligns the Regional Housing Needs Allocation (RHNA) process with the SCS, and creates penalties for local governments that do not zone to meet the RHNA.

Creating an RTP is a lengthy process. An MPO begins by creating a future land use scenario for the RTP horizon year. In the past, this was often simply a projection of current growth trends, but SB 375 requires that MPOs instead create SCSs that examine the potential for land use policies to channel growth toward areas where residents drive less. The MPO, local governments, and transit agencies submit potential transportation projects, and the MPO then estimated the total amount of transportation revenue that will be available over the life of the RTP and selects a financially constrained group of projects to include in the plan. The MPO uses a computerized travel model to analyze how this group of projects will perform under the future land use scenario with respect to federal air quality requirements, performance measures such as travel times on congested routes or jobs accessibility for low-income neighborhoods, and now, under SB 375, greenhouse gas reduction targets. Once the MPO has completed its RTP, only projects contained in these plans are eligible for inclusion in the transportation improvement program (TIP) that programs transportation spending over a four-year period.

Under SB 375, planning and implementation are closely related. If an MPO determines that it cannot meet GHG reduction targets given land use trends and available revenues, the bill instead allows an MPO to adopt an alternative planning strategy (APS), which is not part of the RTP, and which outlines additional measures that the region could take to meet its GHG reduction targets. Since an APS is not part of the RTP, it does not affect transportation funding, which is the most important implementation measure offered by SB 375. In order for SB 375 to reduce GHG emissions effectively, MPOs will have to adopt SCSs instead of APSs so that transportation funding is aligned with regional land use decisions, and then create additional incentives for local governments to implement these strategies. Four factors will affect whether MPOs are able to accomplish these tasks. The first three concern the constraints placed on SCSs by the RTP process, and the fourth concerns how MPOs implement their SCSs:

1. whether MPOs are able to identify sufficient *land use opportunities* in their SCSs to accommodate growth in regional and town centers given likely population changes and current local plans;
2. whether MPOs control sufficient *transportation funding* to provide alternatives to driving in areas that SCSs target for growth;
3. whether MPOs' *travel models* are capable of analyzing the GHG reductions and other benefits of SCSs to demonstrate to ARB that these plans meet SB 375 targets and to build support among stakeholders; and
4. whether the CEQA and RHNA changes described above, as well as the grants that some MPOs have been offering local governments to support plans and projects that implement regional land use plans, provide effective *implementation measures*.

This report examines each of these four factors in turn. We conducted a series of substantive interviews between June 2009 and March 2011, during which time local, regional and state agencies were in the early stages of preparing to implement SB 375. The 55 interview subjects included developers, elected officials, consultants, attorneys, analysts, and planners from state, regional, and local government agencies across California. We supplemented these interviews with a financial analysis of current RTPs and with a review of government reports and academic research on specific aspects of the regional transportation planning process. Our findings and recommendations are summarized below.

Findings

The general consensus that emerged during our interviews was that SB 375 is an important first step in revising a planning framework that poses many challenges to creating sustainable communities. These challenges include:

- local plans and codes that are out of date and do not support dense, mixed-use development or pedestrian-, bicycle-, and transit-friendly streets;
- transit systems that are currently struggling to maintain existing levels of service;
- inadequate transportation, sewer, and water infrastructure in many of the areas that an SCS is likely to prioritize for growth; and
- school siting policies that are not aligned with the goals of SB 375.

All of these issues point to a far-reaching need to align several different spending and decision-making processes, many of which are out of MPOs' control, with the priorities of SB 375. In order to successfully create sustainable communities, MPOs will need to look beyond SB 375 and move beyond business-as-usual planning, leveraging the opportunities within the bill to provide better incentives for smart growth and engaging a wide variety of stakeholders in a serious conversation about regional planning issues. The state will need to follow these conversations as they unfold and take additional steps to strengthen the bill. It is in this spirit that we offer the following findings and recommendations.

Land use opportunities

Federal regulations require that MPOs consider local general plans when creating the future land use scenarios that they use in their RTPs, and MPOs have traditionally responded to this requirement by simply assuming full build-out of local plans in their land use scenario. However, these plans are focused on meeting local goals, not regional ones, so this is unlikely to be an effective approach to crafting a cohesive regional land use strategy to reduce GHG emissions. While MPOs cannot directly contradict local plans, they need not take these plans at face value when creating their SCS. Local plans often can cumulatively accommodate more growth than is projected for a metropolitan area, giving an MPO the freedom to assume where that growth will go within the region. RTPs typically extend ten to 15 years further into the future than general plans, and even further if general plans are out of date, which many are. This allows MPOs to make assumptions about the type of growth that will occur beyond the horizon of local plans. Finally, general plans often are based on local economic aspirations rather than on data, and MPOs can create a regional plan that deviates from local assumptions provided that MPOs' assumptions are based on sound data and analysis.

Transportation funding

Though MPOs are responsible for preparing RTPs, these plans must account for all regional transportation revenues, including those from sources that MPOs have no control over, such as local transportation sales taxes, transit agency revenues, and federal spending on discretionary projects. The clause in SB 375 that requires transportation funding to be consistent with the land use strategy in the SCS only applies to the discretionary funding that MPOs allocate. Yet most RTPs make it difficult to discern what share of transportation dollars is controlled by the MPO, and how the MPO plans to spend these dollars. We conducted an in-depth review of recent RTPs from the 18 MPOs that are subject to SB 375 in order to discern how large a shift in transportation spending the bill stands to effect. MPOs' funding comes largely from federal and state sources that are often only eligible for certain types of projects, and through this analysis we also examined how these constraints may shape the way in which MPOs spend their dollars.

MPOs control roughly 10 percent of overall transportation funding and 15 percent of capital transportation dollars statewide, which is unlikely to be sufficient to fund a large-scale shift in growth patterns. In general, the multi-county MPOs in California's largest metro areas control a smaller share of regional funding, while single-county MPOs control a larger share; seven single-county MPOs allocate over 50 percent of the transportation dollars in their region. Though the overall share of funding controlled by some MPOs is relatively small, it may have more of an effect than the dollar amount would suggest. Transportation decision-making is fragmented among many public agencies with different priorities, and large projects typically rely on many different sources, including those allocated by MPOs. This means that funding policies set by MPOs have the potential to affect most of the projects that shape regional growth. However, MPOs are constrained in how they spend their transportation dollars for three reasons:

1. Many MPOs suballocate some funding sources to stakeholder agencies without conditions, and consider these funding sources committed, and not eligible to implement an SCS.
2. During the first round of SCSs, much of MPOs' funding may be committed to projects that were approved under previous RTPs.
3. In large metropolitan areas, county transportation commissions (CTCs) or authorities (CTAs) allocate transportation sales taxes, which are the largest single transportation funding source, and are not subject to SB 375. Since the projects in sales tax expenditure plans have a guaranteed

source of long-term funding, they often draw in discretionary funds allocated by MPOs.

One MPO, the San Francisco Bay Area Metropolitan Transportation Commission (MTC), has passed a policy that narrows the definition of "committed" projects and funding sources. This policy creates an opportunity for MTC to eliminate wasteful spending, prioritize projects that support regional goals, and free up more funding for SCS implementation, particularly during the first round of SCSs. Though sales taxes are a substantial source of funding, many tax-funded projects still rely heavily on funding from MPOs, which gives MPOs an opportunity to prioritize funding to the projects that meet regional goals. Some CTCs and CTAs have also created policies that favor projects that support regional plans.

Travel models

The passage of SB 375 prompted a statewide examination of MPOs' travel models. Since MPOs will need to use these models in order to demonstrate that their SCSs will meet GHG reduction targets, the sensitivity of models plays a role in determining which policies an MPO may include in its SCS. However, many of the travel models used by California's MPOs cannot capture the benefits of various transportation and land use strategies that research has shown to reduce GHG emissions. In 2009, the Strategic Growth Council allocated $7.5 million in grants to help MPOs improve their models, but MPOs identified an additional $14.5 million worth of necessary improvements that are either unfunded or did not receive grants from the SGC. Other reports have outlined recommendations for further upgrading models and creating a uniform, accurate framework for evaluating GHG emissions from an SCS. These changes are crucial to the success of SB 375, but instead of duplicating this work, we focus on how to use models to foster consensus during the SCS process and to align local decision-making with the SCS.

Many of the modelers whom we interviewed expressed a belief that, even if an MPO uses a state-of-the-art travel model, the model does not drive policy. Instead, MPOs' boards often direct modelers to use models to demonstrate the benefits of policies already underway. Board members are often made up of local elected officials more interested in serving their constituencies than in meeting regional needs, so these policies may not help MPOs achieve GHG reduction targets. The fact that local governments often base policies on outdated transportation decision-making tools that do not reflect the benefits of smart growth means that local planning sometimes works against the strategies that SB 375 is meant to encourage.

Some MPOs have used sketch planning tools to examine outcomes when creating regional blueprint land use plans, which served as the antecedent to SCSs. These tools are less complex than travel models, but are easier to use and capable of analyzing a wider variety of performance measures. Staff felt that sketch planning tools were effective in fostering consensus in favor of plans that reduced GHG emissions and led to many other positive outcomes.

Implementation measures

Overall, the environmental review specialists we spoke to voiced mixed opinions of the CEQA and RHNA amendments in SB 375 that are intended to support SCS implementation. These changes are important steps in better aligning project-level environmental review and housing allocation with the regional land use and transportation plans required by SB 375, but they may not make it substantially easier to build new housing that conforms to an SCS.

The criteria that SB 375 outlines for a CEQA-exempt transit priority project are so narrow that few projects are likely to qualify for these exemptions, especially in the short term, when the real estate market remains slow and when the new CEQA terms created by SB

375 will need to be defined through litigation. Meanwhile, the provision in SB 375 that exempts projects that conform to an SCS or APS from analyzing cumulative traffic, GHG emissions, and growth-inducing impacts may reduce the costs of environmental review and lessen exposure to neighborhood opposition for these projects, but it is not likely to change the outcome of the CEQA process. Nonetheless, by linking CEQA with the SCS process, SB 375 has the potential to encourage more consideration of regional goals and impacts in project-level analysis.

Aligning housing allocations with the RTP and SCS is a logical way to link transportation and land use planning. However, the two processes still use different data and methods, have different time horizons, and are overseen by different state agencies that are not required to coordinate with each other when setting targets. Studies have also shown that RHNA compliance does not actually result in housing construction, particularly for affordable housing or housing in central cities. Some planners cautioned that the RHNA process generates a fair amount of political controversy, and that in some cases arguments over RHNA allocations have led local governments to be suspicious of regional planning efforts in general. Based on these concerns, it seems likely that the procedural and political issues behind aligning RHNA with the SCS will need to be resolved for these changes to have a positive impact on coordinating land use and transportation decisions.

Four MPOs have created programs that offer grants for planning efforts or capital projects that support regional land use plans. Regional and local planners feel that these programs have been successful, and could be effective SCS implementation measures. Local plans and zoning codes are often out of date, and since local governments have authority over land use changes, aligning these documents with an SCS is the most effective way to implement the strategy. Planning grants can facilitate updates to local plans in priority growth areas, as well as create additional CEQA streamlining opportunities for developers if local governments conduct an environmental review that covers projects that are consistent with an updated plan. Capital grants can help provide "on the ground" examples of what an SCS looks like and draw in investments in non-transportation infrastructure, such as sewer and water lines, which are necessary to support more intensive development in many priority growth areas. MPOs may even be able to fund these investments directly by swapping funding with utility districts. Staff from MPOs that offer grant programs mentioned that it was important to create an in-depth application process with clear performance measures, consequences for not meeting deadlines, and ample opportunities for MPO staff to work with applicants in order to ensure that projects get built as planned.

Recommendations

Based on the above findings, we offer the following recommendations to MPOs and to the state agencies and lawmakers whose decisions shape growth:

Recommendations to the state

- The state should increase the amount of funding available for SB 375-supportive projects and transportation modes.
- The state ought to condition funding sources for housing, transportation, and infrastructure toward meeting SB 375 goals.
- The state agencies that provide or regulate infrastructure in California, including housing, state highways, and schools, need to collaborate and ensure that these processes work together in support of SB 375.
- State representatives should lobby for federal transportation policy and funding decisions that support the goals of SB 375.

Recommendations to MPOs

- MPOs need to include clear goals for future land use changes in their SCS and monitor progress toward meeting these goals.
- MPOs should pass policies that narrow the definition of committed projects and funds.
- MPOs ought to develop additional self-help funding sources and allocate revenues toward supporting SCS implementation.
- MPOs should support their SCSs by adopting additional policies to align specific transportation funding decisions with land use and GHG reduction strategies.
- MPOs need to fast-track funding to transportation projects that reduce GHG emissions and support land use changes called for in their SCSs, especially when allocating money to projects in sales tax expenditure plans.
- MPOs ought to work to promote and maximize the economic and social co-benefits of smart growth.
- MPOs should create capital and planning grant programs that offer incentives for local governments to implement SCSs.
- MPOs ought to work with local governments to create CEQA incentives for developments that comply with SCSs through specific plans and general plan updates.
- MPOs need to work with local governments and the state in order to coordinate infrastructure, school siting, and service provision toward serving the land use changes called for in their SCSs.

Recommendations to MPOs and state agencies

- MPOs and the state should develop sketch planning tools that are interactive, informed by up-to-date research, and are capable of measuring a variety of performance measures for use in the SB 375 planning process.
- State agencies and MPOs need to work with local governments to align local transportation planning and policy with the goals of SB 375.

1. Introduction

Over the past five years, California has emerged as a national leader in creating policies to combat climate change. Executive Order S-3-05 established goals of lowering the state's greenhouse gas (GHG) emissions to 1990 levels by 2020 and to 80 percent below 1990 levels by 2050 (Schwarzenegger 2005), and Assembly Bill 32, the 2006 Global Warming Solutions Act, set the 2020 goal into law and directed the Air Resources Board (ARB) to create a plan to reach the 2050 goal (State of California 2006). In the absence of federal leadership on climate issues, twenty other U.S. states have followed California's lead and set their own targets, and as of January 2009 thirty-six U.S. states had adopted comprehensive climate change policies (Center for Climate Strategies, 2009, Pew Center on Global Climate Change 2009, Northrop 2008).

In September 2008, the Governor signed Senate Bill 375, the latest piece of legislation that is part of AB 32 implementation, into law. SB 375 is an attempt to reduce GHG emissions from the transportation sector, which accounts for the largest share (37 percent) of California's total emissions (California Air Resources Board 2009). Three factors influence the amount of transportation-related emissions: how much carbon is in the fuels that vehicles use, how efficiently vehicles use that fuel, and how much people drive their vehicles. California's Low Carbon Fuel Standard (LCFS) (Schwarzenegger 2007) addresses the first factor, while Assembly Bill 1493 (Pavley 2002), which instituted fuel efficiency standards for vehicles sold in California, addresses the second. Some researchers, however, have argued that these technological changes will not be sufficient to meet California's GHG reduction goals if the amount that Californians drive continues to increase (Pacala and Socolaw 2004, Ewing et al 2008). The goal of SB 375 is to reverse this trend by curbing the sprawling, auto-dependent development patterns that have come to characterize California's urban areas by encouraging a coordinated approach to land use and transportation planning commonly referred to as "smart growth."

In all 18 of California's metropolitan areas with populations over 200,000, metropolitan planning organizations (MPOs)[1] are responsible for preparing and updating a regional transportation plan (RTP) describing how transportation revenues across the region will be spent over the next 25 years, and for demonstrating that this plan will enable the region to meet state and federal air quality standards. SB 375 requires that MPOs include a regional land use strategy in their RTP, the sustainable communities strategy (SCS), which, in combination with the transportation projects and policies in the RTP, meets GHG reduction targets set by ARB. Table 1 summarizes these targets, which vary according to the anticipated population growth and policies already underway in each region. Per capita targets would still lead to an increase in absolute GHG emissions due to

[1] Another regional agency, the council of governments (COG), is an assembly of local officials that provides information and fosters collaboration on regional issues. In the majority of the areas governed by SB 375, COGs also serve as MPOs, with a notable exception in the Bay Area, where the Metropolitan Transportation Commission (MTC) serves as the region's MPO and prepares the RTP, while the COG, the Association of Bay Area Governments (ABAG), creates demographic projections and performs other land use planning functions, such as the regional housing needs assessment (RHNA). We use the term "MPO" throughout this report when referring to the regional bodies governed by SB 375, though some of our interviewees use the terms "COG" and "MPO" interchangeably.

Table 1. Regional per capita GHG emissions targets, 2020 and 2035 (California Air Resources Board 2010)

MPO	2020 Target	2035 Target
Southern California Association of Governments (SCAG)	-8%	-13%
Bay Area Metropolitan Transportation Commission (MTC)	-7%	-15%
San Diego Association of Governments (SANDAG)	-7%	-15%
Sacramento Area Council of Governments (SACOG)	-7%	-16%
Eight San Joaquin Valley MPOs (San Joaquin COG, Stanislaus COG, Merced CAG, Madera CTC, Fresno COG, Kings CAG, Tulare CAG, Kern COG)	-5%	-10%
Association of Monterey Bay Area Governments (AMBAG)	0%	-5%
Santa Barbara County Association of Governments (SBCAG)	0%	0%
San Luis Obispo Council of Governments (SLOCOG)	-8%	-8%
Butte County Association of Governments (BCAG)	+1%	+1%
Shasta County Regional Transportation Planning Authority (SCRTPA)	0%	0%
Tahoe Metropolitan Planning Organization (TMPO)	-7%	-5%

population growth in most regions in the absence of technological improvements, but will yield additional reductions beyond those that can be anticipated due to the Pavley standards and the LCFS.

SB 375 does not change the fact that local governments have exclusive authority over land use decisions. Instead, SB 375 aligns three previously distinct planning processes with the SCS and provides incentives in order to encourage local governments and builders to implement the SCS. The bill:

1. requires MPOs to use the regional transportation planning (RTP) process to pass through certain federal, state, and regional transportation funds to projects that conform to the SCS;
2. amends the California Environmental Quality Act (CEQA) to limit the environmental review for projects that conform to the SCS and exempt certain projects from CEQA altogether; and
3. aligns the Regional Housing Needs Allocation (RHNA) process with the SCS and creates new provisions that expose local governments to lawsuits and limit their ability to disapprove projects if they have not zoned to meet their allocations.

This report examines the ways in which MPOs can shape the RTP planning process and leverage the changes created by SB 375 in order to effectively encourage smart growth. We conducted a series of substantive interviews between June 2009 and March 2011, during which time local, regional and state agencies were in the early stages of preparing to implement the bill. The 55 interview subjects included developers, elected officials, and staff from private planning firms and state, regional, and local government agencies across California. The agency staff that we interviewed were not only planners, but also consultants, attorneys, and analysts with expertise in the many aspects of planning and policy that are affected by SB 375. We supplemented these interviews with a financial analysis of current RTPs in order to understand how much funding SB 375 stands to affect. Finally, we reviewed government reports and academic research on specific aspects of the regional transportation process. The following chapter presents the results of this analysis, and the final chapter summarizes our findings and offers recommendations.

2. Analysis

Creating an RTP is a lengthy process that can take up to three years. An MPO first creates a future land use scenario for the RTP horizon year based on local and regional plans, population forecasts, and trends in the regional economy and housing market. In the past, this was often simply a projection of current growth trends, but SB 375 requires that MPOs examine the potential for policies and market forces to channel growth toward areas where residents drive less in their SCSs. The MPO then estimates the total amount of transportation revenue that will be available over the life of the RTP, not only from the federal and state sources that the MPO allocates, but also from local sources such as transportation sales taxes, general funds, and transit agency revenues, as well as from state and federal discretionary sources. Regional stakeholders submit potential transportation projects, and the MPO selects a financially constrained group of projects (i.e. a group of projects that can be funded with the amount of money that can reasonably be expected to be available in the region over the course of the RTP) based on regional policies and stakeholder input. The MPO then uses a computerized travel model to analyze how this group of projects will perform under the future land use scenario with respect to federal air quality requirements, performance measures such as travel times on congested routes or jobs accessibility for low-income neighborhoods, and now, under SB 375, greenhouse gas reduction targets. Once the MPO has completed its RTP, only projects contained in the plan are eligible for inclusion in the transportation improvement program (TIP) that programs transportation spending over a four-year period.

Under SB 375, planning and implementation are closely related. If an MPO determines that it cannot meet GHG reduction targets through a financially constrained RTP, SB 375 instead allows an MPO to adopt an alternative planning strategy (APS), which is not financially constrained and therefore not part of the RTP, and which outlines additional measures that the region could take to meet its GHG reduction targets. Since an APS is not part of the RTP, it does not affect transportation funding, which is the most important lever MPOs have in shaping regional growth. As a result, interviewees dismissed the APS as a "cop out" or a "punt." In order for SB 375 to effectively reduce GHG emissions, MPOs must adopt SCSs instead of APSs so that transportation funding is aligned with regional land use decisions, and then create additional incentives for local governments to implement these strategies. Four factors will affect whether MPOs are able to accomplish these tasks. The first three concern the constraints placed on MPOs by the RTP process, and the fourth concerns the additional incentives that MPOs will use to implement their SCSs:

1. whether MPOs are able to identify sufficient *land use opportunities* in their SCSs to accommodate growth in regional and town centers given likely population changes and current local plans;
2. whether MPOs control sufficient *transportation funding* to provide alternatives to driving in areas that SCSs target for growth;
3. whether MPOs' *travel models* are capable of analyzing the GHG reductions and other benefits of SCSs to demonstrate to ARB that these plans meet SB 375 targets and to build support among stakeholders; and
4. whether the CEQA and RHNA changes described above, as well as the grants that some MPOs have been offering local governments to support plans and projects that implement regional land use plans, provide effective *implementation measures*.

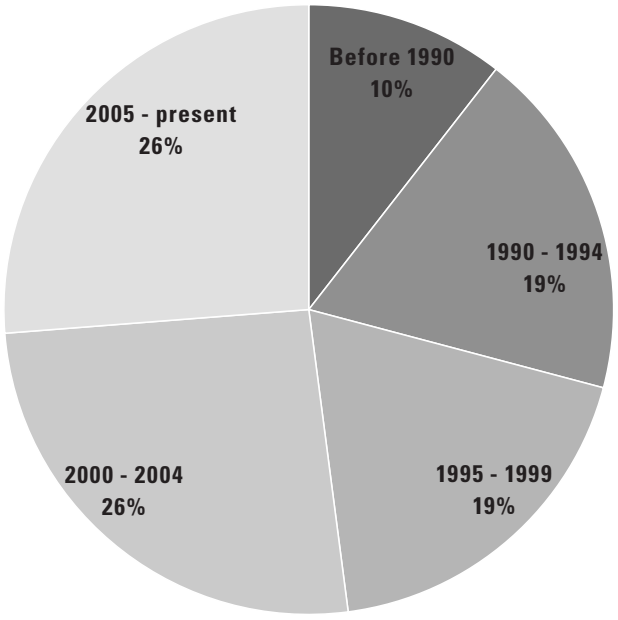
The following four sections discuss each of these factors in turn based on our interviews with planners and agency staff, financial analysis of current RTPs, and literature review.

2.1 Opportunities for land use changes

Since the birth of MPOs in the 1970s, regional transportation planning has been driven by local land use decisions. Until recently, when progressive MPOs began to pursue a more integrated approach, regional transportation planning followed local land use plans, investing in new facilities to serve new growth without questioning whether this growth was in the best interests of the region's transportation network (Solof 1997). Federal regulations include consistency requirements that RTPs—and hence SCSs—must "consider" local general plans (23 Code of Federal Regulations §450.322). Historically, most MPOs have interpreted this clause conservatively, creating future land use scenarios for their RTP that simply assume build-out of existing local general plans. This approach limits MPOs' ability to lower GHG emissions through their RTPs, since it is often difficult to reduce emissions below baseline levels without deviating from the local plans that inform the current development pattern, and hence create the baseline against which plans for the future are judged.

Prior to the passage of SB 375, some California MPOs began to challenge this status quo approach, adopting land use plans and forecasts that balanced regional policies with local ones. For example, the Association of Bay Area Governments' (ABAG) land use projections for the San Francisco Bay Area assume that households and jobs will increasingly be located in regional centers such as San Francisco, Oakland, and San Jose. There are three factors that give an MPO "wiggle room" to make such assumptions in an RTP or an SCS without violating federal consistency requirements. First, if local general plans can cumulatively accommodate more growth than an MPO projects for the region, the MPO has the freedom to assume where that growth will go within the region. According to a planner from ABAG, "Though the SCS will have to be consistent with local general plans, it doesn't necessarily follow that the SCS has to assume that these plans will all be fully built out," and an RTP could reduce GHG emissions by forecasting the maximum permissible level of development in the most accessible locations and targeting transportation improvements toward these areas. Second, RTPs typically extend ten to 15 years further into the future than general plans, and even further if general plans are out of date, as is often the case (Figure 1), allowing MPOs to make assumptions about the type of growth that will occur beyond the horizon of local plans. Third, general plans are based on out-of-date or on locally serving assumptions that do not make sense at the regional scale, and MPOs can use data to demonstrate why these plans are unrealistic and advocate for a plan that better meets regional needs. For example, local plans often call for less housing than is needed to meet demand, and more tax-revenue-gen-

Figure 1. Date of cities' most recent updates to the land use element of their general plans (Governor's Office of Planning and Research 2010a, 68-80)



erating retail and commercial uses than the market will support (Adams, Eaken, and Notthoff 2009, 17). When SACOG was creating its blueprint, it analyzed local plans against its regional economic forecast, and found that the region collectively had a 20-year supply of residential land and a 70-year supply of office, commercial, and industrial land. This allowed SACOG to strategically locate office, commercial, and industrial land in its blueprint, and helped the agency convince local jurisdictions to re-designate land as residential in locations where doing so would improve the balance between jobs and housing.

In the past, the state and federal agencies that oversee the RTP process have required that MPOs provide additional information in support of land use forecasts that did not simply assume build-out of general plans. However, with the passage of SB 375, state agencies are acknowledging that MPOs will need to take a more active role in accounting for land use policies and economic trends. The California Transportation Commission's 2010 RTP Guidelines explicitly allow that "planning assumptions can be different than historical trends or existing plans and boundaries" provided that these assumptions are reasonable, consistent, and well-documented (California Transportation Commission 2010, 129). The Commission outlines several reasons why an SCS can be based on assumptions that differ from current local plans, including "the need for the SCS to be designed to achieve GHG emissions reductions," "new demographic, market, regulatory, or environmental trends," "adopted blueprints, habitat conservation plans, or other plans which may accurately reflect likely future growth patterns," likely changes in state and federal regulations and funding, differences between RHNA allocations and general plans, and the issue of differing time horizons between the SCS and general plans discussed above (California Transportation Commission 2010, 128-129).

MPOs do not have complete freedom to make land use assumptions. For example, few blueprint plans have sought to create new smart growth opportunity areas by calling for higher densities in existing single-family areas since, as one planner said, "nobody wants to hear about their plot getting upzoned… once property lines are drawn, they can't be erased." A regional planner with whom we spoke felt limited by consistency requirements, and told us that the SCS "will be constrained by existing general plans to the point where it's difficult to see a difference between the base-case and an SCS," though it's worth noting that this interview took place before the CTC released its most recent RTP Guidelines. Still, the experience of ABAG and SACOG shows that MPOs have much more leeway to make land use assumptions than MPOs have typically assumed.

2.2 MPOs' share of transportation funding

The RTP is, in essence, a financial plan, in which MPOs must identify a set of future transportation projects that can be funded with revenues that are expected to be available over the plan's 25-year horizon. However, MPOs only control a share of these revenues, either directly or through policies that encourage other agencies within the region to use their funding to support regional goals. In order for an MPO to reduce GHG emissions, this share must be large enough to meet the transportation needs of new residents through modes other than solo driving. Cities that are targeted for growth in the SCS are more likely to take on this growth if doing so means that they receive more funding. In the words of one interviewee:

> If the transportation dollars are big enough to build and maintain the necessary infrastructure, it could get cities to accept more housing... the more you can tie real money to this stuff, the more likely you are to start getting what you want. But you've really got to have enough money.

Table 2. RTP funding sources, purposes, total amounts in nominal dollars, and amounts devoted to capital projects, organized by decision-maker (see Appendix 1 for details)

	Primary purpose	Total ($mil)	% Total	% Capital	Capital total ($mil)	% Capital total
Federal government		**$25,680**	**3.1%**	**99%**	**$25,301**	**8.6%**
Federal Transit Administration (FTA) grants	Transit capital, operations	$10,033	1.2%	100%	$10,033	3.4%
Federal Highway Administration programs	Road improvements	$3,787	0.5%	90%	$3,408	1.2%
Earmarks/High Priority Projects/ other	Varies	$11,860	1.4%	100%	$11,860	4.0%
Caltrans		**$173,123**	**20.6%**	**22%**	**$37,399**	**12.7%**
Federal programs administered by Caltrans	Highways and local streets	$3,809	0.5%	50%	$1,904	0.6%
Interregional Transportation Improvement Plan (ITIP)	Highways and local streets	$11,594	1.4%	100%	$11,594	3.9%
State Highway Operations and Protection (SHOPP)	Highway rehab and repair	$58,995	7.0%	5%	$2,950	1.0%
Proposition 1B	State priority projects	$14,145	1.7%	100%	$14,145	4.8%
Non-motorized programs	Non-motorized	$64	0.0%	100%	$64	0.0%
Environmental Enhancement and Mitigation	Community enhancement, natural resources preservation	$250	0.0%	100%	$250	0.1%
Intercity rail operating costs	Rail operations	$2,357	0.3%	0%	$0	0.0%
Traffic Congestion Relief Program (TCRP)	Transit, HOV lanes, highway widening	$420	0.1%	100%	$420	0.1%
Transportation Enhancement Act (TE)	Streetscaping	$400	0.0%	100%	$400	0.1%
Caltrans operating budget	Caltrans operations, highway O+M	$74,000	8.8%	0%	$0	0.0%
Other	Varies	$7,090	0.8%	80%	$5,672	1.9%
MPOs		**$80,503**	**9.6%**	**56%**	**$45,416**	**15.5%**
Regional Surface Transportation Program (RSTP)	Highways and local streets	$6,816	0.8%	65%	$4,430	1.5%
Congestion Management and Air Quality (CMAQ)	Transit, TDM	$6,027	0.7%	90%	$5,424	1.8%
Federal Transit Administration (FTA) funding	Transit capital, operations	$14,034	1.7%	55%	$7,719	2.6%
Transportation Enhancement Act (TE)	Streetscaping	$876	0.1%	100%	$876	0.3%
Regional Transportation Improvement Plan (RTIP)	Regional roads, transit	$14,207	1.7%	100%	$14,207	4.8%
State Transit Assistance (STA)	Transit operations	$4,056	0.5%	5%	$203	0.1%
Transportation sales taxes	Varies	$14,700	1.8%	44%	$6,468	2.2%
Tolls/impact fees	Toll operations, streets and roads	$19,022	2.3%	30%	$5,707	1.9%
Other	Varies	$766	0.1%	50%	$383	0.1%

	Primary purpose	Total ($mil)	% Total	% Capital	Capital total ($mil)	% Capital total
Non-MPO regional agencies (CTCs, CTAs, CMAs, AQMDs, etc.)		**$264,657**	**31.5%**	**50%**	**$131,171**	**44.6%**
Regional Surface Transportation Program (RSTP)	Highways and local streets	$10,600	1.3%	65%	$6,890	2.3%
Congestion Management and Air Quality (CMAQ)	Transit, TDM	$9,500	1.1%	90%	$8,550	2.9%
Federal Transit Administration (FTA) funding	Transit capital, operations	$12,640	1.5%	55%	$6,952	2.4%
Transportation Enhancement Act (TE)	Streetscaping	$324	0.0%	100%	$324	0.1%
Regional Transportation Improvement Plan (RTIP)	Regional roads, transit	$17,183	2.0%	100%	$17,183	5.8%
State Transit Assistance (STA)	Transit operations	$4,550	0.5%	5%	$228	0.1%
Transportation sales taxes	Varies	$198,434	23.6%	44%	$87,311	29.7%
Tolls/impact fees	Toll operations, streets	$9,609	1.1%	30%	$2,883	1.0%
Vehicle license fees	Air pollution reduction	$116	0.0%	0%	$0	0.0%
Other	Varies	$1,700	0.2%	50%	$850	0.3%
Local agencies		**$295,551**	**35.2%**	**18%**	**$54,518**	**18.6%**
Gas tax subventions	Local streets	$27,396	3.3%	9%	$2,466	0.8%
Local Transportation Funds (LTF)	Local streets, transit	$82,139	9.8%	5%	$4,107	1.4%
Impact fees	Varies	$25,943	3.1%	100%	$25,943	8.8%
General fund revenue/other local funds	Varies	$60,616	7.2%	20%	$12,123	4.1%
State Transit Assistance	Transit operations	$16,007	1.9%	5%	$800	0.3%
Federal Transit Administration (FTA) Fixed Guideway Modernization	Rail expansion and modernization	$9,078	1.1%	100%	$9,078	3.1%
Transit agency fare revenues	Transit operations	$70,577	8.4%	0%	$0	0.0%
Transit agency other revenues	Transit operations	$3,793	0.5%	0%	$0	0.0%
Total		**$839,514**	**100%**	**35%**	**$293,804**	**100%**

This section explores whether MPOs do control enough money, and whether they have enough flexibility with the money that they do control, to fund a shift toward smart growth in California's cities.

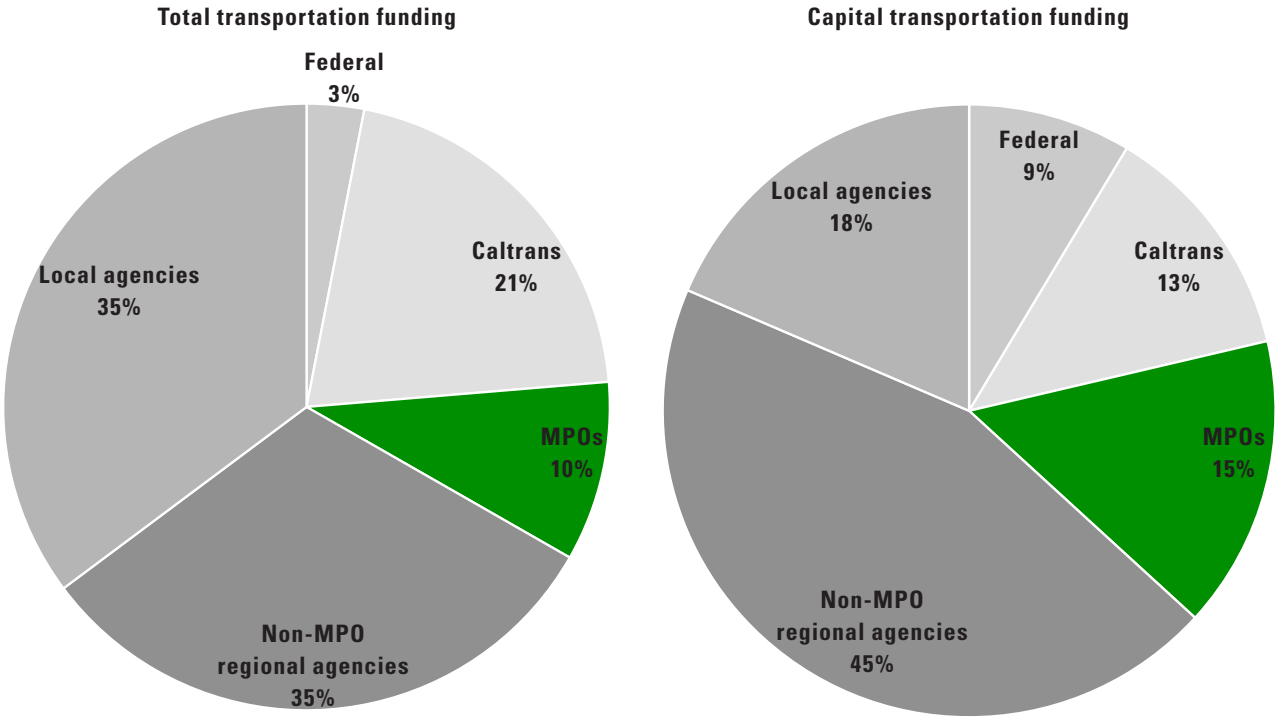
These are complex questions. Funding for transportation projects comes from a variety of sources, including federal and state gas taxes, county-level transportation sales taxes, local impact fees, and transit agency fares. Though the majority of transportation dollars come from state, federal and local sources, a large proportion of them are passed through to regional bodies, either MPOs or county-level agencies, for programming. In order to ensure equality across different transportation modes and geographical areas, many of the state and federal dollars that get passed through are suballocated by formula to funds that are dedicated to specific purposes, such as transit operations or streetscape improvements, or split between different areas of the state.

Though MPOs are required to account for all of these revenue sources in their RTPs, they do not have any control over how the majority of them are spent. Generally speaking, federal agencies program funding for earmarked projects and discretionary transit grants; Caltrans and the California Transportation Commission program state and federal dollars dedicated toward construction and maintenance of the state highway system; county tax authorities and transportation commissions program self-help revenues such as tolls and transportation sales taxes; counties and cities program state and local funding for road improvements and maintenance; and transit agencies use farebox and advertising revenues as well as state funding sources to fund operations. Meanwhile, MPOs program the majority of state and federal funds that are dedicated toward transit, most federal revenues dedicated to road improvements, and some self-help revenues.

We reviewed recent RTPs from all 18 MPOs that are subject to SB 375 in order to determine how much transportation funding different decision-makers control. Table 2 summarizes the results of this analysis (for more information on the methods and assumptions used in this analysis, see Appendix 1). It shows the many different funding sources that RTPs account for, as well as their primary purpose, total amount, and share of total transportation spending in California's metropolitan regions. Roughly two-thirds of these sources go toward operating and maintaining the current transportation system, while one-third go toward capital investments. Though operating expenses, in particular those dedicated to providing transit service, can be crucial to supporting smart growth, capital investments are more likely to shape future growth patterns, so our analysis focuses on the latter. Table 2 shows the proportion and amount of each funding source that goes toward capital investments, as well as each source's share of total capital spending. Funding sources are categorized by the institutions that are responsible for allocating them: the federal government, Caltrans, MPOs, non-MPO regional agencies (county transportation commissions and authorities, congestion management agencies, sub-regional tax and toll authorities, and air quality management districts), and local agencies (city and county governments, transit agencies).

Of the many revenue sources shown in Table 2, only those that are controlled by MPOs must go toward implementing an SCS. Figure 2 summarizes the breakdown in total and capital expenditures between different decision-makers. MPOs control only 10 percent of the total funding in California, but a comparatively high proportion of the funding that MPOs allocate goes toward capital projects, and MPOs' 15 percent share of capital funding is roughly on par with the share controlled by Caltrans or by local governments. Still, this is a relatively small portion

Figure 2. Total and capital transportation funding in California, by decision-maker (see Appendix 1 for details)



of overall capital spending, especially compared to the large amount of money controlled by non-MPO regional agencies that allocate transportation sales taxes and other self-help revenues in regions governed by multi-county MPOs.

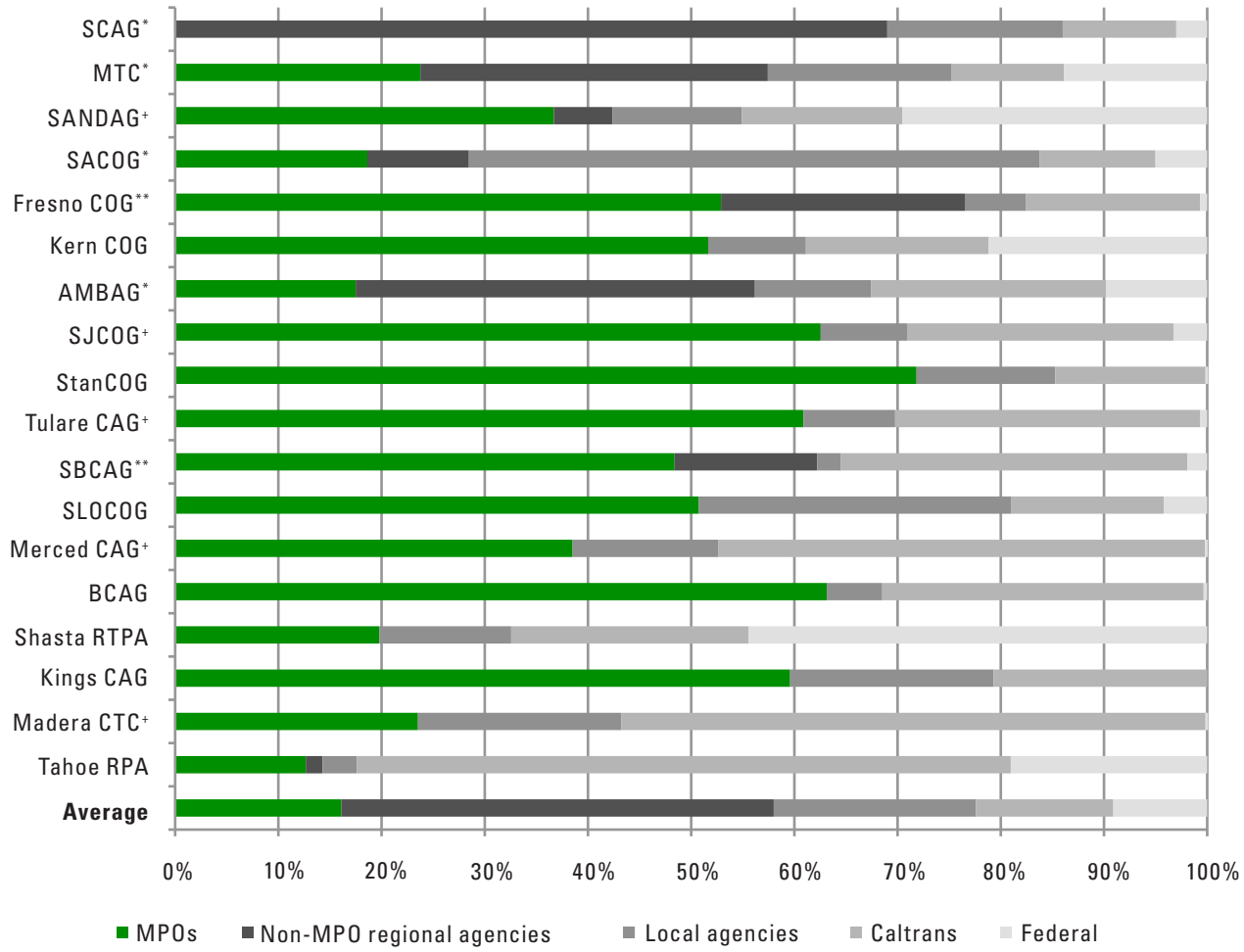
2.2.1 Differences in funding between single- and multi-county MPOs

Figure 2 masks the wide variety among MPOs, and the relatively low share of overall funding that it attributes to MPOs largely reflects the fact that non-MPO regional agencies control so much funding in the large metropolitan areas that account for the majority of California's transportation spending. Figure 3 shows the breakdown in capital funding by decision-maker in each of California's 18 metropolitan areas.

In general, single-county MPOs control a larger share of capital transportation spending, particularly those that allocate transportation sales taxes or are located in less urbanized areas, where local governments account for a smaller share of revenues. Urban areas in some of the state's most rapidly growing regions, particularly the San Joaquin Valley, are governed by single-county MPOs. Though these areas currently contain fewer high-density, mixed-use neighborhoods than coastal metropolitan areas, the fact that many of the Valley MPOs control over 50 percent of the regional capital transportation budget creates an opportunity to shift a greater share of transportation funding toward transit hubs and regional centers that will anchor future growth.

However, a larger share of vehicle miles traveled (VMT) in the Valley and other developing areas comes from interregional trips (Heminger et al 2010), including freight movement, recreational travel, and, in single-county regions located next to large metropolitan areas, commutes to nearby job centers. One planner at an MPO in the San Joaquin Valley told us, "the real issue is the Bay Area and Sacramento's inability to provide affordable housing." Since the land uses that generate interregional VMT are outside of their jurisdiction, many single-county MPOs may face lim-

Figure 3. Capital transportation funding by decision-maker in California's MPOs (see Appendix 1 for details)



* indicates a multi-county MPO where CTCs or CTAs allocate transportation sales tax revenues.
+ indicates a single-county MPO that controls a current or planned transportation sales tax.
** indicates a single-county MPO where a transportation sales tax is in place, but where non-MPO agencies control the majority of tax revenues.

ited opportunities to reduce GHG emissions through land use strategies or by providing better transportation options. Part of Caltrans' responsibility is to accommodate interregional travel, and if it does so by expanding capacity on rural highways, it may open up more opportunities for interregional commuting, even if MPOs are otherwise taking steps to increase jobs-housing balance and access within the region.

SB 375 attempts to address this issue in two ways. First, aligning RHNA with the SCS is in part an attempt to ensure that cities in the state's largest metropolitan areas build their share of affordable housing, which would cut down on interregional commuting. Second, the bill allows for the eight San Joaquin Valley MPOs to collaborate on a Valley-wide SCS. Interviewees from these MPOs were not sure whether they would take this option, and said that they may instead collaborate in smaller groups of two to three MPOs. Additional interregional collaboration and revenue-sharing agreements or other joint implementation actions, such as the joint powers agreement through

which San Joaquin COG and the Alameda and Santa Clara county transportation authorities support the Altamont Commuter Express (San Joaquin Council of Governments 2007, 6-13), may also help to address the increasing number of commutes that take place across regional boundaries.

Meanwhile, multi-county MPOs and MPOs in large metropolitan areas face an opposite set of circumstances: they often have relatively good transit service and strong regional centers in which to focus new development, but typically control a small share of regional funding, and a large share of what they do control goes toward operating and maintaining the existing transportation system rather than capital projects. Furthermore, investments designed to lower the cost or increase the convenience of alternatives to driving are often not sufficient to offset the high cost of living in these areas, particularly in regional centers. Finally, these MPOs must coordinate between a larger number and variety of government agencies in order to implement projects and policies.

The Southern California Association of Governments (SCAG), which governs a region containing roughly half of the state's population, encompassing 178 member cities, six counties, and 14 subregional organizations (Southern California Association of Governments 2011), provides an extreme example of the political and economic difficulties that multi-county MPOs face in creating an SCS. SCAG does not program any capital transportation funds; instead all of them are programmed by the six CTCs within the region. Five of these six CTCs administer transportation sales taxes, which alone account for over a third of regional revenues, and others have additional impact fee programs dedicated toward transportation improvements. According to one interviewee,

> The CTCs come up with their own plans, and then SCAG checks them for discrepancies, such as if one county adds a freeway lane and the county next door doesn't so that the lane ends at the county line, and alerts the CTCs to these issues. Then SCAG compiles the plan and applies some sort of smoke-and-mirrors policies—which change from one plan to the next—in order to demonstrate that the plan will make conformity with air quality standards.

The greater Los Angeles area continues to grow, and has many central neighborhoods that are well-served by transit in which it could add new residents while reducing GHG emissions, but SCAG may not be able to capitalize on these opportunities because without any capital dollars to spend it is, in the words of a planner who works in the region, "limited in its ability to shape growth." However, planners from SCAG report that many local governments, especially those that have jurisdiction over the regional and town centers identified in the agency's Compass Blueprint, are engaged partners in implementing the Blueprint, and SCAG has created technical assistance programs to support those partners in their planning efforts. Furthermore, one CTC in the region, the Los Angeles County Metropolitan Transportation Authority (LA Metro), is working on building land use criteria into its competitive funding programs that address the goals of SB 375. If other CTCs in the region follow suit, this will be a step toward aligning regional transportation funding with the SCS created by SCAG.

The SCAG region contains 14 subregional COGs, and SB 375 attempts to allow for better coordination within the greater Los Angeles area by allowing the subregional COGs to take primary responsibility for preparing the SCS for their respective jurisdictions. One planner felt that this would be a better course to take since "The subCOGs do not allocate funding, but there's board overlap between them and the CTCs." At the same time, other interviewees were

concerned that the subregional COGs did not have the capacity to create an adequate SCS. Only two of the 14 subregional COGs have elected to prepare their own SCS, and SCAG will be responsible for integrating their results with its regional plan.

Though the SCAG region is exceptionally large, the challenges discussed here apply to some extent in all major metropolitan areas. MPOs in these regions must coordinate between several different local and sub-regional agencies that are usually more dedicated to serving their constituencies than to meeting regional goals and often control a substantial share of transportation funds. However, this overlapping mix of agencies may also give MPOs in these regions more opportunity to leverage their limited funding to support change, as we explain in Section 2.2.3, especially given the extensive transit networks and established regional centers that exist in California's largest metropolitan areas.

2.2.2 Transportation sales taxes

Of the different funding sources listed in Table 2, transportation sales taxes are a particularly important force in shaping California's transportation system. These taxes, which are administered at the county level and require voter approval by a two-thirds majority, are the single largest source of transportation capital dollars in the state, accounting for 28 percent of all capital spending. Twenty counties currently have at least one transportation sales tax measure in place. State law requires that these taxes be administered at the county level by an authority that is independent from the county board of supervisors. Most counties have either designated the county transportation commission (CTC) as this authority or have set up a separate county transportation authority (CTA). These often double as congestion management agencies (CMAs), which prepare countywide transportation plans and allocate state and federal funds.

Table 3 summarizes the revenues and allocations of California's transportation sales tax measures. Like Table 2, Table 3 separates capital spending on the assumption that it is most likely to shape growth, although sales tax measures devoted to transit operations are also crucial to maintaining a high level of transit service in major metropolitan areas. The capital expenditure plans for different tax measures vary widely, but in general tax revenues in urbanized counties are more likely to go toward transit and other improvements that support smart growth, while predominantly suburban counties are more likely to spend tax dollars on road projects.

One interviewee referred to sales taxes as "the 800-pound gorilla in the room," and several others expressed similar opinions. Not only do these taxes collectively constitute the largest share of transportation funding, but they also are more reliable than other revenue sources. According to one planner, "With decreasing state funding, self-help revenue sources are increasingly important." California's transportation funding gap continues to grow since the state gasoline tax remains constant even as a growing number of Californians use the transportation system. The amount of state and federal funds that flow to a given MPO from year to year fluctuates according to political and economic shifts, and this uncertainty is compounded by the fact that MPOs often use a combination of different sources, each with its own constraints, to fund a project. In recent years the legislature has eliminated or cut back on transportation funding sources, such as State Transit Assistance, which funds transit operations, in order to cover budget gaps. As a result, MPOs relying on state and federal funds must sometimes adjust priorities and project lists from RTP to RTP, while sales tax measures are guided by a long-term expenditure plan that includes specific projects.

These expenditure plans, and the CTCs and CTAs that implement them, can exert a strong influence on

Table 3. Transportation sales tax measures, revenues, and approximate average allocations (Hathaway 2011).*

				Transit and road expansions		Transit operations and maintenance		Road operations and maintenance	
County	**Measure**	**Expires**	**$1000s/yr.**	%	$1000s/yr.	%	$1000s/yr.	%	$1000s/yr.
SCAG region									
Imperial	D	2048	$31,000	5%	$1,550	2%	$620	93%	$28,830
Los Angeles	R	2038	$670,000	59%	$395,970	25%	$164,820	15%	$99,160
Los Angeles	A	perm.	$670,000	34%	$227,800	58%	$388,600	3%	$20,100
Los Angeles	C	perm.	$670,000	44%	$294,800	34%	$224,450	20%	$134,000
Orange	M	2041	$295,000	43%	$126,850	25%	$73,750	32%	$94,400
Riverside	A	2039	$157,000	60%	$94,200	0%	$0	40%	$62,800
San Bernardino	I	2040	$146,000	81%	$118,260	0%	$0	19%	$27,740
Subtotal			**$2,639,000**	**48%**	**$1,259,430**	**32%**	**$852,240**	**18%**	**$467,030**
MTC region									
Alameda	A	2022	$110,000	40%	$44,000	32%	$35,200	22%	$24,200
Alameda	BART	perm.	$110,000	0%	$0	100%	$110,000	0%	$0
Contra Costa	J	2034	$75,000	34%	$25,500	34%	$25,500	32%	$24,000
Contra Costa	BART	perm.	$75,000	0%	$0	100%	$75,000	0%	$0
Marin	A/Q	2028	$31,000	25%	$7,750	57%	$17,670	18%	$5,580
San Francisco	K	2033	$67,000	36%	$24,120	50%	$33,500	14%	$9,380
San Francisco	BART	perm.	$67,000	0%	$0	100%	$67,000	0%	$0
San Mateo	A	2034	$60,000	42%	$25,200	30%	$18,000	23%	$13,800
San Mateo	Transit	perm.	$60,000	0%	$0	100%	$60,000	0%	$0
Santa Clara	A	2036	$156,000	75%	$117,000	21%	$32,760	4%	$6,240
Santa Clara	Transit	perm.	$156,000	100%	$156,000	0%	$0	0%	$0
Sonoma	A/M	2028	$37,000	50%	$18,500	28%	$10,360	20%	$7,400
Subtotal			**$1,004,000**	**42%**	**$418,070**	**48%**	**$484,990**	**9%**	**$90,600**
Other regions									
San Diego	A	2048	$243,000	40%	$97,200	30%	$72,900	20%	$48,600
Sacramento	A	2039	$118,000	22%	$25,960	35%	$41,300	38%	$44,840
Fresno	C	2027	$60,000	35%	$21,000	24%	$14,400	35%	$21,000
Santa Cruz	Transit	perm.	$7,000	0%	$0	100%	$7,000	0%	$0
San Joaquin	K	2041	$47,000	35%	$16,450	30%	$14,100	35%	$16,450
Tulare	R	2037	$18,000	50%	$9,000	15%	$2,700	35%	$6,300
Santa Barbara	A	2038	$31,000	20%	$6,200	12%	$3,720	65%	$20,150
Madera	T	2027	$7,000	26%	$1,820	2%	$140	72%	$5,040
Total			**$4,174,000**	**44%**	**$1,855,130**	**36%**	**$1,493,490**	**17%**	**$720,010**

* All amounts are in constant 2009 dollars. An expiration date of "perm." denotes a permanent measure that will only expire if it is overturned by voters. Allocations may not add up to 100 percent since some measures set aside funds for administration, environmental programs, or other costs. All transit measures can be used either for operations or capital spending based on annual board decisions, but all counties except Santa Clara prioritize operations.

which projects make it into an RTP, particularly in Southern California, which is home to many of the state's largest sales tax measures. Since projects in the expenditure plans have guaranteed sources of funding, MPOs often have no choice but to include these projects in the RTP if they want to "back a winner," as one interviewee put it. This can lead MPOs to apply discretionary funding to these projects that they might otherwise use more strategically to reduce VMT—for instance, adding sidewalks to a tax-funded freeway overpass in a suburban area where few people travel by foot rather than improving the pedestrian environment in a mixed-use city center.

Though CTCs and CTAs "have a bigger financial foot in the door than the feds and state combined [and] they have a big impact on transportation projects in the RTP," as one MPO planner put it, they are not subject to the requirements of SB 375. Many MPO staff with whom we spoke were concerned that county transportation agencies would block MPOs from crafting effective SCSs, remarking, "in general, smart growth is not a criteria [sic] that the CTCs put much weight on" and "they're going to work with us, but the question is how." Some CTCs are planning on supporting SB 375 implementation; for example LA Metro is working on integrating land use and sustainability criteria into its Call for Projects competitive grant program that will favor projects in "strategic opportunity areas," such as those that meet the criteria for transit priority projects as stated in SB 375 and "areas that have been identified in adopted plans, policies and/or principles consistent with the Compass Blueprint in targeting growth to reduce vehicle miles traveled or greenhouse gas emissions" (Los Angeles County Metropolitan Transportation Authority 2010).

However, the Call for Projects program and tax-funded discretionary programs in other regions account for a relatively small share of the overall expenditure plan, and CTCs and CTAs may see fewer opportunities to alter the capital projects that make up the bulk of many expenditure plans. SB 375 explicitly does not require any changes in the allocation plan of any sales tax measure passed before December 31, 2010 (California Government Code §65080(b)(2)(K)), and nothing in the bill affects future sales taxes so long as they are not administered by an MPO. Therefore, tax measures may limit MPOs' ability to meet SB 375 targets if their expenditure plans are focused on accommodating automobiles.

Nonetheless, some interviewees suggested that there are ways to work within this constraint. Most sales tax measures do not specify in which order funded projects should be completed, and also allow authorities to amend expenditure plans beginning a certain number of years after the measure has been passed in order to allow for flexibility as priorities change over the life of the tax. Therefore, sales tax authorities could support SB 375 implementation by fast-tracking projects that best serve priority development areas and delaying sprawl-inducing projects until the amendment clause kicks in, at which point they may be able to replace these projects with ones that better serve the growth pattern identified in the SCS.

Also, though revenues from sales tax measures are relatively stable, they still fluctuate with consumer spending, and many tax-funded projects still rely heavily on outside funding sources, including those allocated by MPOs. By one interviewee's estimate, sales tax revenues are currently down by 20 percent due to the recession, which may force sales tax authorities to rely more heavily on MPO funding to implement the projects that are included in their expenditure plans. This would give MPOs the opportunity to selectively fund projects that support the land use goals identified in the SCS. Finally, some measures also allow minor discretionary changes to capital projects that may provide an opportunity to shave small portions of money off of road projects to devote to smart growth

projects. Some interviewees cautioned that officials may be reluctant to modify voter-approved expenditure plans, but others felt that political support in favor of using tax measures to support smart growth will increase in the future due to rising energy prices, environmental catastrophes caused by climate change, or "a growing recognition that there's not the money to accommodate growth."

Future MPO-administered sales tax measures will support SB 375 implementation, although it will be up to MPOs and the authors of these measures to determine what exactly this will mean. Most likely a certain percentage of revenues will go toward transit, bicycle, and pedestrian projects; projects that serve priority growth areas designated in the SCS; or grant programs that offer local agencies incentives to implement such projects. SANDAG currently uses a portion of their sales tax revenues to fund the latter.

2.2.3 Leveraging MPOs' transportation funding to reduce GHG emissions

One planner working at an MPO summed up SB 375 as follows: "the amount of dollars that is conditioned by this bill are quite small, and the condition itself is quite vague." On average, MPOs only control 15 percent of capital transportation funding in California, although many control more, as shown in Figure 3. Meanwhile, SB 375 only affects the remaining 85 percent of capital transportation funds insofar as an MPO leverages its share of transportation funding to influence how various stakeholders spend their revenues. There are three factors that will determine whether MPOs will be able to exert this leverage to create and implement the first round of SCSs:

1. The extent to which other projects in the region rely on funds allocated by the MPO, and the conditions that an MPO places on these funds.

Transportation policy and funding in California is extremely fragmented. The 85 percent of capital transportation funding that is not controlled by MPOs does not uniformly work against the goals of SB 375, but is spent according to the priorities of the many different agencies that allocate these funding sources, which often include improving alternatives to driving and supporting sustainable land use patterns. In this context, the fact that MPOs must spend their share of transportation funding on a coordinated strategy to support smart growth can have substantial influence. Major transportation projects draw money from several different sources, including those allocated by MPOs, in order to fund different aspects and phases of construction, operations, and maintenance, and if even a small amount of funding is withheld during a given phase, it may hold up the rest of the project. Planners will even distribute the costs of a single project phase between several sources in order to cover bases as competition over transportation funding increases and the reliability of any given source decreases. When speaking about one of the funding sources programmed by MPOs, one interviewee noted, "The average project, while it has a very small portion of its money in the RTIP [Regional Transportation Improvement Program], can't go forward without it." This is true even for projects funded by transportation sales taxes; according to a recent analysis by MTC, tax measures in the San Francisco Bay Area only pay for 23 to 41 percent of the total project costs for their expenditure plans (Metropolitan Transportation Commission 2011a).

MPOs can influence outcomes by putting policies in place that impose conditions upon transportation spending, such as MTC's Resolution 3434, which requires that local governments plan to meet minimum housing thresholds in proposed transit corridors before the agency funds transit extensions along those corridors (Metropolitan Transportation Commission 2005b). According to one planner, passing this resolu-

tion took "a full court press, and a lot of engaged commissioners who were willing to use some political capital." MTC staff argued for the policy on the grounds that it was necessary in order to ensure that new stations had enough riders to cover the costs of service. Resolution 3434 is also one of the only pre-SB 375 examples of a California MPO conditioning major transportation funding on land use goals in order to encourage smart growth.

2. The amount of funding that an MPO considers discretionary, and the constraints on discretionary funding sources.

The transit funds that MPOs allocate come from diverse sources, each with its own set of eligible activities: State Transit Assistance (STA) goes mostly toward operations and maintenance, and Federal Transit Administration (FTA) formula funds are subdivided into several different programs. Funds from the largest of these programs are eligible for capital projects and preventative maintenance, while other programs are dedicated to serving rural, disabled, or low-income populations. MPOs typically distribute this money unconditionally to transit agencies and local governments, and the tolls and sales tax measures allocated by MPOs have pre-determined expenditure plans that limit MPOs' discretion over revenues. As a result, these sources are typically considered committed. This leaves MPOs with four discretionary sources, which together account for 29 percent of MPOs' funding, or three percent of total transportation spending, and 55 percent of MPOs' funding for capital projects, or eight percent of statewide capital spending:

- Regional Transportation Improvement Program (RTIP) funds, which are used for capital projects located on the regional transportation system;
- Regional Surface Transportation Program (RSTP) funds, which can be used for capital projects and operations and maintenance on major roads, as well as capital transit projects;
- Congestion Management and Air Quality (CMAQ) funds, which can be used for road projects that improve traffic flow without adding capacity, transit projects and operations in new transit systems, bicycle and pedestrian facilities, TDM programs, and other projects designed to reduce air pollution; and
- Transportation Enhancement (TE) funds, which can be used for streetscape improvements and bicycle and pedestrian facilities.

Figure 4 shows a breakdown of the capital transportation funding sources allocated by MPOs, with those that are typically considered committed in gray and those typically considered discretionary in green.

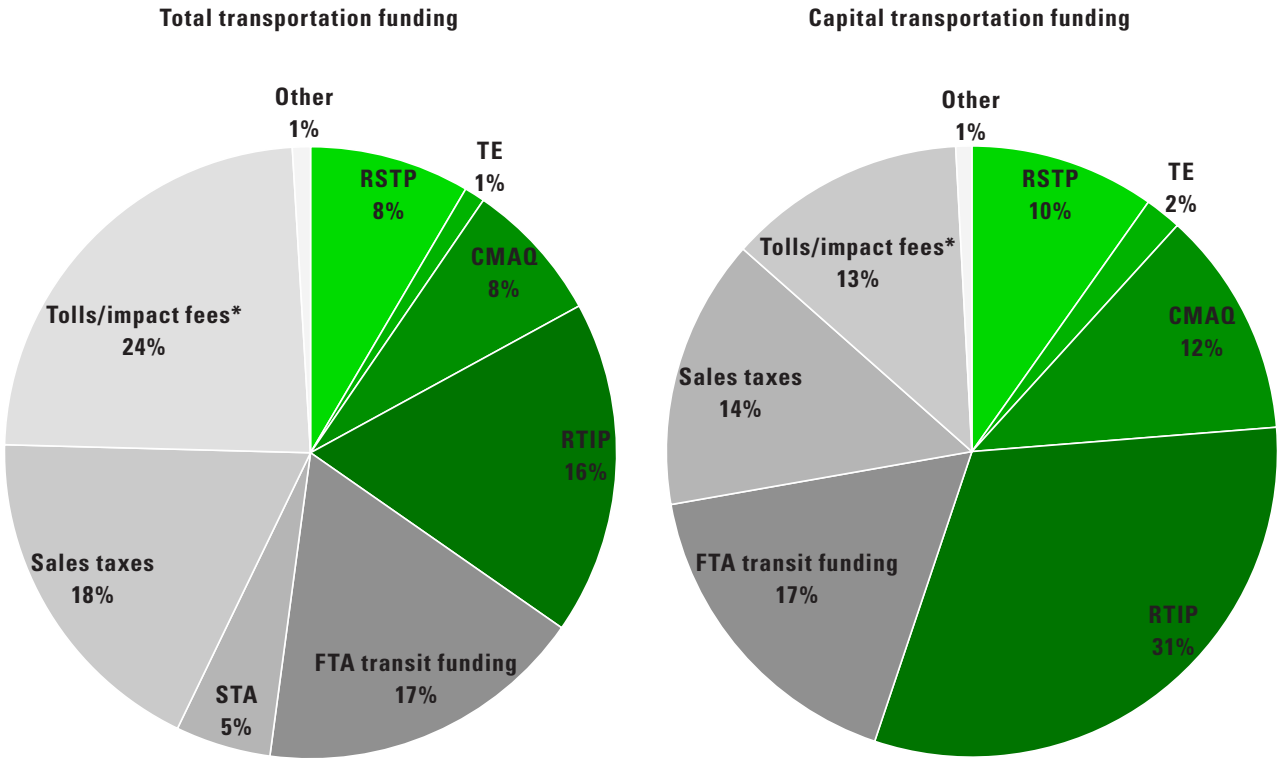
Even discretionary sources are not without constraints. MPOs often rely on local governments to submit projects for the RTIP, and staff at some MPOs reported that they had limited discretion to exclude projects that did not meet regional goals. Since CMAQ funds can only fund transit operations in new systems for the first three years of service, one interviewee felt that "it's really dangerous to rely on that money" in order to expand service to a new smart growth development. RSTP funds are constrained by virtue of their flexibility; since they are one of the few federal revenue sources available for road maintenance they are highly sought after by local governments. According to one planner, the money that MPOs allocate "all adds up to supporting smart growth, and anything that supports transit and bike/ped is certainly crucial, but it's a question of whether or not it works in a coordinated fashion."

However, the assumptions that limit the amount of funding that MPOs consider discretionary are not set in stone, and altering these assumptions will help MPOs meet their targets under SB 375. One planner reported that by reconsidering the assumptions that informed in its funding forecasts, SANDAG was able to double the amount of discretionary funding that

would go into implementing its current SCS. While revising these assumptions will not necessarily ensure that funding will be there for projects that support an SCS, it does allow SANDAG to include more such projects in its RTP, allowing it to choose from a greater variety of options as it moves forward with implementing its strategy.

MTC has adopted a policy that changes the definition of "committed funds" from "Transportation funds for operations and maintenance as programmed in the current Transportation Improvement Program, specified by law, or defined by MTC policy" to funding "directed to a specific entity or for a specific purpose as mandated by statute or by the administering agency" (Metropolitan Transportation Commission 2011a). The sources that are "de-committed" by this policy are mainly devoted to transit, and include a large portion of the FTA transit grants shown in Figure 4, STA Population-Based funds, the three-county sales tax that goes toward operating the Bay Area Rapid Transit system, and Local Transportation Funds. The new policy doubles the amount of funding that MTC considers discretionary (Metropolitan Transportation Commission 2011a). Instead of distributing this money unconditionally to transit agencies and local governments, MTC can now place conditions, which could include criteria prioritizing projects or transit service improvements based on the land use strategy in the SCS, on these funding sources.

Figure 4. Total and capital transportation funding allocated by MPOs, by source (constrained funding sources in gray, discretionary funding sources in green; see Appendix 1 for details)



*Only MTC and SANDAG collect tolls, so the large share of tolls shown in Figure 4 is not broadly representative.

3. The amount of funding that an MPO considers committed to existing projects.

SB 375 contains a grandfather clause that exempts certain projects programmed for funding before December 31, 2011 from meeting the bill's requirements, which is likely to further limit the amount of funding that will be available to implement an SCS. MTC is the only MPO that includes information in its current RTP on what proportion of the revenues that it controls are discretionary revenues not committed to other projects. According to these estimates, $32 billion, or 14 percent of the $218 billion in total investments contained in the RTP, are discretionary funds not already committed to projects. Roughly half of these funds—seven percent of the total—go toward capital projects, including not only transit and freeway expansions, but also bicycle facilities, grant programs for local smart growth projects, and investments in ramp meters and other TSM technologies (Metropolitan Transportation Commission 2008b, 41). According to our analysis, MTC controls 32 percent of regional capital dollars, so this means that roughly 79 percent of MTC's capital funding is committed to existing projects. If other MPOs have a similar proportion of their funding committed to existing projects, then that would mean that only three percent of total capital spending will be available to implement the first round of SCSs.

MTC's 2008 RTP is based on a traditional set of assumptions about what constitutes both a committed funding source and a committed project. MPOs have typically considered a project "committed" if it is included in a current TIP, and SB 375's grandfather clause applies to projects in a current TIP or in a transportation sales tax measure that was approved by voters prior to 2009. However, MTC has determined that the grandfather clause in SB 375 does not prevent it from evaluating projects "per the project performance assessment process and at Commission discretion based on financial constraint, policy or other considerations" (Metropolitan Transportation Commission 2011b). In reality there are several different possible levels of "commitment" as projects move through various stages of development (e.g., planning, design, environmental review, right-of-way acquisition, contracting, construction), and the regional transportation planning process (e.g., inclusion in the RTP, inclusion in the TIP, allocation of funds). In the committed funds policy discussed above, MTC's board also elected to narrow the definition of "committed projects" from projects included in the TIP to projects that have completed an environmental impact report (EIR). Even projects included in transportation sales tax expenditure plans, which MTC automatically considered committed under its previous policy, would be subject to performance assessment during the RTP process. This will give MTC more flexibility to select projects that best meet shifting regional needs and policy goals in future RTP updates.

In adopting this policy, MTC's board rejected an even narrower option that would define a committed project as one that "is under construction, as indicated by utility relocation, subsequent construction activities, or vehicle award" (Metropolitan Transportation Commission 2011a). MTC staff's analysis of this option suggests that further limiting the number of projects that the agency considers committed would lead to better fiscal management of transportation funds. Staff compared cost estimates generated during the environmental review phase with more current cost estimates for 16 projects and found that post-EIR cost increases are common, averaging 30 percent for highway projects and 50 percent for transit projects (Metropolitan Transportation Commission 2011a). Re-considering committed projects allows MPOs two potential ways to meet SB 375 targets, both by avoiding projects that increase GHG emissions and by freeing up money through improved fiscal management to fund projects that meet regional goals.

2.3 Travel models

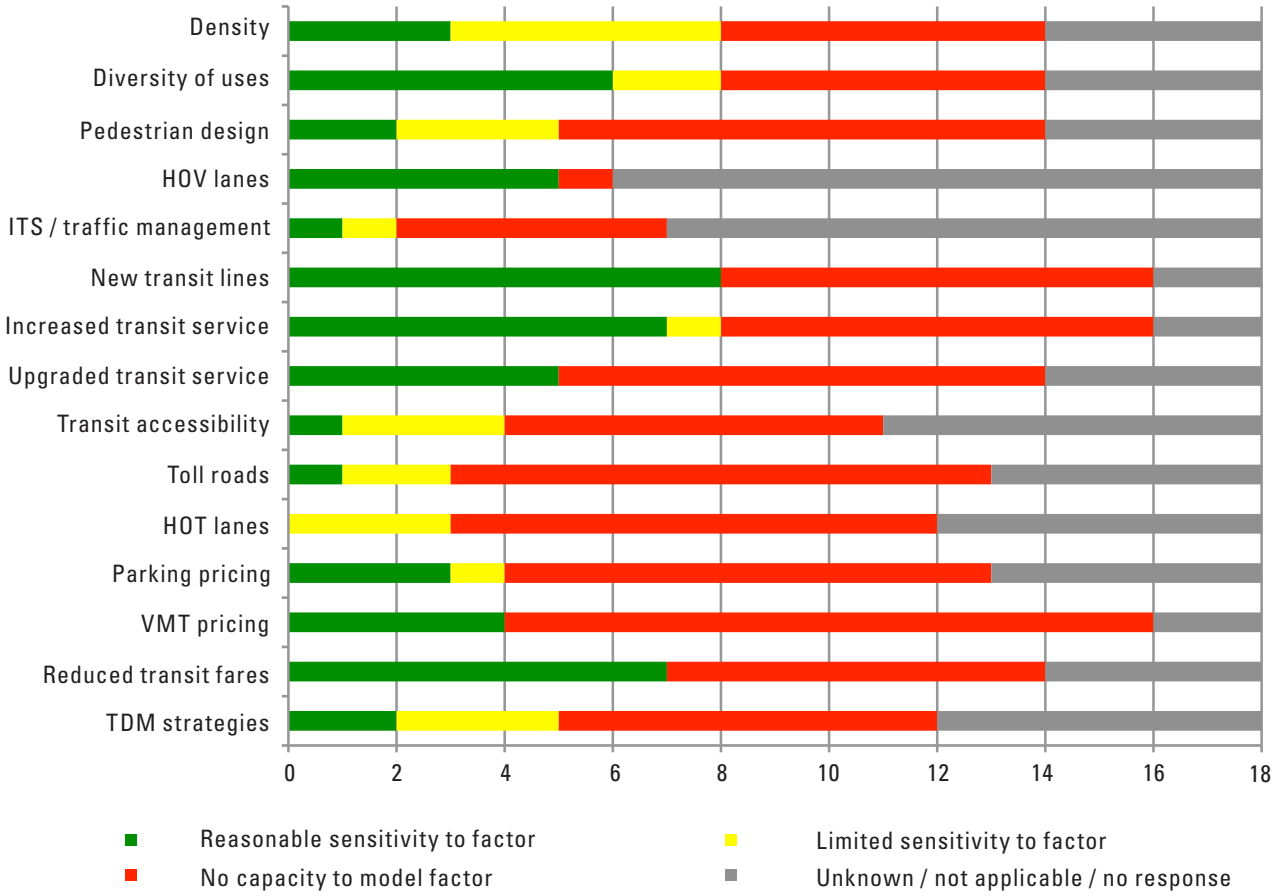
Forecasting the impacts of a long-term land use and transportation plan is a difficult and sometimes speculative task. It requires planners to predict how the plan will affect the travel choices made by the millions of residents who live in a given metropolitan area, and then to estimate environmental, economic, and social impacts based upon the results. Under the Clean Air Act, MPOs are required to use computerized travel models to demonstrate that an RTP will meet federal air quality standards for the region (40 CFR 93.122). In essence, SB 375 creates a parallel requirement that MPOs also use their models to demonstrate that an RTP and SCS will also meet state GHG reduction targets.

The system that serves as the basis for most travel models that are still in use today was developed in the 1950s in order to site new highway facilities. During the 1970s and 80s, the federal government funded the development and implementation of travel models and made these models the standard travel analysis tool for all large MPOs. Since then, federal policy and emergent issues in growing metropolitan areas have required increasingly sophisticated modeling. Instead of building new highways to increase mobility, many MPOs now focus on removing bottlenecks, managing highway facilities, and providing alternatives to driving in order to reduce pollution and congestion without limiting travelers' access to destinations. However, federal funding for model development has not kept pace with the evolving issues now facing regional planning agencies, so models are not always up to the demands that MPOs place on them (Transportation Research Board 2007).

The passage of SB 375 prompted a statewide examination of MPOs' travel models. Since MPOs need to use their models in order to demonstrate that their SCSs meet GHG reduction targets, the sensitivity of models will play a role in determining which policies an MPO may include in its SCS. In 2009 the SB 375 Regional Targets Advisory Committee (RTAC), which was convened to recommend a process for setting regional GHG reduction targets, surveyed MPOs on the sensitivity of their travel models to 29 factors. These included strategies to reduce GHG emissions, such as transit projects, road pricing, and traffic management programs, as well as land use, economic, and demographic factors that can help an MPO accurately estimate emissions and create an effective SCS. Figure 5 summarizes the survey responses for 15 key factors.

No MPO reported that its model was sensitive to all of these factors, and most models were not sensitive to the majority of them. Since SB 375 requires that MPOs create a regional land use strategy, it is particularly important that models be sensitive to land use factors such as density, diversity of uses, and pedestrian design (the "3 Ds"). Only one MPO reported that its model was sensitive to all three, though four others reported that their models would account for the 3 Ds once planned upgrades were complete. MPOs also reported several other model upgrades that were either planned or underway (SB 375 Regional Targets Advisory Committee 2009a). Some of these upgrades have since been funded by the Strategic Growth Council (SGC), which was established to allocate grants toward sustainable community development, and approved $7.5 million in modeling incentive grants in 2009. However, the grant process also underscored the high cost of bringing travel models up to date. As part of their applications, MPOs submitted model improvement plans that identified the necessary upgrades to prepare for creating their first SCS. We conducted an analysis of all of these applications and found that collectively, MPOs identified $36 million in needed improvements. Some of these already had funding through sources other than the SGC, but MPOs also identified an additional $11 million in unfunded needs, along with the $3.5 million in grant requests that were not funded by the SGC. These esti-

Figure 5. MPOs' self-assessed ability to account for key GHG reduction policy factors using their travel models (SB 375 Regional Targets Advisory Committee, 2009a)



mates do not necessarily account for the ongoing costs of operating a more complex travel model, which according to interviewees can be considerable due to longer run times and more intensive data needs.[2]

Recently, many researchers have examined the shortcomings of travel models in depth and made technical recommendations for increasing model sensitivity to better account for land use changes and for travelers that walk, bike, or take transit. Caltrans' *Assessment of Local Models and Tools for Analyzing Smart Growth Strategies* (California Department of Transportation 2007) is one of the most thorough such efforts, and discusses innovations in travel modeling by planning agencies in California in considerable depth. The RTAC's final report to ARB (Senate Bill 375 Regional Targets Advisory Committee 2009c) contains technical recommendations for using models to implement SB 375. DiShanzo and Matute (forthcoming) recommend ways that ARB and the California Transportation Commission (CTC) can create more effective GHG reduction targets, standardize models across

[2] Based on an analysis of all Modeling Incentive Grant applications submitted by MPOs (AMBAG 2009, BCAG 2009, MTC 2009, SACOG 2009, SANDAG 2009b, San Joaquin Valley MPOs 2009, SLOCOG 2009, SBCAG 2009, SCRTPA 2009, SCAG 2009b, SGC 2009a and 2009b, TMPO 2009).

MPOs, and improve model accuracy. Together, these resources outline the necessary steps to ensure that models accurately assess an SCS once it has been created. However, models can also play an important role in informing the creation and implementation of an SCS by providing stakeholders with feedback on different projects and policies. In this section we focus on how MPOs use their models in this latter capacity. MPOs' model improvement plans and their responses to the RTAC survey suggest that it may take several RTP cycles for MPOs to improve their models to the point where they can produce accurate long-term estimates of GHG emissions and the potential of different land use and transportation strategies to reduce these emissions. In the meantime it is crucial that MPOs use their resources to engage stakeholders to take action and begin reversing California's decades-long trend toward sprawl.

2.3.1 Travel models' role in informing policy

All of the attention and funding that SB 375 has channeled toward regional travel models suggests an assumption that better information drives better policy—that if travel models show that a given policy has a greater potential to reduce GHG emissions, MPOs are more likely to pursue that policy in order to meet their SB 375 targets. The MPO staff that we interviewed felt that at best, model outputs were "one piece of information that boards consider among many." Some said that, in fact, policy drives modeling, and that board members choose to enact policies without considering model results, and then direct staff to use models to refine or to demonstrate the effects of these policies. In the words of one modeler at an MPO that recently upgraded its travel model to better account for the effect of land use on travel behavior,

> Enhancements are nice, but I don't know how much they're really going to change what we're doing; they're just going to make our model more sensitive… Our board is conservative, and is uncomfortable with model-driven policy development, so it's better for us to use modeling to show the impacts of policy.

Another interviewee told of an instance in which an MPO's board had directed staff to simply change the land use assumptions informing its travel model in order to demonstrate that the region would make air quality conformity instead of enacting policies to reduce pollution. Even in cases where an MPO's board gives more credence to model results, staff mentioned that it is difficult to upgrade a complex model in response to new policies: "when upgrading, we try to think about the policies that are on people's minds, but people's minds change quicker than models do."

In the federal air quality conformity process, which one modeler dismissed as a "mandatory useless exercise," models often serve as a means for MPOs to justify policies that are already in place. However, in order to meet California's GHG reduction targets, the policies that govern California's growth must change. Some interviewees mentioned cases in which MPOs had used data to shape policy:

> We said, 'you're going to build a big parking lot anyways, but you should at least include some complementary land uses,' and we provided the research to back it up, some of which was academic, but it was also backed by our travel survey, which showed that within a half-mile of stations, the mode split is about 40% non-auto.

In order for MPOs to build support among stakeholders for their SCSs, they need to discuss not just how the plan will affect GHG reductions, but also a variety of other co-benefits of smart growth, including reduced congestion, taxpayer savings on services and infrastructure maintenance, savings on house-

hold transportation costs, open space preservation, public health benefits, and increased access to goods and services for low-income communities (SB 375 Regional Targets Advisory Committee 2009c, 42-43). However, a complex travel model may not be the best tool with which to analyze many of these co-benefits and conduct outreach.

2.3.2: Sketch planning tools and public outreach

Many MPOs have developed or are in the process of developing "sketch planning" tools to use when creating land use plans and scenarios. These tools estimate vehicle travel, GHG emissions, and other impacts based on simplified land use scenarios instead of simulating travel, so they are much easier to operate, quicker, and more transparent than travel or land use models, and can incorporate a wider variety of performance measures. At the same time, they can be reasonably accurate if planners program them with assumptions derived from travel models or from academic research. MPOs must use a travel model to meet state and federal conformity requirements, but sketch planning tools can help build consensus in favor of smart growth policies and data-driven planning. In the words of one modeler,

> Models tell a story, and that story should inform policy. What we typically do is generate numbers, which is not the point… Sketch planning tools can tell a story in a manner that's more transparent than a travel model.

According to one planner working at an MPO that used sketch modeling tools in order to create its blueprint plan, "as we produced better data, the outreach worked to enhance the public understanding of and demand for this data." Using a sketch model to hone scenarios can also save MPOs money and time by reducing the need for labor-intensive travel model runs.

The state has funded the development of two sketch planning tools. I-PLACE^{3}S, which was developed by the California Energy Commission, is a map-based model that allows users to alter a land use scenario and provides feedback on how these changes affect performance measures (Sacramento Area Council of Governments 2010). I-PLACE^{3}S is web-based, and the software is freely available, but users must pay a private company to store their data on an online server. Another tool, Rapid Fire, was developed by Calthorpe Associates with funding from the California High-Speed Rail Authority and the Strategic Growth Council. Rapid Fire is a spreadsheet-based tool that estimates several environmental and economic performance measures based on the proportion of land use types that a given scenario contains (Calthorpe Associates 2011a). However, the state did not fund a wider release of Rapid Fire, and Calthorpe Associates is currently refashioning it as a proprietary tool, while developing a map-based tool, Urban Footprint, for public release (Calthorpe Associates 2011b).

SB 375 acknowledges the importance of the type of public engagement that sketch planning tools are meant to support, and the bill increases the requirements for local governments to conduct outreach during the RTP process (State of California Government Code, §65080(b)(2)(E)(iii)). Sketch planning models and scenario development account for roughly ten percent of the funding that MPOs requested from the SGC (Strategic Growth Council 2010a). Given that many MPOs have found sketch planning models to be simple and effective outreach tools, and that these models can account for a variety of performance measures that travel models cannot, it may be more cost-effective for the state and MPOs to devote resources to developing these resources rather than to creating more complex travel models.

2.3.3: Local transportation planning tools

MPOs' boards are made up of local elected officials who are often more likely to be responsive to local issues than regional ones. In spite of the emphasis that SB 375 places on developing regional models that are sensitive to smart growth, the tools that cities and counties use to evaluate transportation decisions focus much more on local congestion than on regional benefits, and therefore encourage local opposition to smart growth projects rather than mitigating it. Regional travel models are too complex to apply to individual development projects, so instead local governments typically use two other methods: trip generation studies and level of service analyses.

In order to calculate the trips generated by a proposed project, local governments typically use the process outlined by the Institute of Transportation Engineers (ITE) in its *Trip Generation* manual, which involves multiplying some indicator of intensity of use (e.g., number of dwelling units or retail square footage) by a trip generation rate that relates this indicator to the number of trips exiting and entering a project. ITE's trip generation rates are based on traffic counts conducted at sites in suburban Florida (Arrington and Cervero 2008). Researchers have shown that this "suburban bias" causes the ITE to "understate the traffic benefits of mixed use developments" (Langdon 2008, 1), overestimating the amount of trips generated by these developments by an average of 44 percent (Arrington and Cervero 2008, 4). ITE estimates also do not account for the potential reductions in vehicle trips in transit-oriented developments. Many cities base minimum parking requirements on trip generation studies, which imposes a double penalty on new developments in dense, mixed-use urban areas. First, the ITE method overestimates the amount of parking that these developments need to provide, and since land costs are higher in central areas, developers must meet requirements with structured parking, which costs more per space to build than a surface parking lot (Shoup 2005, Millard-Ball 2002). Recently, researchers, Caltrans, and air quality management districts have created several new methods for adjusting ITE estimates in order to better account for sustainable transportation modes and smart growth developments (South Coast Air Quality Management District 2007, Caltrans 2009, Caltrans 2010b, California Air Pollution Control Officers' Association 2010). These methods account for factors such as density, mix of uses, transit service, and adjacent bicycle and pedestrian facilities. Though 3 D adjustments and other factors derived from a regional travel model that is based on travel surveys may be more accurate to use when estimating trips within a given region, none of these resources refer users to MPO model outputs.

Once local governments estimate how much traffic a project will generate, they then estimate how this traffic will affect delay on surrounding roads using level of service (LOS), a metric that compares vehicle volumes to road capacity. LOS does not consider modes besides automobiles, so sidewalks, bicycle lanes, or traffic calming projects cause a decline in LOS simply because they increase vehicle delay, even though they improve the environment for users of more sustainable transportation modes. The majority of local governments in California have minimum auto LOS standards in their general plans (Governor's Office of Planning and Research 2010a, 110-111). Since streets in built-out areas are often already congested, and the projected additional traffic from new developments only worsens LOS, these standards favor development at the urban fringe, where there is more road capacity to handle new trips (San Francisco County Transportation Authority 2003, 3).

The Highway Capacity Manual (HCM), which offers guidance on LOS methodologies for different transportation facilities, now includes pedestrian LOS measures, and the National Cooperative Highway Research Program has developed a multimodal LOS

(MMLOS) for urban streets that estimates LOS for pedestrians, bicyclists, and transit users in addition to drivers. These resources are important steps toward ensuring that transportation planners and engineers consider all modes when making transportation decisions, but they also illustrate the need for further research. The pedestrian LOS measurement used in the most recent Highway Capacity Manual is based on the amount of space available to pedestrians (Transportation Research Board 2000). This relies on the assumption that pedestrians, like cars, primarily aim to avoid congestion—an assumption belied by a stroll through any busy retail district. MMLOS uses qualitative measures of pedestrian and bicycle LOS that are based on surveys, while auto LOS is a quantitative measurement based on the amount of delay that vehicles experience (Dowling et al 2008). This makes it difficult to use MMLOS to compare the impact that a project will have on different modes.

In a 2009 survey of local governments, 40 cities and counties reported using "alternative methodologies, other than LOS standards, to measure traffic impacts" (Governor's Office of Planning and Research 2010a, 112), and following the passage of Assembly Bill 1358, the Complete Streets Act, the general plan guidelines encouraged the use of MMLOS and other alternatives (Governor's Office of Planning and Research 2010b). Instead of adopting alternative measures, cities such as Sacramento and San Jose have passed policies that exempt projects in key infill areas from assessing LOS impacts on nearby intersections.

These are important first steps, but more concerted efforts will be necessary to align local transportation planning with regional decision-making under SB 375 on two fronts. First, local governments need new tools that better capture the benefits of smart growth decisions, particularly with respect to LOS. Improving these tools also has the potential to inform regional travel models, which do not include the local streets that bicyclists and pedestrians typically travel on, and only use rudimentary indicators of bicycle and pedestrian design that do not account for the full range of design improvements that can encourage people to travel by these modes. Second, MPOs and the state need to work with local governments to reform policies such as minimum parking requirements and LOS standards that penalize smart growth developments based on results from outmoded development tools. The City of San Francisco is working on a project to simultaneously reform methods and policies by replacing LOS with a measure of automobile trips generated (ATG). Under this approach, projects will be charged a mitigation fee based on the amount of trips that they generate rather than on their impact on delay at nearby intersections. The City considers ATG a better indicator of a project's environmental impacts and its system-wide transportation impacts, and believes that using ATG as the basis for environmental review of transportation impacts will make the process easier to administer and support the City's climate and transportation policies, which prioritize transit, bicycles, and pedestrians. ATG will also lead to a more equitable review process, since all projects will pay a mitigation fee based on their incremental impacts on the transportation system. Under LOS, only projects that lower a nearby intersection's LOS grade pay mitigation fees, while previous projects that have added traffic that contributes to the eventual decline in LOS are not charged. San Francisco's planning and transportation departments intend to accompany this change with a renewed assessment of trip generation rates (San Francisco County Transportation Authority 2008b). Our case study of TransForm's GreenTRIP program (see text box on page 33) describes one effort to promote alternative trip generation analyses and influence local development decisions in more detail.

Case Study: TransForm's GreenTRIP certification program

GreenTRIP is a certification system created by TransForm, a land use and transportation advocacy group in the Bay Area, in order to recognize "multi-family, mixed-use, in-fill projects that apply comprehensive strategies to reduce traffic and greenhouse gas emissions." (TransForm 2011). TransForm staff see GreenTRIP as a "teaching tool that we can use to explain to elected officials, developers, staff, and the public about the benefits of this type of development," and counter neighbors' fears that projects will clog local streets.

In order to get certified by GreenTRIP, a project must meet three criteria. The thresholds for each vary according to the type of neighborhood in which the project is located:

1. *Reduce driving*. TransForm staff use URBEMIS software, which adjusts trip generation forecasts based on density, access to jobs and retail, pedestrian design, and proximity to transit and bicycle facilities in order to predict travel demand from a new development.
2. *Provide less parking*. Maximum requirements range from 0.75 to 1.5 spaces per household.
3. *Apply additional traffic reduction strategies*. These include "unbundling" parking and providing discounted transit passes, or providing free car-sharing memberships. (TransForm 2010a)

Once a project is certified, TransForm creates outreach materials (Figure 6) that describe how the project reduces vehicle trips, and staff testify in favor of the project at public meetings. TransForm recently conducted a pilot application of GreenTRIP on five projects, and we spoke with developers, planners, and elected officials who were involved with each of these projects about how the program worked as an incentive for smart growth.

Most of our interviewees believed that GreenTRIP "has all the right fundamentals" and addresses important issues facing projects that have the potential to reduce GHG emissions, particularly public concerns about parking, which can delay approval. For developers, these delays translate into "real money;" one developer estimated that the four years that it took to get his project entitled cost an additional million dollars. Even if traffic studies use trip generation methods that account for the benefits of smart growth, interviewees felt that "it's difficult for a community to understand traffic" because "neighbors have two or three cars, and automatically assume that others are going to as well." One interviewee told us that "planners have to do a much better job to show people that near transit vehicle trips do go down," and GreenTRIP is an effort to do just that.

Four of the developers with whom we spoke mentioned that GreenTRIP was influential in determining which traffic reduction strategies they used. In most cases, the five pilot projects already included low parking ratios or some sort of traffic demand management, but GreenTRIP's traffic

(Continued) ⟶

reduction strategies helped developers "focus on the essentials." Three developers chose to provide free transit passes to each unit for 40 years, while another extended the span of the free carshare membership provided for residents. In some cases, these changes convinced local planners to lower parking requirements, allowing developers to save money on infrastructure.

However, none of our interviewees felt that GreenTRIP had changed the outcome of the development process for any of the pilot projects. In part, this is because the pilot round of GreenTRIP certification focused on projects that were already on the way to entitlement. Several projects have also been put on hold due to the current slump in the real estate market, so "there hasn't been an opportunity to share" GreenTRIP certification with the public. At best, developers felt that GreenTRIP added to existing support, and "was just a good way for us to get the word out about our project." One planner said that GreenTRIP helped build public acceptance by providing "an outside perspective; it was another agency looking at [the project] and saying, 'yes, we think this will achieve what the city thinks it will achieve.'"

Some interviewees felt that GreenTRIP will help with approval in the future, because projects will be certified earlier in the development process and developers would have more of a chance to use the outreach materials, and because more local governments are developing climate action plans and other policies that focus on the benefits that GreenTRIP emphasizes. Other developers said that they were less likely to use the system again, especially once TransForm starts charging fees for certification. There are several other sustainable development certification and rating systems currently on the market, including LEED, GreenPoint, and Energy Star. Though none of these systems address transportation impacts in as much depth as GreenTRIP, some interviewees said that they would not want to pursue yet another certification when GreenTRIP does not have the recognition that some of these other systems do. Affordable housing developers, who are more likely to rely on public funding sources for projects, cautioned that some of these sources prohibit traffic reduction strategies like unbundled parking, or that providing transit passes "may mean that you give up some permanent loan financing."

GreenTRIP is now in its full launch phase, and TransForm has changed project requirements in order to increase eligibility for the program and continues to accept applications and work with the current round of applicants. Whether GreenTRIP takes a more direct role in facilitating TOD projects depends on how well TransForm can continue to build recognition for the system. Some interviewees suggested that GreenTRIP could ultimately be used in local zoning guidelines or applied as a CEQA mitigation measure, in which case the system could become a powerful tool for helping California reduce VMT and meet SB 375 targets, especially since TransForm is currently seeking funding to bring the program to other large metropolitan areas in California.

2.4: Incentives for implementing an SCS

SB 375 includes two measures to help MPOs and local governments implement an SCS. The bill creates several different types of CEQA incentives for projects that conform to an SCS and creates new provisions that expose local governments to lawsuits and limit their ability to disapprove certain housing projects if they have not zoned to provide the housing that they are allocated through the RHNA process, which is aligned with the SCS. In addition, many MPOs have created grant programs to help local governments create plans and implement projects that support regional "blueprint" land use plans, which are the forerunners to the land use plans that SB 375 requires MPOs to include in their SCSs. This section discusses the potential for each of these approaches.

2.4.1 CEQA streamlining for SCS projects

The California Environmental Quality Act (CEQA) requires that all public and private plans and projects that have significant environmental effects prepare an environmental impact report (EIR). An EIR examines the significant impacts of a plan or project across a variety of categories (e.g., air quality, water quality, GHG emissions, noise, traffic) and identifies alternatives and mitigation measures (California Code of Regulations 14 §15000 *et seq*., California Public Resources Code §21002.1(a)). CEQA is a controversial law among planners; proponents praise it for encouraging transparency and public involvement in planning decisions, while critics allege that it creates unnecessary administrative delays and emphasizes local quality of life over regional and global environmental issues (Landis 1995, Barbour and Teitz 2005). SB 375 does not contain broad CEQA reforms; instead it allows for five paths to CEQA relief:

1. Projects that are consistent with an SCS or APS that meets GHG reduction targets are exempt from analyzing cumulative traffic impacts, growth inducing impacts, and GHG emissions from cars and light-duty vehicle trips in their EIRs.
2. Transit priority projects, which are projects located within a half-mile of a transit station that has peak service at least every 15 minutes, have a net residential density of 20 units per acre, meet minimum criteria for floor area ratio, and are consistent with the SCS or APS, are not required to analyze off-site alternatives or cumulative impacts that were addressed in a prior EIR.
3. Instead of filing a mitigated negative declaration, a transit priority project that can mitigate all environmental impacts to a level of insignificance can undergo a sustainable communities environmental assessment, which leaves the project less vulnerable to legal challenges.
4. Transit priority projects that include at least 20 percent affordable housing and create sufficient open space are exempt from CEQA altogether.
5. Local governments may adopt a uniform set of traffic mitigation measures for high-density residential developments that would exempt these projects from complying with additional traffic mitigation requirements.

In general, the professionals that we interviewed who were familiar with the CEQA process felt that the CEQA reforms contained in SB 375 would not facilitate any new smart growth development in the short term. Many agreed that the criteria for a CEQA-exempt transit priority project were so numerous and strict that it would be exceedingly difficult for a project to meet all of them. One planner working on a specific plan for a large site said, "SB 375's CEQA exemptions are too constrained to work as widely as I'd like." The affordable housing and open space requirements for CEQA-exempt projects may be difficult to meet in urban areas that have the right transit service and real estate market for transit priority projects, but where land acquisition costs are high. Meanwhile, less urbanized areas may not have the necessary densities or transit service to create transit priority projects. Planners from the San Joaquin Valley and the Central

Coast felt that, in the words of one, "this represents a lack of consideration for rural governments" in some of the regions that are expected to accommodate the majority of California's population growth. Some interviewees drew unfavorable comparisons between SB 375's CEQA exemptions to the exemptions for certain infill housing developments (California Public Resources Code §21159.24), which according to the California Performance Review (2007) are "too restrictive to encourage reuse of vacant and underused land in older, developed urban areas"

Some interviewees felt that the clause in SB 375 that exempts developments that are consistent with an SCS from analyzing cumulative traffic impacts, growth inducing impacts, and GHG emissions from cars and light-duty vehicle trips is a useful incentive, since it "could significantly reduce the cost and scope of consultant traffic studies, and presumably the exposure to NIMBY opposition." However, other planners with whom we spoke pointed out that this change would not reduce these projects' exposure to community opposition. Lead agencies in the CEQA process are typically local governments, and nearby residents are most likely to be involved in the process, so cumulative impacts are not necessarily a strong sticking point. According to the most recent survey of CEQA projects and outcomes, the majority of required mitigation measures have been for local traffic and noise impacts, not cumulative impacts (Johnston 1991).

Even interviewees who were optimistic about the potential impact of SB 375's CEQA reforms believed that it is going to be a while before these reforms have an impact. One interviewee pointed out that the new classifications introduced by SB 375, such as "sustainable communities environmental assessment" and "transit priority project," "must be defined through litigation." Another noted that the current real estate market will make it difficult to find test cases that will help to define these terms:

> Slowly developers will propose projects that meet SB 375 streamlining requirements to get a leg up in areas that are environmentally sensitive, and this will snowball outward to other areas as those projects get put into place. But projects do have to jump through a lot of hoops to get the benefits of streamlining, and developers today might not see the market for that kind of growth.

Though interviewees were divided about the impact that SB 375's CEQA reforms would ultimately have, most praised the reforms for linking environmental review back to regional plans. In the words of one interviewee, "the problem is not that CEQA doesn't allow you to look at the larger picture, but that lead agencies aren't doing that." Over the past several decades, CEQA's project-by-project approach to environmental analysis has become a de facto substitute for comprehensive long-range planning (Barbour and Teitz 2005). By tying CEQA streamlining to a regional planning process, SB 375 has the potential to help local agencies and the public see transportation as a regional issue rather than a local one. According to one interviewee, "The good thing about SB 375 is that it encourages a programmatic look at the transportation system. There's something to the fact that cities and counties now need to look at problems extending beyond their borders." While SB 375's CEQA reforms may not change the outcome of the environmental review process for smart growth projects, they do allow the comprehensive planning effort involved in creating an SCS to substitute for some aspects of project-level analysis, saving the developers of these projects money and effort.

Though SB 375 creates new categories of CEQA exemptions and review for projects that conform to an SCS, these changes are in effect already allowed under CEQA. The California Code of Regulations states that projects that are consistent with a general

plan, specific plan, or zoning ordinance for which an EIR has already been completed need only conduct an EIR for significant environmental impacts that are specific to that project (14 California Code of Regulations §15152). This approach, known as tiering, is commonly used in specific plans for large developments, and several interviewees suggested that it could also be applied to the SCSs that MPOs create under SB 375. Following the 2007 passage of Senate Bill 97, which established that GHG emissions are appropriate subjects for CEQA analysis, a series of amendments to the Code of Regulations specified requirements for "GHG reduction plans" that can streamline the CEQA review of later projects that are consistent with these plans (14 California Code of Regulations §15183.5). If a GHG reduction plan includes adequate mitigation measures and undergoes an environmental impact report (EIR), and a later project incorporates those mitigation measures and does not have other significant impacts, the projects is not required to undergo an EIR.

Though the Code of Regulations does not allow regional plans to work as GHG reduction plans, interviewees suggested that regional governments could work with local governments to create general plans or climate action plans that refer back to the transportation GHG emissions analysis conducted in the SCSs. This would enable these local governments to provide more extensive CEQA relief to projects that fulfill the goals of an SCS, while at the same time ensuring that projects that benefit from tiering and streamlining are also consistent with other local goals. Though coordinating with the SCS may add another layer of complexity to local general plan updates, especially given the relatively short RTP cycle, planning grant programs like those discussed in Section 2.4.3 may provide an opportunity for MPOs to coordinate with local governments in offering more extensive CEQA relief to projects that implement SCSs.

2.4.2 Aligning RHNA with the SCS

SB 375 also aligns the Regional Housing Needs Allocation (RHNA) process with the RTP cycle, requiring MPOs to use the same growth forecast in their RHNA as they do in the RTP and to complete their housing allocation every other time that they update their transportation plan. The bill also requires that MPOs accommodate all projected housing growth in their region in the SCS and allocate housing accordingly, rather than outsourcing housing to neighboring regions, as they were previously allowed to do. Finally, SB 375 creates new deadlines for zoning to support housing targets, and if cities do not meet these deadlines they are limited in their ability to disapprove or condition new housing developments and are vulnerable to lawsuits. Like CEQA, the RHNA process has generated a fair share of controversy, and many local governments either contest or choose not to comply with their RHNA housing quotas (Lewis 2003). Though many of our interviewees felt that aligning the RHNA process with the SCS is a sensible step in integrating land use and transportation planning, many also warned that tying the two together and increasing local housing allocations could generate controversy as MPOs collaborate with local governments to create an SCS.

In spite of the procedural changes that SB 375 makes to align the RHNA and RTP processes, some interviewees warned that the two processes' goals are still fundamentally at odds with each other. According to one regional planner, "the RTP growth forecast emphasizes [transportation] efficiency, whereas RHNA ensures that all local governments take on a fair share of affordable housing growth," regardless of whether they are regional centers or far-flung suburbs. Both processes have different time horizons, use different data sets and projections, and are overseen by different state agencies. Some interviewees felt that this presents a serious conflict. One warned, "The RHNA and RTP processes are difficult to integrate. Both pro-

cesses have separate objectives, and both sets of objectives have to be met" while another voiced concern that "ARB sets GHG targets and HCD [the department of Housing and Community Development] sets the RHNA, but they don't have to collaborate."

Even if aligning RHNA with the SCS gets cities to zone for more housing, there is no guarantee that the housing will get built. A 2003 study found very little correlation between whether a city zoned to meet its RHNA allocation and actual construction (Lewis 2003). Recent RHNA compliance studies conducted by MPOs support this conclusion. SCAG and ABAG found that regional construction of housing fell short of goals by seven and 21 percent, respectively, with much larger gaps in affordable housing production and in central cities (Southern California Association of Governments 2004b, San Francisco Planning Department 2010). Ultimately, the market determines where housing will take place, and zoning only plays a small role in shaping the market. This fact, coupled with local governments' reluctance to provide housing that generates few tax dollars and requires more spending on services, has fueled local mistrust of the RHNA process, and some interviewees worried that this mistrust would negatively affect regional planning under SB 375. One planner reported that his MPO contested its RHNA allocation after "the state gave us an exceedingly high number of units that did not match building activity levels and resource constraints," and that as a result many local governments in the area were "almost paranoid" about state-mandated long-term planning, and were unwilling to apply for grants to create regional blueprint plans.

However, another set of interviewees felt that incorporating RHNA into the SCS was a logical and necessary step in integrating land use and transportation planning. As an example, one planner referred to a case where San Joaquin COG's RHNA allocated significant growth to unincorporated San Joaquin County because the community was building a new suburban development on cheap land far from existing urban areas, and felt that "that wouldn't fly under SB 375, because it's ultimately increasing commuter traffic to the Bay Area." Another interviewee felt that aligning the two processes helped offset the cost burden undertaken by cities that are required to take on more housing, creating "more confidence that if you get a higher RHNA you also get more transportation investments." Finally, one interviewee said that in its current incarnation "RHNA just reinforces the status quo because it's based on existing trends," and that SB 375 could provide support for more policy-based housing forecasts. Though zoning alone does not build housing, these forecasts could become the basis for local governments to provide financial incentives for housing development, such as dedicated revenue streams and tax-increment financing districts. Overall, our interviews suggest that aligning RHNA allocations with the SCS has the potential to channel housing growth to cities that are well served by transit and offer good access to local jobs and retail, but deeper changes to how the state and MPOs allocate housing may be necessary before this potential is realized.

2.4.3 Smart growth incentive grants

In addition to the CEQA incentives created by SB 375, MPOs can also offer additional incentives for smart growth developments. MTC, SANDAG, and SACOG currently provide capital grants and planning grants to help local governments create plans and implement projects that support regional land use goals, and SCAG and SANDAG offer technical assistance to local planners to support implementation of its blueprint plan. These MPOs use CMAQ, RSTP, TE, Caltrans grants, and, in the case of SANDAG, sales tax revenues to fund these programs.

Planning grants generally support specific plans to increase density and mix of uses in regional priority development areas. SCAG and SANDAG accompany

Case Study: MTC's Transportation for Livable Communities grant program

Since 1998, the Bay Area's MPO, MTC, has allocated over $200 million in planning and capital grants to cities, counties, and transit agencies through its Transportation for Livable Communities (TLC) program (Metropolitan Transportation Commission 2010). The program aims to improve transportation choices; support infill, mixed-use, and transit-oriented development; and enhance communities' sense of place and quality of life. The majority of planning grants have supported plans for increased development near transit stations and along mixed-use corridors, while most capital grants have funded pedestrian and bicycle facilities, transit access improvements, and traffic calming measures in these areas (Metropolitan Transportation Commission 2008c).

We interviewed staff from three mid-size Bay Area cities that had received planning grants: San Leandro, Santa Rosa, and Petaluma. San Leandro used its grant to create a specific plan for the area within a half-mile radius of a proposed bus rapid transit (BRT) station, which also encompasses the city's downtown and BART station. Santa Rosa and Petaluma have developed or are developing plans for station areas along a new rail transit line. Each of the planners with whom we spoke mentioned that TLC grants played a catalytic role in these efforts. Staff in San Leandro "realized the opportunity" to develop their plan through the program, and for Santa Rosa and the grants represented "the first step in the community's education" about planning for rail transit.

The resulting plans contained more ambitious smart growth policies than previous local plans, and in some cases even more housing than MTC's policies call for. For example, after the TLC grant "allowed citizens to look much more closely at the real potential of that area," San Leandro's station area plan calls for 70 percent more housing around the BRT station than its general plan, and Santa Rosa's plan provides 55 percent more units than MTC's smart growth policy requires near a rail station. Both of these cities' plans also reduce minimum parking requirements or explore shared and unbundled parking near stations. Staff in all three cities have prepared or are planning to prepare an umbrella EIR in order to facilitate development in the plan area, and these cities may also use their plans as the basis for applying for capital funding in the future.

We also spoke with staff from three cities that had received TLC capital grants:

- Union City, which received two grants totaling $7.5 million to construct bus canopies, pedestrian paths, and a plaza as part of the Intermodal Station District, a $101 million project to upgrade the city's BART station and redevelop 50 acres of adjacent industrial space;
- Gilroy, which received three grants totaling $4.5 million to widen sidewalks, shorten crossings, and install street furniture as part of an $8.6 million effort to revitalize its main street; and

(Continued) ⟶

- San Mateo, which received a TLC grant for $1.9 million to construct a pedestrian walkway and improve the streetscape connecting the city's renovated Caltrain station and a new downtown cinema on the site of a former parking garage. The total project cost was $13 million.

Staff mentioned that the TLC grants spurred them to ask, 'what more can we do than what we've already thought about?' in order to improve the area for pedestrians." Another interviewee told us, "the business community's concern was providing automobile access, and MTC staff provided a more pedestrian-oriented perspective, which helped local officials consider the overall picture." In all three cities, the grant-funded improvements have produced positive outcomes. 780 new housing units, 157 of them affordable, have been built in Union City's Intermodal Station District over the past 10 years. 355 units were planned or built near Gilroy's main street since the city began its streetscaping project, and staff have observed an increase in pedestrian volumes (Metropolitan Transportation Commission 2008d). In San Mateo, restaurants opened along the new pedestrian walkway to take advantage of foot traffic. According to one planner, "building the infrastructure was critical in showing that this was a desirable place to develop," and another said that the improvements funded by TLC "encouraged [nearby] businesses to upgrade their buildings."

The TLC program has also faced challenges. Only 38 percent of local governments that have received station area planning grants have implemented planned pedestrian improvements (Metropolitan Transportation Commission 2008, 11). The codes and standards that guide engineering and implementation do not always support pedestrian-friendly planning, and one MTC planner said that grant-funded projects sometimes get "scaled down as they go through public works and other phases of design." For example, pedestrian bulb-outs may be shortened due to fears that they will restrict access for fire trucks and other vehicles with large turning radii. Still, MTC staff believe that bringing these issues to light has prompted some local governments to re-examine design standards. Non-transportation infrastructure needs can also stymie plan implementation; for instance San Leandro has concluded that improvements to its sewer and water system will be necessary in order to support the intense development proposed in its plan.

MTC has updated the TLC guidelines in order to increase funded projects' chances for success. Projects are now required to be in priority development areas identified by the Bay Area's regional land use plan in order to receive funding, and applications must now include preliminary design drawings in order to avoid unanticipated problems in the implementation phase. Finally, capital grants are now available for a wider variety of projects, including site assembly, sewer and water upgrades, on-site TDM programs, and converting surface parking to structured parking (Metropolitan Transportation Commission 2010). Overall, TLC provides an example for how an MPO can use a limited amount of funding to spur far-reaching changes.

these with technical assistance programs that train local planners on analysis and outreach techniques to support smart growth, such as adjusting trip generation estimates and parking requirements for mixed-use or transit-oriented developments and creating computer visualizations of sustainable communities. According to a planner from MTC, planning grants "worked as a carrot to the stick" of Resolution 3434, MTC's policy requiring local governments to meet minimum density thresholds along planned transit extensions. Other MPOs may also be able to use grant programs to support policy changes under SB 375 by helping local governments plan for more housing, create umbrella EIRs that facilitate development, and meet other land use goals. Many interviewees felt that aligning local plans with the regional SCS is ultimately the most effective way to implement a regional land use strategy. Since so many local plans are out of date and local planning needs are large, planning grant programs create an opportunity to achieve this goal.

Meanwhile, capital grants fund streetscape improvements, traffic calming measures, and bicycle and pedestrian facilities near transit stations and along key corridors. Though grants typically only cover a small percentage of overall project costs, the MPO staff that we interviewed generally felt that they provided an important incentive for local governments to build well-designed smart growth projects. One interviewee told us, "my biggest concern is that I can't figure out what the interface looks like between regional COGs and local general plans," and capital grants help provide "on the ground" examples of projects that support blueprint plans. Capital grants can also spur investments in non-transportation infrastructure, such as sewer and water lines, which are necessary to support more intensive development in many areas.

We spoke with the staff at the four largest MPOs about best practices in administering grant and technical assistance programs. All of these interviewees agreed that the structure of the application process was very important in determining the success of grants and ultimately in providing assistance to projects that would provide the region with a positive example of smart growth development. According to one planner, "we can only create and modify deadlines, and locals can set realistic deadlines and demonstrate due diligence." Two interviewees felt that there had been insufficient oversight in their first round of grants, and that as a result the funded projects had not been built. These MPOs responded by requiring a more extensive pre-application in order to give the MPO more time to collaborate with local governments in crafting grant proposals, instituting "use it or lose it" policies that deny local agencies the right to apply for funding in the next round of grants if they failed to meet deadlines on a project for which they currently received capital assistance, and creating performance measures to better assess whether projects will truly lead to denser and mixed-use development near transit. Interviewees also mentioned that it had been difficult to distribute grants equitably across the region since cities with older downtowns and better transit service were better suited for smart growth, which angered stakeholders who felt that their cities were being penalized. Two MPOs resolved this by creating a hierarchy of smart growth areas and grant types, awarding planning grants to areas with the potential for future transit service and mixed-use development and capital grants to existing regional and town centers and mixed-use neighborhoods. For an in-depth study of MTC's capital and planning grant programs, see the text box on page 39.

2.5 Conclusion

Planning for smart growth doesn't begin and end with transportation funding. Excellent transit service and bike/ped facilities can certainly make a neighborhood more desirable, but creating successful, sustainable communities also requires coordinating land use changes with investments in police and fire services,

schools, and non-transportation infrastructure such as sewers and utility lines. SB 375 represents a first step toward creating these communities in two ways. First, the process of creating an SCS provides an opportunity to identify many environmental, economic, and social issues that only become clear at the regional level, and to engage the wide variety of stakeholders who have a hand in addressing these issues. Second, directing transportation funding to priority growth areas has the potential to act as incentive for governments in these areas to take on more growth, and to draw in the other investments that are necessary to fully implement an SCS.

The relatively small and fragmented amount of transportation funding that MPOs control, coupled with the likely modest impact of SB 375's RHNA and CEQA reforms, will make it challenging for MPOs to craft an SCS that substantially reduces GHG emissions if they continue to plan in the same way that they have for the past several decades. In order to meet SB 375 targets, MPOs will need to move beyond business as usual by revisiting long-held assumptions about how land use patterns evolve and how regions spend their transportation dollars, and by using modeling tools to inform policy development rather than to demonstrate that policies already in place conform to federal and state requirements. They will also need to strategically use their transportation dollars and the other incentives created by SB 375 to leverage large changes in regional growth patterns.

Though we've drawn a distinction between planning and implementation in this chapter, in reality the two are deeply intertwined. This is because the most powerful implementation measure contained in SB 375—the requirement that an MPO allocate its transportation funding to support a regional growth strategy—only applies if an MPO creates a financially constrained SCS that meets GHG reduction targets. If an MPO simply engages in business-as-usual planning, it is less likely to meet these targets, and more likely to pass an APS, which is almost purely aspirational. Furthermore, it is virtually impossible to accurately predict how a region will grow over the course of decades, and the project list in an RTP is not a fixed plan, but a menu of options that continuously evolves as regional priorities change and as MPOs update their RTPs every four years. GHG emissions, as well as congestion, air pollution, household transportation costs, and other issues that smart growth seeks to address, are liable to increase in importance over the coming years. By re-examining assumptions and engaging in proactive planning, MPOs can take steps to ensure that they have options in place to deal with these issues as they become more urgent. The following chapter summarizes our findings and contains specific recommendations to MPOs and the state in order to ensure that SB 375 is an effective first step in reversing sprawl and reducing GHG emissions.

3. Findings and recommendations

3.1 Findings

The general consensus that emerged during our interviews with planners was that SB 375 is an important step in revising a planning framework that poises numerous challenges to smart growth projects, and that the following challenges will need to be addressed in order to effectively implement the SCSs that MPOs will create over the next several years:

- Local general plans, zoning codes, building codes and street design standards are often out of date, and do not support dense, mixed-use development in key areas or pedestrian-, bicycle-, and transit-friendly streets. The collective cost of updating these plans is quite large.
- Many of the transit systems that provide the most viable alternative to vehicle trips are currently struggling to maintain existing levels of service.
- The type of areas in which an SCS is likely to encourage growth—regional and town centers that are walkable and well served by transit—are often the older areas of a region, and the costs of simply maintaining a state of good repair in these areas can be very high.
- Several plans to add new residents to existing downtown or mixed-use neighborhoods have been stymied because these areas lack sufficient water and sewer infrastructure to support planned growth. The public works agencies and utilities that have authority over infrastructure investments have their own policies and regulations, which may not align with regional plans.
- School location is an important factor in determining where families choose to live. According to one estimate, school-related trips by students, parents, and staff account for over one-fifth of overall statewide trips during the school year (McKoy, Vincent, and Makarewicz 2008). However, school siting is governed by state policies that do not support California's planning priorities, schools are free to override local land use regulations, and planners often do not involve school districts in the planning process.

All of these issues point to a far-reaching need to align several different spending and decision-making processes, many of which are out of MPOs' control, with the priorities of SB 375. As others have pointed out, complying with SB 375 is not necessarily the same thing as actually reducing driving (Shigley 2009). In order to successfully create sustainable communities, MPOs will need to look beyond SB 375 and move beyond business-as-usual planning, leveraging the opportunities within the bill to provide better incentives for smart growth and engaging a wide variety of stakeholders in a serious conversation about regional planning issues. The state will need to follow these conversations as they unfold and take additional steps to strengthen the bill. It is in this spirit that we offer the following findings and recommendations.

The traditional practice of creating a future land use scenario by assuming build-out of existing local general plans may limit MPOs from meeting SB 375's GHG reduction targets, but MPOs have ample opportunities to make assumptions that lead to a more sustainable scenario.

Federal regulations require that MPOs consider local general plans when creating the future land use scenario that they use in their RTPs, and MPOs have traditionally responded to this requirement by simply assuming build-out of local plans in their land use scenario. However, local plans are focused on meeting local goals, not regional ones, so this is unlikely to be an effective approach to crafting a cohesive regional

land use strategy that reduces GHG emissions. While MPOs cannot directly contradict local plans, planners identified three conditions that can give MPOs more freedom to create a land use plan that does meet GHG reduction targets:

1. If local general plans can cumulatively accommodate more growth than an MPO projects for the region, the MPO has the freedom to assume where that growth will go within the region.
2. MPOs are free to make assumptions about the type of growth that will occur beyond the horizon of local plans. RTPs typically extend ten to 15 years further into the future than general plans, and even further if these plans are out of date, as is often the case.
3. If general plans are based on unrealistic assumptions about market demand for housing or commercial property, MPOs can use economic data to create a plan that better meets regional needs.

The RTP Guidelines also specify several other instances in which MPOs can make assumptions that deviate from those in local land use plans provided that MPOs' assumptions are reasonable, consistent, and well-documented. Of course, the more MPOs consult with local governments to reconcile any differences between the land use assumptions that inform their SCSs and foreseeable trends in local planning, the more likely SCSs are to be implemented. However, federal consistency requirements should not constrain MPOs from creating SCSs that meet GHG reduction targets.

Many MPOs control a relatively small share of regional transportation funding, but they may be able to use that small share to leverage greater change.

According to our financial analysis of current RTPs, MPOs control roughly 10 percent of overall transportation funding and 15 percent of capital transportation dollars, though it's worth noting that this low average is due to the small share that multi-county MPOs in California's largest metro areas control. Single-county MPOs often control a much larger share; seven single-county MPOs allocate over 50 percent of the transportation dollars in their region. Transportation decision-making is fragmented among many different funding sources and decision-makers with different priorities, and large projects typically rely on many different sources, including those allocated by MPOs. This means that funding policies set by MPOs have the potential to affect most of the projects that substantially affect regional growth.

There are three factors that may constrain MPOs from effectively spending their transportation funding to support implementation of their SCSs:

1. The money that MPOs allocate does not work in a coordinated fashion toward supporting smart growth. MPOs suballocate some funding sources to local agencies without conditions, and consider these sources committed. The state and federal funding that MPOs allocate is divided into different sources, each of which is eligible only for certain types of projects.
2. During the first round of SCSs, much of MPOs' funding may be committed to projects that were approved under previous RTPs. In its previous RTP, MTC estimated that roughly 79 percent of its capital funding was tied up in committed projects. If other MPOs have a similar portion of funding already committed, it will seriously limit the amount of money that is available to implement the first SCSs.
3. In large metropolitan areas, county transportation commissions (CTCs) or authorities (CTAs) allocate transportation sales taxes, which are the largest single transportation funding source, and these agencies are not subject to the requirements of SB 375. Since the projects in sales tax expenditure plans have a guaranteed source of long-term funding, they often draw in discretionary funds allocated by MPOs.

One MPO, MTC, has passed policies that change the way in which it allocates funding in order to place new conditions on funding sources and to narrow the definition of "committed" projects. Both approaches have the potential to eliminate wasteful spending, prioritize projects that support regional goals, and free up more funding for SCS implementation, particularly during the first round of SCSs. Though sales taxes are a substantial source of funding, most tax-funded projects still rely on funding from MPOs, which gives MPOs an opportunity to prioritize funding the projects that meet regional goals. Some CTCs and CTAs have also created policies to prioritize projects that support regional plans.

Travel models are currently not sensitive to many GHG reduction strategies, and though MPOs and the state are working to improve models, it is unlikely that all models will be up to speed during the first few rounds of SCSs.

SB 375 rests on the assumption that travel models are appropriate tools for examining travel behavior and forecasting GHG reductions due to smart growth land use and transportation strategies. However, in the RTAC's 2008 travel modeling survey, only one MPO had a travel model that was sensitive to the 3 Ds of land use (density, diversity, and pedestrian design), and many MPOs could not even model basic improvements in transit service. Substantial upgrades will be necessary before MPOs are capable of capturing the full GHG reduction benefits of smart growth strategies. In 2009, the Strategic Growth Council allocated $7.5 million in grants to help MPOs improve their models, but MPOs identified an additional $14.5 million worth of necessary improvements that were either unfunded or did not receive grants from the SGC. This means that travel models will likely only be partially able to assess the GHG reduction potential of smart growth and travel demand management strategies during the first several rounds of SCSs.

Better modeling does not always lead to more sustainable transportation policy.

Though travel models are important tools in demonstrating conformity with federal air quality thresholds and with the GHG reduction targets created through SB 375, modeling is just one factor influencing transportation policy. The attention that state agencies have so far devoted to improving models in preparation for SB 375 seems to rest on the assumption that increasing models' sensitivity to smart growth policies will make decision-makers more likely to implement these policies. In fact, many of our interviewees expressed a belief that models do not drive policy, but vice versa—that MPOs' boards direct modelers to use models to demonstrate the benefits of policies already underway. Some MPOs have used sketch-modeling tools, which are not as complex as travel models, but are more responsive and capable of analyzing a wider variety of performance measures, to examine outcomes when creating regional blueprint land use plans, which serve as the antecedent to SCSs. Staff felt that these tools were effective in fostering consensus in favor of plans that reduced GHG emissions and led to many other positive outcomes.

The tools that local governments use to analyze transportation impacts are biased against smart growth projects.

Though SB 375 gives regional governments cause to update their travel models to better account for alternative modes and mixed land uses, the level of service metrics, trip generation forecasts, and other decision support tools that local governments use to assess transportation decisions remain rooted in auto-centric assumptions and methodologies. These tools often overestimate the traffic impacts of compact, mixed-use developments near transit, and can lead policy makers, planners, and residents to oppose smart growth developments or to require that developers pay for unnecessary parking or costly traffic mitiga-

tion measures. Though researchers and state agencies have proposed several methods to better incorporate consideration of smart growth land use planning and alternative transportation modes into trip generation forecasts and LOS metrics, these are inconsistently applied across the state. Until these tools change, local transportation planning may work against the changes that SB 375 intends to spur.

The CEQA streamlining measures contained in SB 375 may make environmental review easier and cheaper for smart growth projects, but are unlikely to affect development approvals in the short term.

Most of the environmental review specialists we spoke to felt that the criteria for a CEQA-exempt transit priority project are so narrow that few projects will qualify for these exemptions, especially in the short term, when the real estate market remains slow and when the new CEQA terms created by SB 375 will need to be defined through litigation. Meanwhile, the provision in SB 375 that exempts projects that conform to SCSs or APSs from analyzing cumulative traffic, GHG emissions, and growth-inducing impacts has the potential to reduce the costs of environmental review and lessen exposure to neighborhood opposition for these projects. However, research suggests that infill projects are more likely to face opposition based on their local impacts than on regional ones, so exempting a project from examining cumulative impacts is not likely to have a significant on project approval nor on the mitigation measures that a developer must adopt. Nonetheless, some interviewees expressed hope that by linking CEQA with the SCS process, SB 375 would lay the groundwork for more consideration of regional goals and impacts in project-level analysis.

Though it is important to coordinate housing with transportation, aligning RHNA with the SCS may create procedural challenges and controversy, and may not actually lead to more housing production.

The majority of our interviewees agreed that aligning RHNA with the SCS process was a logical step in coordinating land use and transportation planning under SB 375. However, interviewees cautioned that the two processes are still fundamentally at odds since they use different data and methods, have different time horizons, and are overseen by different state agencies that are not required to coordinate with each other when setting targets. Ultimately, the market is the most important determinant of housing production, and since RHNA only affects zoning it has a limited effect on actual construction. Various studies have found that even cities that zone in compliance with their RHNA allocation often build less housing than they zone for, especially affordable housing and housing in infill areas. Other interviewees cautioned that the RHNA process generates a fair amount of political controversy, and that in some cases arguments over RHNA allocations have led local governments to be suspicious of regional planning efforts in general. Based on these concerns, it seems likely that the procedural and political issues behind aligning RHNA with the SCS will need to be resolved for these changes to have a positive impact on coordinating land use and transportation decisions, and that the RHNA process will need to include financial incentives that help to get housing built.

3.2 Recommendations

3.2.1 Recommendations to the state

The state should increase the amount of funding that is available to MPOs to implement SB 375.

If California is serious about meeting SB 375 targets, the state needs to restore State Transit Assistance, an important source of transit operating revenue that the legislature voted to eliminate in 2009 in order to cover budget gaps, as well as allocate additional funding to support MPOs in implementing SB 375. Though the current political climate makes a tax increase to support additional funding unlikely, there may be opportunities to fund SB 375 implementation through the gas tax swap, which is up for renewal in 2011. Under the gas tax swap, gasoline tax rates rise with the price of gas, and one interviewee suggested that through the renewal, the State could create a rule stating that when the price of gasoline rises above a certain limit, a half-cent per gallon will go toward implementing SB 375. Such a tax would raise roughly $75 million per year (California State Board of Equalization 2011)—by comparison, the Strategic Growth Council is allocating $180 million over a period of several years—which could be used to fund MPOs to plan under SB 375 and to create additional incentive programs for smart growth developments.

The state ought to condition funding for housing, transportation, and infrastructure toward meeting SB 375 goals.

In addition to allocating new funding toward implementing SB 375, the state can place conditions on other funding sources that support SB 375's goals. For instance, if State Transit Assistance is restored, the state could choose to set aside a percentage of that funding to increase service or extend transit to priority development areas designated in SCSs. This strategy need not be limited to transportation funding; in fact, placing such conditions on funding sources that support housing or infrastructure would leverage more resources toward meeting the wide-ranging needs of smart growth projects. For example, the Transit-Oriented Development Housing and Infill Infrastructure Grant program administered by the Department of Housing and Community Development (2009) prioritized projects that exceeded required densities, provided access to transit and amenities, and were consistent with regional blueprint plans, and a recent evaluation of the program suggested awarding extra points to projects that are in an SCS-designated priority growth area (Sprowls, Cataline, and Brown 2011). Recent legislation has been introduced in the Senate that would better align school funding with the goals of SB 375 (Lowenthal 2011), and passing this law would ensure that priority growth areas are desirable areas for families to live in. If the state makes conformity with SCSs a criterion for receiving certain funds, it could not only provide incentives to implement an SCSs, but for MPOs to adopt SCSs instead of APSs.

The state agencies that oversee processes that affect urban growth in California need to collaborate and ensure that these processes work together in support of SB 375.

Among state agencies, the burden of implementing SB 375 lies almost entirely with ARB, which issues regional GHG reduction targets and evaluates SCSs. Yet several other agencies have the potential to effect the outcome of SB 375, including Caltrans, which is responsible for implementing improvements to the state highway system as well as modeling inter-regional travel; the Department of Housing and Community Development (HCD), which oversees the RHNA process; the Department of Finance, which provides the demographic projections that form the basis of RHNA and other important data; and the California Department of Education (CDE), which creates standards for school siting and approves education-

related plans and projects. These agencies should collaborate in order to correct inconsistencies in their policies that may make it more difficult for MPOs to implement SB 375. For example, HCD and ARB can ensure that the same assumptions inform both RHNA targets and regional GHG emissions reduction targets, and Caltrans can set policies to prioritize funding to projects that support SCS implementation or to ensure that none of its transportation projects work contrary to the goals of SB 375 by adding highway capacity in a manner that will trigger new sprawl development. School siting is a particularly important issue, both because schools are an important factor in determining where families locate and because there is currently very little collaboration between school districts and planning agencies. The state should take steps to better integrate school siting into the SB 375 planning framework, such as prioritizing modernization of existing schools rather than the construction of new ones or creating mandates or incentives for school districts and MPOs to collaborate in the SB 375 process (Center for Cities and Schools 2010).

State representatives should lobby for federal transportation policies that support the goals of SB 375.

Ultimately, many of the potential barriers to SB 375, such as the constraints on many of the funding sources that MPOs allocate, come from federal, not state, transportation legislation. As the federal transportation bill periodically comes up for reauthorization, state representatives should advocate for reforms that support the goals of SB 375. In light of the fact that California has a history of enacting innovative environmental policies that later influence federal policy, successful implementation of SB 375 may in and of itself provide a compelling argument in favor of reform. Potential reform measures include allocating more funding toward transit, bicycle and pedestrian projects; creating a funding stream for land use incentive programs; or allowing more of the funding that MPOs allocate to be spent on local planning efforts to achieve transit-supportive densities.

3.2.2 Recommendations to MPOs

MPOs need to include clear goals for future land use changes in their SCSs and monitor progress toward meeting these goals.

Though MPOs have traditionally assumed full build-out of local general plans when creating land use scenarios for their RTPs, they actually have several opportunities to create a land use plan that differs from current general plans in their SCS. MPOs should take advantage of these opportunities to outline future land use changes that will be necessary for the region to reduce GHG emissions. These changes should be as specific as possible. Several interviewees mentioned the difficulty of translating regional plans and policies to local action, and outlined steps that MPOs could take in order to communicate their long-term plans more effectively to local governments. These include designating a wide enough range of land use types in an SCS in order to ensure that multiple typologies apply to each city within a given region, using form-based guidelines that specify building and street types associated with each land use type to help local governments understand what an SCS looks like at the local level, or even outlining parcel-level changes on key opportunity sites near transit. MPOs should then monitor general plan updates and revisions, specific plans, and large-site development approvals in order to track local progress toward SCS implementation.

MPOs should pass policies that narrow the definition of committed projects and funds.

In keeping with traditional MPO policies on committed projects, SB 375 contains a grandfather clause that exempts all projects that are programmed in a current TIP or included in a sales tax measure from

consideration during the SCS/RTP process. MPOs also consider many of the discretionary funding sources, particularly transit operating revenues, that they allocate as committed because they pass these funds through to local governments and transit agencies without condition. However, these policies may substantially limit the money that is available to implement the first round of SCSs. Furthermore, these policies do not necessarily lead to sound fiscal management of the transportation system. There is often a substantial delay between when a project is included in the TIP and when construction begins, and initial estimates typically underestimate project costs by 30 to 50 percent. Narrowing the definition of a committed project can discourage cost overruns and avoid tying up resources in delayed projects. If MPOs distribute transit funding without conditions, they miss an opportunity to provide incentives to services that have high ridership, are more cost effective, or serve priority growth areas. MTC has passed a new committed funds and projects policy that considers projects—even those that are included in sales tax measures—committed only once they have completed an EIR and allows the agency to place conditions on several transit funding sources. This policy can help avoid projects that encourage sprawl or do not meet other regional goals, create new incentives for local governments and transit agencies to meet regional goals, and free up more money for transportation projects that support SCS implementation. Ensuring that MPOs' funding goes to sales tax-funded projects that meet performance measures is a particularly important step in using regional funds to support projects with regional benefits in California's major metropolitan areas.

MPOs ought to develop additional self-help revenue sources to support SCS implementation.

The extensive transportation needs of California's metropolitan areas put severe pressure on MPOs simply to maintain the existing transportation system, which in turn limits their opportunities to invest in increased transit service, bicycle/pedestrian improvements, and provide incentives to local governments. Many single-county MPOs have transportation sales taxes in place, but they often have outdated expenditure plans that do not support smart growth, and could pass new or extension measures that devote more revenues to local incentive grants, increased transit service, or other programs that support SCS implementation. Though multi-county MPOs do not have the authority to levy transportation sales taxes, MPOs can also raise funding through other measures, such as tolls and regional gas taxes, which can have additional benefits such as reducing overall VMT and mitigating congestion.

MPOs should support their SCSs by adopting additional policies to align specific transportation funding decisions with land use and GHG reduction policies.

MPOs have always been free to do what SB 375 requires them to do: pass policies that condition transportation funding on land use goals. For instance, MTC adopted Resolution 3434, which requires that local governments zone to meet density thresholds along a planned transit expansion before MTC allocates any of its funding toward the expansion, in 2005. Several interviewees noted that SB 375's requirement that MPOs allocate transportation funding to support implementation of their SCS was vague, and policies like Resolution 3434, which sets specific minimum thresholds for the number of housing units that must be planned for in station areas along the route of a proposed transit extension before MTC allocates funding to support the extension, can help to clarify the conditions that MPOs will place on transportation funding. MPOs could even go beyond this policy by making certain transportation funds contingent on local governments setting aside funding for land use changes that support investments. If an

MPO adopts an APS that does not affect transportation funding, it could still us the land use goals in the APS as the basis for such a policy, which would ensure that it does not lose the benefit of SB 375's most effective implementation measure.

MPOs need to fast-track funding to transportation projects that reduce GHG emissions and support land use changes called for in their SCSs, especially when allocating money to projects in sales tax expenditure plans.

RTPs and other long-term transportation plans often do not specify the order in which projects will be built, but careful attention to timing will be necessary in order to successfully implement SCSs. For example, SB 375 allows local governments to offer CEQA streamlining to any transit priority project within a half-mile of any planned major transit stop or corridor. If projects that take advantage of streamlining on the basis of planned transit extensions get built before the extensions are completed, then congestion and accessibility will worsen, as will local perceptions of smart growth. Furthermore, though projects in transportation sales tax expenditure plans are grandfathered in by SB 375 and are often taken as given during the RTP process, many of these projects still rely on MPOs for funding. Prioritizing funding to tax-funded projects that serve infill areas or expand transit may create opportunities to ensure that these measures support the goals of SB 375 rather than working against them. Furthermore, withholding funding to tax-funded projects that do not support the goals of SCSs during the next few rounds of RTPs may provide an opportunity to reconsider these projects later on, since many sales tax measures contain a provision that allows the sales tax authority to reconsider the expenditure plan after a given date.

MPOs ought to work to promote and maximize the economic and social co-benefits of smart growth.

Most of the interviewees with whom we spoke believed that the current recession poses an obstacle to SB 375 implementation by restricting development opportunities and redirecting public attention away from climate change and toward the economy. However, some researchers have found that there will be increasing demand for compact housing in urban areas that are well served by transit (Nelson 2006), and that compact development patterns reduce the cost of infrastructure and services (Burchell 2002). Though the recession may delay new development, it may also provide MPOs with the chance to make a compelling economic argument in favor of smart growth, and further investigating these issues may help MPOs and local governments create more effective RHNA and SCS implementation programs. Other researchers have linked sprawl to obesity and high asthma rates (Frank 2004; Frumkin, Frank, and Jackson 2004), and their work suggests that smart growth policies may improve public health issues that are at the core of many people's perception of their quality of life. Many sketch modeling tools discussed address these impacts, but MPOs should also take additional steps to educate stakeholders and residents on the economic and public health benefits of smart growth through outreach campaigns.

MPOs should use capital grants and technical assistance to provide incentives for smart growth projects.

Three MPOs currently offer capital grants to help local governments implement transportation improvements adjacent to new smart growth projects, and some also offer technical assistance to local planners. Though the grant amounts are small and limited in terms of what they can fund, the planners overseeing these programs all reported that they had been very important both in raising awareness among local gov-

ernments of smart growth principles and in helping MPOs develop best practices to ensure that projects get built on time and achieve program goals. Many local plans are badly out of date, and local plans in rapidly developing regions may not allow for the densities or mix of uses that are necessary to support transit service and crate walkable neighborhoods. Planning grant programs and technical assistance may be a particularly important tool to help create opportunity areas for smart growth in these regions. These MPOs can adopt best practices from MPOs that have more experience administering grants, such as incorporating clear performance measures into the application process, requiring pre-applications so that MPOs have an opportunity to help local governments hone applications, and requiring design drawing to reduce the chance of delays for capital projects.

MPOs should work with city and county governments to create CEQA incentives for developments that comply with SCSs through local plan updates.

Several interviewees suggested that the CEQA streamlining offered by SB 375 will not have much of an effect, particularly in regions that lack sufficiently dense urban areas or frequent transit service to apply the exemption that SB 375 offers to transit priority projects. However, the CEQA guidelines encourage lead agencies to use tiering in order to lower the burden of environmental review on projects that conform to an existing general or specific plan. MPOs could work with local governments through technical assistance or planning grant programs to help ensure that general plan updates or specific plans in priority growth areas allow for tiering for projects that support SCS implementation. This has the potential to provide additional CEQA relief to developers in a way that also meets other community goals.

MPOs need to work with local governments and the state in order to coordinate funding for housing, infrastructure, school siting, and service provision toward serving the land use changes called for in their SCSs.

MPOs and their sister agencies, COGs, function as regional convening bodies, and it is important for them to foster collaboration between the broad variety of transportation- and non-transportation-related agencies whose decisions affect the potential success of SCSs, and to coordinate policies and investments in police and fire services and sewer and water infrastructure toward supporting SCS implementation. MPOs can also trade funding with utility districts to support infrastructure upgrades in priority growth areas, as MTC plans to do under its next round of TLC capital grants. MPOs should advocate for the state to create new funding sources devoted to supporting housing in priority growth areas, and lobby the California Department of Education and the Division of the State Architect for reformed school siting policies and advocate for legislation to ensure that school planning supports the goals of SB 375, and include school districts in the SCS process.

3.2.3 Recommendations to MPOs and the state

MPOs and the state should develop sketch planning tools that are interactive, informed by up-to-date research, and are capable of measuring a variety of performance measures for use in the SB 375 planning process.

Many interviewees mentioned the importance of sketch planning tools in fostering consensus among decision-makers during the blueprint planning process. Though these tools are not capable of the complex analyses that travel models perform, they are more user-friendly and transparent, can evaluate regional plans using a wider variety of performance measures than a travel model, and can be reasonably accurate if they are built on sound assumptions.

Though sketch planning tools cannot substitute for a travel model at all phases of the RTP/SCS process, they can be used to develop and refine scenarios, eliminating the need for time-consuming travel model runs in early stages of plan development. However, in order to make sure that the two tools are compatible, MPOs must incorporate assumptions and results from their travel models into sketch planning tools. Instead of funding individual MPOs' development of sketch planning tools, the state could promote sketch planning by funding or further improving the tools that it has already paid to develop—for example, by providing free data storage for I-PLACE^{3}S or by funding a wider release of Rapid Fire.

State agencies and MPOs need to work with local governments to align local transportation planning and policy with the goals of SB 375.

In order to effectively implement SB 375, both regional and local governments will have to update the tools that they use to assess transportation decisions to better capture the potential for investments in alternatives to driving and compact, mixed-use developments to reduce driving. So far, most of the state's efforts in this field have focused on improving MPOs' travel models, but it will also be important to remove the "suburban bias" of local trip generation models and level of service metrics in order to overcome the increased development costs and public opposition faced by smart growth developments. Researchers have already laid the foundation to make these changes; the relationship between transportation and land use is one of the most written-about topics in academic planning, and several different agencies, including Caltrans, are working on creating trip generation methodologies that are focused on infill and smart growth developments. However, the challenge lies in incorporating this new information into local transportation policies, which can be slow to change. The Complete Streets Act (AB 1358) provides an opportunity for state agencies to encourage local governments to rethink minimum vehicle LOS standards and parking requirements. MPOs should build on this momentum by working with public works departments to re-evaluate minimum LOS policies, particularly in areas that SCSs target for growth. If MPOs' travel surveys take more in-depth data from these areas, MPOs may be able to provide more accurate trip generation estimates for smart growth development, which would help local governments address neighbors' concerns about the traffic generated by infill and TOD projects. Advocacy efforts such as TransForm's GreenTRIP system, which recognizes new developments that significantly reduce driving, also have the potential to promote smart growth projects and alternatives to auto-centric planning methods.

List of organizations represented in interviews

Association of Bay Area Governments
BRIDGE Housing
California Attorney General's Office
California Department of Transportation
California Planning and Development Report
City of Fresno
City of Gilroy
City of Petaluma
City of San Leandro
City of San Leandro
City of San Mateo
City of Santa Rosa
City of Union City
CityCentric
California Department of Housing and Community Development
EBL&S Development
Eden Housing
Endangered Habitats League
Fresno Council of Governments
Kern County Association of Governments
Keystone Development Group
League of California Cities
Merced County Association of Governments
Metropolitan Transportation Commission
Mintier Harnish
Modesto Bee
Natural Resources Defense Council
Republic Urban Properties
Sacramento Council of Governments
San Diego Association of Governments
San Luis Obispo Council of Governments
Senate Transportation Committee
Southern California Association of Governments
TransForm
Western Riverside Council of Governments

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Appendix 1: Methodology for analyzing transportation funding

For our analysis of transportation funding sources, which is summarized in Table 2 and Figures 2, 3, and 4, we determined the total amount of money provided by a given source using the revenue projections contained in recent RTPs from all 18 California MPOs subject to SB 375.[3] Different MPOs have different ways of categorizing revenues; some aggregate sources into a few categories, while others provide detailed breakdowns of sources. We began by creating a standard list of sources that appeared in the majority of RTPs and categorizing each MPO's revenues according to this list. In most cases where an MPO had aggregated multiple funding sources into a single category, we attributed the category total to the dominant source within the category. Our estimates of an MPO's total revenues may differ slightly from the total estimated by the MPO in its RTP.

Not all MPOs allocate the same revenue sources, so we verified our attributions by decision-maker using the text in the RTP and interviews with MPO staff. We then summed the estimates for a given source across all MPOs to arrive at the totals by source shown in column 3 of Table 2. Since RTPs express financial estimates in nominal dollars, different RTPs have different horizon years, this approach overestimates the amount of money coming from MPOs whose RTPs extend further into the future, but the distortion is relatively small since all the RTPs we studied had a horizon year of either 2030 or 2035. After estimating the total from each revenue source, we calculated the percentage of each devoted to capital expenditures based on information from Hathaway (2011) to arrive at the figures in columns 5 through 7 of Table 2.

We adjusted estimates for certain revenue sources based on interviews with MPO staff and policy documents. Below are assumptions and details related to individual line items in Table 2 (pages 14-15):

Interregional Transportation Improvement Program (ITIP)

The State Transportation Improvement Program (STIP) is divided 75/25 into two revenue sources: the RTIP and the ITIP. Where the ITIP was not included as a separate line item in an RTP, we assumed that 25 percent of STIP funds went to the ITIP.

Proposition 1B

This category only includes bond revenues from Proposition 1B that are already programmed for specific projects. The state is currently determining what formula to use to allocate remaining Prop 1B funds.

Proposition 42

Some MPOs account for revenues from Proposition 42 separately. Based on work done by Hathaway (2011), we assumed that these funds were split as follows: 40 percent to the RTIP, 40 percent to local gas tax subventions, and 20 percent to STA.

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[3] Included in this analysis are the most recent RTPs as of January 2010 (AMBAG 2005, BCAG 2008, Kern COG 2007, Kings CAG 2007, Madera CTC 2007, Merced CAG 2007, MTC 2008, SACOG 2008, SANDAG 2009, SBCAG 2008, SCAG 2008, SCRTPA 2004, SJCOG 2007, SLOCOG 2005, StanCOG 2007, Tahoe RPA 2008, Tulare CAG 2007). As of publication of this report, SCRTPA, SLOCOG, AMBAG, and the eight San Joaquin Valley MPOs have completed more recent RTP updates. These updates may shift the estimates of funding by decision-maker for these MPOs shown in Figure 3. However, they are unlikely to have a substantial effect on the statewide estimates in Table 2, Figure 2, and Figure 4 since (a) there have not been any major shifts in state and federal transportation funding nor in self-help revenues in these regions over the past five years and (b) the MPOs in question are mostly in less-populated regions, and collectively account for only six percent of total transportation funding by our estimates.

Environmental Enhancement and Mitigation (EEM)

The EEM program, which provides funding for highway landscaping and land restoration projects, is not always reflected as a separate line item in RTPs, and RTPs only showed a total of $12.8 million in EEM funds. We adjusted this total to $250 million over the roughly 25-year horizon of current RTPs since the program allocates $10 million per year in grants.

Caltrans operational budget

Caltrans' operational budget, which covers planning, administration, and highway operations and maintenance, is roughly $74 billion over the next 25 years, but is not included in RTP revenue forecasts. Nonetheless, we included these funds in our estimates because they could be affected if Caltrans were to shift its operational policies in support of SB 375.

Regional Transportation Improvement Program (RTIP)

Where the RTIP was not included as a separate line item, we assumed that 75 percent of STIP funds went to the RTIP. In the SCAG and AMBAG regions CTCs allocate the RTIP, so we attributed these regions' RTIP funds to non-MPO regional agencies.

Transportation Enhancement Act (TE)

TE funds are an important source of money for streetscaping and bicycle/pedestrian projects. TE is a federal program, but funds are channeled through the STIP, and many MPOs do not account for TE separately. Based on the TE allocation plan, the total amount over the life of the current RTPs should be roughly $1.6 billion, divided 75/25 between the RTIP and the ITIP. However, RTPs showed only $70 million in state TE funds and $608 million in regional TE funds. We therefore transferred $330 million from the STIP to state TE and $592 million from the RTIP to regional TE. We then subdivided the total regional TE between MPOs and non-MPO regional agencies according to the proportion by which RTIP funds are divided between the two.

State Transit Assistance (STA)

Half of STA funds are allocated to MPOs based on population share, while the other half are allocated to transit agencies based on their share of total statewide farebox revenues. MTC is the only MPO that separates population-based and revenue-based STA funds in its RTP, and in the Bay Area, which has a large proportion of the state's transit ridership, revenue-based funds account for 75 percent of all STA revenues going to the region. For other MPOs, we assumed a 50/50 split between population-based and revenue-based STA revenues. This slightly overestimates the overall share of revenue-based STA funds going to transit agencies.

Transportation sales taxes

Six single-county MPOs are the designated sales tax authority for a sales tax measure: SANDAG, SJCOG, SBCAG, TCAG, MCTC, and MCAG (which has not yet passed a tax measure, but accounts for a planned tax in its RTP). However, SBCAG passes through the majority of its tax revenues to local governments, so we attributed these to non-MPO agencies. There is also a sales tax in the Fresno region, but Fresno COG is not the designated sales tax authority. In the MTC region there is a three-county sales tax dedicated to operating and maintaining the Bay Area Rapid Transit (BART) system that accounts for $11.5 billion over the life of the RTP, and though it is technically administered neither by MTC nor by any of the CTAs, we included it as a non-MPO regional funding source.

FTA Fixed Guideway Modernization

Where this was not included as a line item, we assumed that Fixed Guideway funds accounted for 20 percent of total formula FTA funding in cities with newer rail systems (e.g. SANDAG, SCAG). Though we list these funds as 100 percent capital, a portion may go toward vehicle and equipment replacement.

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