

# LEADING THE WAY

FULL  
REPORT

Policies and  
Practices for  
Sustainable  
Communities  
Strategies

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ClimatePlan

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# COMMONLY USED ABBREVIATIONS

## A. AGENCIES

ABAG: Association of Bay Area Governments  
AMBAG: Association of Monterey Bay Area Governments  
ARB: California Air Resources Board  
BCAG: Butte County Association of Governments  
Fresno COG: Fresno Council of Governments  
KCAG: Kings County Association of Governments  
Kern COG: Kern Council of Governments  
MCAG: Merced County Association of Governments  
MPO: Metropolitan Planning Organization (any)  
MTC: Metropolitan Transportation Commission  
OCTA: Orange County Transportation Agency  
SACOG: Sacramento Area Council of Governments  
SANDAG: San Diego Association of Governments  
SBCAG: Santa Barbara County Association of Governments  
SCAG: Southern California Association of Governments  
SJCOG: San Joaquin Council of Governments  
SRTA: Shasta Regional Transportation Agency  
TCAG: Tulare County Association of Governments  
TMPO: Tahoe Metropolitan Planning Organization  
TRPA: Tahoe Regional Planning Agency

## B. PROGRAMS, PROCESSES, AND DOCUMENTS

AHSC: Affordable Housing and Sustainable Communities (Program)  
BRCP: Butte Regional Conservation Plan  
EIR: Environmental Impact Report  
EMP: Environmental Mitigation Program (as used in San Diego RTP)  
LTBPP: Lake Tahoe Bicycle and Pedestrian Plan  
MJHE: Multi-Jurisdictional Housing Element  
MTP: Metropolitan Transportation Plan  
RHNA: Regional Housing Needs Allocation  
RTP: Regional Transportation Plan  
SCS: Sustainable Communities Strategy  
SRTCAP: Sacramento Regional Transportation Climate Adaptation Plan  
TOAH: Transit Oriented Affordable Housing (Program)

## C. OTHER ABBREVIATIONS

CEQA: California Environmental Quality Act  
CO<sub>2</sub>: Carbon Dioxide  
CPHAM: California Public Health Assessment Model  
GHG: Greenhouse Gas  
ITS: Intelligent Transportation Systems  
LIHM: Low Income High Minority (as used in Sacramento MTP/SCS)  
PCA: Priority Conservation Area (as used in Plan Bay Area)  
PDA: Priority Development Area (as used in Plan Bay Area)  
RAMP: Regional Advance Mitigation Planning  
RUCS: Rural-Urban Connections Strategy (as used in Sacramento MTP/SCS)  
VMT: Vehicle Miles Traveled

## OVERVIEW

California’s Sustainable Communities and Climate Protection Act of 2008 (SB 375) connects land use and transportation planning with California’s ambitious greenhouse gas (GHG) reduction goals. This innovative law requires the state’s 18 Metropolitan Planning Organizations (MPOs) to create Sustainable Communities Strategies (SCSs) showing how their regions will meet state-mandated GHG reduction targets through changes in land use and transportation.

In many regions, the SCS process has led to innovative policymaking to support healthy, equitable, and sustainable patterns of development. Drawing on reviews of adopted SCSs, as well as extensive input from ClimatePlan partners, transportation planners, and others, this report highlights some of the leading practices that have emerged so far. It also offers recommendations that go beyond existing SCSs in areas such as climate adaptation, water, and affordable housing.

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## INTRODUCTION

In parts of California, development has historically involved low-density growth, highly dispersed communities, and transportation systems that provide few options other than driving. This has led to some of the worst air quality in the country, perpetuation of land use patterns that marginalize poor communities of color, and the loss of irreplaceable farmland, rangeland, and open space. Just as importantly, it has contributed to California’s GHG emissions, adding to the impacts of climate change.

SB 375 provides a framework for changing these patterns. Under this pioneering legislation, California’s Air Resources Board (ARB) sets GHG reduction targets for 18 regions around the state.<sup>1</sup> As part of the transportation planning process, each region’s Metropolitan Planning Organization (MPO) is responsible for preparing an SCS that shows how the targets will be met through “changed land use patterns and improved transportation.”<sup>2</sup> The SCS must take into account where and how the region has already developed, as well as a range of additional factors, including the following:

- “[T]he most recent planning assumptions [T] considering local general plans and other factors;”<sup>3</sup>
- Housing needs across income levels, equitably allocated to local jurisdictions;<sup>4</sup>
- The “best practically available scientific information” on natural and working lands;
- Federal Clean Air Act requirements; and
- Input from community residents and stakeholders, “including . . . affordable housing advocates, transportation advocates, neighborhood and community groups,

environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interests, and homeowner associations.”<sup>5</sup>

Based on these considerations, the SCS must offer a forecasted development pattern that reduces per-capita GHG emissions from cars and light trucks in accordance with the region’s targets.<sup>6</sup> In short, SB 375 provides a framework for 18 of California’s most populous regions to reduce GHG emissions while laying the foundations for healthier, more equitable, and more sustainable communities.

MPOs have adopted a wide range of policies and programs to meet these goals. Some have enabled an inclusive public dialogue through proactive outreach efforts and the development of community-driven performance targets. Others have taken creative approaches to scenario development, resource conservation, and meeting rural needs. Still others have changed their project selection processes, maximized funding for investments that support SCS goals, and placed particular emphasis on meeting the needs of under-served communities and expanding active transportation options. MPOs have also made strides in evaluating growth plans and mitigating the impacts of transportation projects. And just as importantly, many have been working closely with local jurisdictions to support SCS implementation.

This report highlights some of the leading practices that have emerged so far. It also provides recommendations for further progress on challenges such as climate adaptation, sustainable water management, and affordable housing. By building on the leading practices and recommendations discussed below, MPOs can help their communities benefit even more from SB 375’s unique framework for land use, transportation, and climate planning.

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## METHODOLOGY

This report is based on extensive input from Metropolitan Planning Organization staff, advocates, and others, supplemented by research on selected Sustainable Communities Strategies and supporting documents. At the outset of the project, targeted experts were consulted to develop an initial outline of potential leading practice categories, with which input was solicited from all 18 MPOs, relevant state agencies, and advocates and academics from around the state. A convening of advocates was then organized to begin vetting this initial input, ensuing in several months of follow up with contributors to clarify, expand upon, and prioritize the many recommendations that were provided for consideration. The leading practices that rose to the top of this process were then synthesized into a draft report and recirculated to the MPOs and other contributors for review, culminating in this report.

Because this report relies primarily on input from experts—as opposed to in-depth research on all SCSs, and all documents, policies, and programs associated with them—it is not comprehensive and may omit worthwhile work by MPOs. Some resources provide more detailed comparisons between regions and explore particular policy areas more comprehensively.<sup>7</sup> While no one size fits all, this report highlights effective practices adopted by regions large and small, and the examples show how these adaptable practices can be tailored to a region’s individual circumstances. For a first look at how California’s communities are realizing the potential of SB 375, these leading practices offer an excellent place to start.

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## LEADING PRACTICES

### A. GETTING STARTED: PREPARING FOR AN INCLUSIVE PUBLIC DIALOGUE

#### LEADING PRACTICE

### **Give the entire community a voice in creating the Sustainable Communities Strategy.**

#### WHY IT MATTERS

Transportation planning can be complex, technical, and controversial. Few non-professionals fully understand it, and the populations who are most affected are often those with the fewest resources to participate in the process. SB 375 attempts to bridge this gap by setting out specific requirements for public outreach by MPOs.<sup>8</sup> But to meet their regions' needs, MPOs should go above and beyond these requirements and ensure that local residents and community organizations are meaningfully involved at each stage in the process.

#### KEY ELEMENTS OF IMPLEMENTATION

- **Seek public input throughout the process:** Engage residents, community organizations, and others from the outset with representation on committees and a role in the planning of public workshops. Invite stakeholders whose viewpoints have historically been underrepresented to participate in the process.
- **Reach out to under-served communities and vulnerable populations:** Actively seek representatives from under-served communities and vulnerable populations, and support participation by offering childcare, food, transportation assistance and programming in multiple languages.<sup>9</sup>
- **Provide mini-grants to support outreach:** Provide funding to organizations that implement outreach activities and bring more community residents into the process.

#### EXAMPLES

MPOs around the state have worked to increase the breadth and depth of public participation, and one of the most successful has been the **Sacramento Area Council of Governments** (SACOG). Prior to the passage of SB 375, SACOG reached out to a wide range of stakeholders during its Blueprint regional visioning process.<sup>10</sup> Through **advisory committees and other contexts for ongoing dialogue**, it worked to deepen these relationships over time.<sup>11</sup> By creating an atmosphere of trust, collaboration, and continuing engagement across multiple planning

processes, SACOG has done more than many MPOs to lay the foundations for “a collective shift toward smarter growth.”<sup>12</sup>

Outreach for SACOG’s 2012 and 2016 SCSs drew heavily on this work. For its 2012 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), SACOG used **focus groups, working groups, and community workshops** to reach out to residents, community organizations, and other stakeholders. This process brought in concerns ranging from affordable housing, agriculture, and clean energy to education, redevelopment, and accessibility for seniors.<sup>13</sup> It particularly emphasized outreach to “communities of concern (i.e., low-income, senior, youth, disabled, and minority groups), active transportation and environmental advocates, and the development community.”<sup>14</sup> SACOG incorporated stakeholder input into its list of performance measures and into scenario development, and was widely praised for its efforts to engage local governments and stakeholders in meaningful, ongoing dialogue.<sup>15</sup>

For its 2016 MTP/SCS, SACOG adopted a **Public Participation Plan** and **Outreach and Communications Plan** that expanded the involvement of under-served communities and rural populations.<sup>16</sup> It also developed a quarterly stakeholder dialogue called the **Sounding Board** to provide ongoing input on MTP/SCS development.<sup>17</sup> The Sounding Board included a wide range of interests, and SACOG specifically sought representation from under-served communities and rural areas.<sup>18</sup> SACOG sought to involve the public in other ways as well, from in-person and online workshops to tribal government outreach, conversations with elected officials, and meetings with stakeholders.<sup>19</sup> Through these and other efforts, SACOG provided transparency throughout the process and supported continuing engagement with participants.<sup>20</sup>

The **Fresno Council of Governments** (Fresno COG) also took an innovative approach to public outreach, using Federal Highway Administration metropolitan planning funds to provide **mini-grants** of up to \$3,000 for schools and community groups to organize workshops, edit presentations and make other contributions to outreach activities.<sup>21</sup> To enable community residents to participate in its workshops, it offered **day care, food, travel assistance, and translation services**, as well as written materials, PowerPoint presentations and simultaneous translation in English, Spanish, Hmong, Punjabi, and Laotian.<sup>22</sup> These efforts involved outreach to thousands of residents and made it possible for over 300 to participate in workshops.<sup>23</sup> And like SACOG, Fresno COG convened an ongoing stakeholder dialogue to guide the process. The 35-member **RTP Roundtable** included seats for jurisdictions and for organizations focusing on specific issues, such as affordable housing, as well as seats open to the public. Membership was determined through an open application process that allowed prospective participants to identify themselves, with the final list approved by the Fresno COG Board of Directors.<sup>24</sup> Taken together, Fresno’s public outreach efforts brought a wide range of voices into the process.

Other notable public outreach activities occurred in San Diego, Kern, San Joaquin, Shasta, and Tahoe, among other regions. The **San Diego Association of Governments** (SANDAG) provided grants to a dozen community-based organizations for outreach to low-income residents, non-

English speakers, seniors, the disabled, and other underrepresented stakeholders.<sup>25</sup> It also offered presentations in both English and Spanish, reached out to **17 tribal nations**, and convened a working group for **dialogue with the military**.<sup>26</sup> The **Kern Council of Governments** (Kern COG) was one of several regions that used an **online educational survey game** that allowed the public to balance their priorities with funding using an interactive bar chart that provided instant feedback on priorities.<sup>27</sup> Through this website and other public outreach efforts, including workshops, roundtables, and phone surveys, Kern COG ultimately gathered input from over 8,000 participants.<sup>28</sup> The **San Joaquin Council of Governments** (SJCOG) built strong **relationships with public health leaders**, incorporating their input into its 2014 RTP/SCS and taking an active role in the subsequent Community Health Assessment and ongoing Community Health Improvement Program.<sup>29</sup> It also shared materials on land use scenarios at the regular meetings of 27 stakeholder groups, including the San Joaquin Sustainable Communities Coalition, the Obesity and Chronic Disease Task Force, the Hispanic Chamber of Commerce, and the Vietnamese Voluntary Foundation.<sup>30</sup> Like SACOG, the **Shasta Regional Transportation Agency** (SRTA) built on relationships developed during a Blueprint planning process. Outreach for its 2015 SCS, which included voting on SRTA-developed land use scenarios, involved “approximately **one in seventy adult residents** in Shasta County” (i.e., over 2,000 participants).<sup>31</sup> And **Tahoe’s cross-jurisdictional participation process** brought together political entities at all levels, including two state governments.<sup>32</sup>

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## LEADING PRACTICE

### **Adopt a focused list of performance targets.**

#### WHY IT MATTERS

A Regional Transportation Plan is a complex document that, over time, can impact every aspect of residents’ daily lives. Will most new development go into existing communities or into “greenfield” growth on what are now farms and ranches? Will residents live in compact communities where walking, biking, and transit are the easiest ways to get around, or will they live in distant suburbs and exurbs and do most of their traveling by car? To answer questions like these, MPOs develop land use scenarios. When scenarios are linked to specific economic, environmental and equity-related impacts, they can be designed to meet the region’s goals and illustrate the tradeoffs involved in doing so.<sup>33</sup> But to make these connections, policymakers and the public need a clear, focused set of performance targets covering the factors that communities care about most.

## KEY ELEMENTS OF IMPLEMENTATION

- **Focus on goals that matter to the community:** Performance targets should be well-defined, understandable, and important goals in areas such as public health, social equity, and conservation, not solely transportation metrics. To identify which factors matter most to the community, targets should be selected with public input.
- **Set targets, not measures:** Agencies should set numerical targets and assess how well each scenario performs with regard to these targets. Input from experts and the public, and a review of existing conditions, can help determine how high to set the targets.
- **Keep the list short:** To focus decision-making on the region's highest goals, the list of targets should be short, and MPOs should provide easily understandable comparisons of how different scenarios perform in relation to them. More detail about scenarios' performance can be included in appendices or environmental review documents.

## EXAMPLES

One of the best examples of an SCS structured around a “concise set of primary performance targets” is Plan Bay Area.<sup>34</sup> Before adopting Plan Bay Area, the **Association of Bay Area Governments** (ABAG) and **Metropolitan Transportation Commission** (MTC) developed a set of nearly 100 possible targets and then sought input from community organizations, business leaders and other stakeholders.<sup>35</sup> After extensive dialogue, **ten targets** were selected:

1. Reduce per-capita CO<sub>2</sub> emissions from cars and light-duty trucks by 15%;
2. House 100% of the region's projected growth . . . by income level . . . without displacing current low-income residents;
3. Reduce premature deaths from exposure to particulate emissions [10% for fine particulates, 30% for coarse particulates, and] achieve greater reductions in highly impacted areas;
4. Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian);
5. Increase the average daily time walking or biking per person for transportation by 70% (for an average of 15 minutes per person per day);
6. Direct all non-agricultural development within the [2010] urban footprint (existing urban development and urban growth boundaries);
7. Decrease by 10 percentage points (to 56%, from 66%) the share of low-income and lower-middle income residents' household income consumed by transportation and housing;
8. Increase gross regional product (GRP) by 110% . . . ;
9. Increase non-auto mode share by 10 percentage points (to 26% of trips), [and decrease VMT] per capita by 10%; and
10. Maintain the transportation system in a state of good repair [as measured by a “road pavement condition index” of at least 75, a reduction in the proportion of “distressed lane-

miles of state highways” to less than 10% of all lane miles, and a transit system where all assets are within their useful lifespan].<sup>36</sup>

The ten performance targets were then used to **compare land use scenarios**, including but not limited to a preferred scenario put forward by ABAG and MTC, a scenario with a more dispersed pattern of development based in part on input from the Building Industry Association (BIA), and the Equity, Environment, and Jobs Scenario put forward by the 6 Wins for Social Equity Network and other equity and environmental advocates.<sup>37</sup> By comparing how each scenario performed under each target, it was possible to see clear differences between the visions for the future put forward by ABAG and MTC (which focused on GHG reductions and open space protection), the BIA (which promoted expansive growth), and equity and environmental groups (which emphasized equity and quality of life goals, but also did well on most performance targets and was found to be the environmentally superior alternative).<sup>38</sup>

Finally, ABAG and MTC used these targets to **measure the performance of individual transportation projects**, finding that the highest-performing projects were generally “focused on leveraging existing assets and improving their efficiency.”<sup>39</sup> Projects that would make it more difficult to meet the targets, or that were unlikely to produce benefits outweighing their costs, were subject to an additional round of scrutiny.<sup>40</sup> Over 30 projects that might otherwise have been included were dropped.<sup>41</sup> Thus, with a short list of performance targets, ABAG and MTC were equipped to compare different visions of where and how the Bay Area would grow and to select transportation projects based on one of those visions.<sup>42</sup>

Other MPOs took innovative approaches as well. **Fresno COG**, for example, hosted **public meetings** organized around six topics to develop a focused list of performance indicators, polled meeting participants and RTP Roundtable members on how to prioritize them, and then used the top indicators to evaluate each scenario considered for its SCS.<sup>43</sup> Along with ABAG and MTC, **SANDAG** had access to results from the **Integrated Transportation and Health Impacts Model**—a quantitative health analysis tool created in partnership with local and state Departments of Health—when developing public health-related targets for its most recent SCS.<sup>44</sup> MPOs such as the **Association of Monterey Bay Area Governments (AMBAG)** and **Tulare County Association of Governments (TCAG)** adopted measures of land conversion that included not only SB 375-defined farmland, but also **farmland inside urban spheres of influence**.<sup>45</sup> And, as illustrated in Figure 1, the **Southern California Association of Governments (SCAG)** used clear, intuitive infographics to depict how its plan was expected to perform.<sup>46</sup>

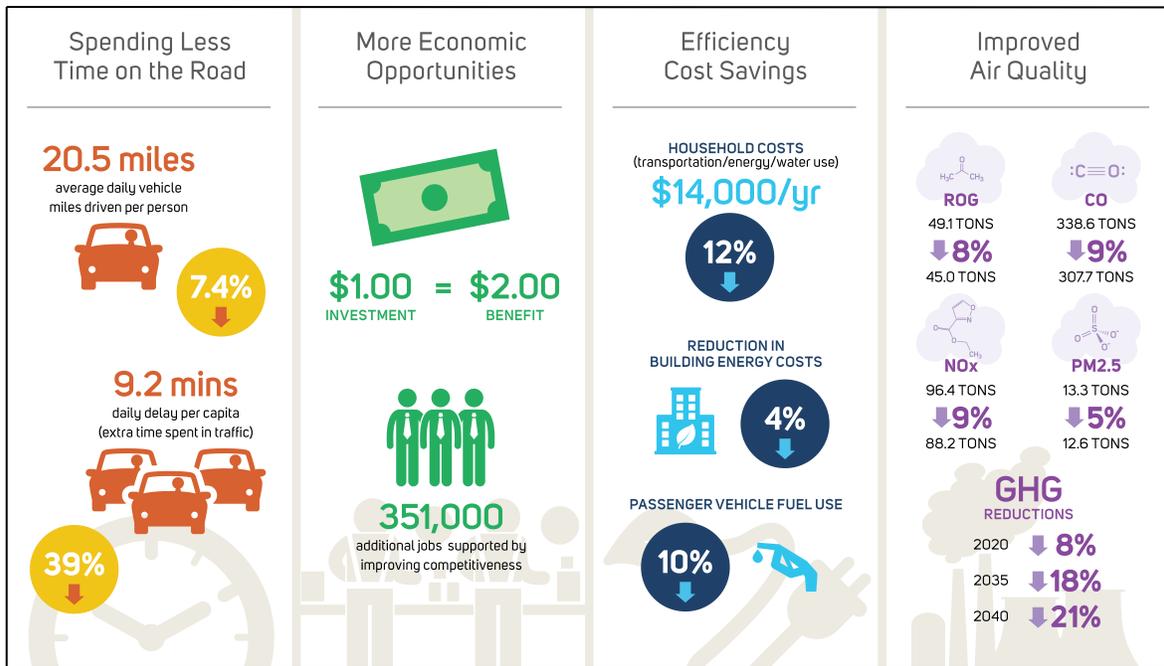


Figure 1: SCAG SCS infographic on plan performance and benefits of implementation (SCAG, 2016a).

## B. AIMING HIGH: PLANNING FOR HEALTHY, EQUITABLE, AND SUSTAINABLE GROWTH

### LEADING PRACTICE

**Use the scenario creation process to host a discussion about where and how the region should grow.**

### WHY IT MATTERS

The development of alternative scenarios about where and how growth will happen is central to the land use and transportation planning process envisioned by SB 375. While scenarios have some constraints, such as the need to use “the most recent planning assumptions considering local general plans and other factors,”<sup>47</sup> they can represent a wide range of possible futures for the region. The particular scenario that an MPO selects as the land use forecast in its SCS can have a significant effect on which transportation projects get built, which in turn can influence development. But to make this process work for everyone, scenarios must thoroughly incorporate the needs, concerns, and aspirations of the region’s residents.

## KEY ELEMENTS OF IMPLEMENTATION

- **Use local government and community input to pre-identify areas for growth and conservation:** From the very beginning of the process, reach out to local governments, residents, and other stakeholders to identify where growth should and should not occur.
- **Build scenarios around stakeholder concerns:** Invite highly engaged stakeholders to create or substantially define scenarios. Provide technical support and financial resources, but leave leadership of the process and substantive decision making in the hands of the community.
- **Provide genuine alternatives:** Scenarios should represent distinct visions for the region's future and should clearly illustrate the tradeoffs between different patterns of development.
- **Educate participants about the links between land use and transportation:** Rather than using the same transportation project list for every scenario, tailor scenarios and project lists to one another. Capital infrastructure, and operations and maintenance expenditures in each scenario should support and incentivize that scenario's growth pattern, as should the timing of these investments.
- **Make the process accessible and transparent:** Because effective public participation requires a basic understanding of the data and modeling assumptions used in scenario development, data should be accessible and assumptions transparent.

## EXAMPLES

Most MPOs incorporate stakeholder input into land use scenario development, but some have taken this process further by allowing stakeholders to create or substantially define scenarios. As noted above, for example, **ABAG** and **MTC** modeled the stakeholder-developed Enhanced Network of Communities (ENC) Scenario and Equity, Environment, and Jobs (EEJ) Scenario.<sup>48</sup> These scenarios represented **starkly different visions** of the region's future, and each was linked to a **specific list of transportation projects**. The ENC list largely overlapped with the list for ABAG and MTC's preferred scenario.<sup>49</sup> But the EEJ list cut a number of road expansion projects in order to redirect funding to bus service, while shifting some housing production to transit-oriented suburban job centers that had not volunteered for significant growth.<sup>50</sup> Neither scenario was adopted as the basis for the land use projection and transportation investments in Plan Bay Area.<sup>51</sup> In the current SCS process, MTC has instead sought to bring stakeholders together to define a consensus scenario. But by modeling these stakeholder scenarios separately in a previous round, ABAG and MTC were able to bring stakeholders representing different constituencies more fully into a dialogue about the region's future.

Other MPOs modeled stakeholder-created scenarios, designed their own scenarios to respond to stakeholder concerns, or developed scenarios to explore how far their regions could go in meeting specific goals. **Fresno COG**, for example, modeled **Scenario D**, which was put forward by a Community Equity Coalition composed of local organizations with support from ClimatePlan.<sup>52</sup> Scenario D was built around a more compact pattern of growth that would have conserved over 4,700 more acres of farmland, rangeland, and other open space than Fresno COG's preferred scenario, while directing more growth into existing communities, especially disadvantaged rural communities.<sup>53</sup> Similarly, in response to advocates' request for a "Balanced Growth Scenario," **Kern COG** developed the **33% Housing Mix Alternative**, under which 33% of new residential development would have gone into existing communities, and the **100% Infill Alternative**, under which all new residential growth would have.<sup>54</sup> And **SANDAG** tested three land use scenarios that went beyond local jurisdictions' general plans to assess the impact that **vastly different growth boundaries and development patterns** could have on GHG reductions.<sup>55</sup> As in the Bay Area, however, none of these scenarios was adopted as the land use forecast for its region's RTP/SCS.<sup>56</sup>

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## LEADING PRACTICE

### **Support conservation of natural and working lands through land use scenarios and transportation investments.**

#### WHY IT MATTERS

California's natural and working lands range from some of the most productive agricultural land on the planet, to iconic parks, preserves, and beaches that attract millions of visitors. They bring billions of dollars a year into many regions, while contributing to food and water security, supporting air quality and active lifestyles, and providing wildlife habitat and access to nature.<sup>57</sup> Directing new growth into existing communities makes it possible to conserve these irreplaceable resources, while also helping to upgrade infrastructure, improve life for current residents, and support water quality. At the same time, land use patterns that emphasize conservation and compact growth can help reduce per-capita VMT and overall GHG emissions. Indeed, a recent study found that reducing California's rate of farmland conversion by half within a decade "would avoid the emission of a cumulative total of 55 million metric tons of greenhouse gases, equivalent to avoiding emissions from more than 129 billion vehicle miles traveled."<sup>58</sup> MPOs can help their regions to realize these benefits by actively incorporating conservation concerns into land use scenarios and transportation investments.

## KEY ELEMENTS OF IMPLEMENTATION

- **Use comprehensive natural resource assessments:** Integrate comprehensive natural resource assessments into scenarios about where and how the region will grow.
- **Adopt land use forecasts that conserve resource areas and farmland:** Incorporate data layers representing natural and working lands into scenario mapping, and avoid projecting new greenfield development (or funding transportation projects to support such development) in these areas.
- **Invest in both conservation and existing communities:** Proactively fund conservation planning and land protection, while focusing forecasted growth and transportation investments on existing communities, including under-served communities.

## EXAMPLES

A growing number of MPOs are incorporating natural resource assessments into their land use forecasts, but **ABAG** and **MTC** took a particularly thorough approach in Plan Bay Area. Drawing on input from local governments throughout the Bay Area, their preferred land use scenario is built around complementary networks of over 100 **Priority Conservation Areas** (PCAs) and nearly 200 **Priority Development Areas** (PDAs), all nominated by local jurisdictions.<sup>59</sup> PCAs are “regionally significant open spaces” where there is both local support for conservation and a threat of land conversion,<sup>60</sup> and they collectively represent an assessment of some of the most valuable and vulnerable natural resources in the region. PDAs are areas suitable for walkable, transit-oriented growth that can help take development pressure off of habitat, farmland, and open space.<sup>61</sup>

To support this framework, Plan Bay Area commits \$10 million in **new funding for conservation planning and land protection** in PCAs, and \$310 million to facilitate development in PDAs over a five-year period.<sup>62</sup> And its land use forecast “direct[s] **100% of the region’s growth inside the year 2010 urban footprint**, which means that all growth occurs as infill development or within established urban growth boundaries or urban limit lines.”<sup>63</sup> While most SCSs predict an increase in the proportion of new growth going into existing communities,<sup>64</sup> the Bay Area’s target of 100% is unique and, if realized, may contribute significantly to the protection of natural and working lands.<sup>65</sup>

Butte County’s 2012 MTP/SCS takes another innovative approach. Prior to preparing its SCS, the **Butte County Association of Governments** (BCAG) used Blueprint Planning Program resources to help four of six local jurisdictions update their general plans.<sup>66</sup> The new plans were designed to be consistent with each other and with the **Butte Regional Conservation Plan** (BRCP) then in development.<sup>67</sup> Based in part on these general plans, Butte’s land use forecast directs most new growth into a network of **Urban Permit Areas** that avoid conflict with special-status species habitat and other resources identified in the BRCP.<sup>68</sup> Thus, by working on a voluntary basis with

local jurisdictions, BCAG was able to lay the groundwork for a land use forecast consistent with protecting its region’s most important natural and working lands.

Elsewhere, the Tulare County Association of Governments (TCAG) and the Santa Barbara County Association of Governments (SBCAG) took the straightforward approach of treating “Greenprint” layers as constraints to development in their land use scenarios.<sup>69</sup> As TCAG’s 2014 RTP/SCS explains,

[r]esource maps produced . . . as part of the San Joaquin Valley Greenprint . . . provide up to date location information on important farmland, critical habitats and other resources on the regional scale. These resource areas were compiled as GIS layers that acted as constraints to development of land in the SCS preferred scenario.<sup>70</sup>

While there was no equivalent of the San Joaquin Valley Greenprint in the Santa Barbara region, SBCAG assembled a set of GIS layers representing habitat, agricultural resources, and other open space areas, and used this “Regional Greenprint” as a constraint to development in each of its UPLAN scenarios.<sup>71</sup>

**SCAG**, meanwhile, adopted a preferred scenario with a **lower rate of habitat and farmland conversion** than the land use forecast in its previous RTP/SCS, and prepared a Natural and Farm Lands Appendix outlining local conservation plans and offering recommendations for a regional Open Space Conservation Plan.<sup>72</sup> Other notable approaches include the **San Luis Obispo Council of Governments’** (SLOCOG’s) proposal to “[g]ive **conservation plans as much weight as general plans** when planning transportation investments,” and the **Kings County Association of Governments’** (KCAG’s) incorporation of **conservation-related criteria** into its scoring system for selecting highway projects.<sup>73</sup> A recent report, “Sustainable Communities Strategies and Conservation: Results from the First Round and Policy Recommendations for Future Rounds,” provides additional context, examples and guidance on conservation-related best practices.<sup>74</sup>

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## LEADING PRACTICE

### **Develop scenarios that minimize displacement and provide homes for all income levels in all communities.**

#### WHY IT MATTERS<sup>75</sup>

In regions with rising rents, income inequality and an entrenched lack of affordable housing in high-income job centers, existing residents are threatened by displacement. When low- and middle-income families are uprooted, they are often forced into cheaper housing on the periphery, increasing racial and economic segregation. They also face longer commutes to work, which

leads to higher per-capita VMT and defeats one of the central purposes of SB 375. MPOs can address these challenges by developing land use scenarios that minimize displacement and promote adequate housing opportunities for low-income residents. And because low-income households are consistently more likely to take transit, these scenarios are likely to feature lower per-capita VMT and GHG emissions.<sup>76</sup>

## KEY ELEMENTS OF IMPLEMENTATION

- **Address displacement in scenario development:** Design land use scenarios that anticipate and minimize the risk of displacement.
- **Promote opportunities for low-income residents:** Ensure that land use scenarios promote jobs/housing balance and fit, such that the supply of affordable housing in all high-amenity communities increases, and low-income residents have access to a wide range of jobs without long commutes.

## EXAMPLES

Displacement is a significant threat for low- and middle-income families in much of California, and no MPO's scenario development process fully addresses this concern. But at least one MPO is directly helping its local jurisdictions plan for affordable housing. **Fresno COG** recently developed a **Multi-Jurisdictional Housing Element** (MJHE) for a majority of local governments in its region, including Fresno County and 12 of 15 incorporated cities.<sup>77</sup> The MJHE specifically addresses affordable housing issues, such as permanent and temporary housing for farmworkers and options for preserving affordable units at risk of conversion to market rate.<sup>78</sup> It also includes **Affordable Housing Development and Preservation** programs for individual jurisdictions, with policy commitments ranging from gap financing for affordable housing builders to streamlined permitting for affordable housing developments.<sup>79</sup> The MJHE will be in effect through December 31, 2023, so it should inform scenario development and land use forecasts for Fresno COG's 2018 and 2022 SCSs.<sup>80</sup>

Other MPOs have worked to develop a more nuanced understanding of the proximity of jobs to housing across income levels. **SACOG**, for example, has gone beyond the traditional measure of **jobs/housing balance** "at the regional, county or jurisdictional level" to focus on housing availability "within four miles of the region's major employment centers."<sup>81</sup> While this metric does not fully address jobs/housing fit, its emphasis on proximity to job centers (as opposed to an undifferentiated look at housing across the region) provides a more sophisticated understanding of the opportunities available to households in specific places.<sup>82</sup>

## GOING FURTHER

In the Bay Area, the Equity, Environment and Jobs Scenario was designed in part to **approximate jobs/housing fit**.<sup>83</sup> Although not selected as the preferred scenario in the first round, adoption of

scenarios like this in future rounds could help to incorporate jobs/housing fit into land use forecasts and transportation investments. To design such scenarios, MPOs could follow the criteria put forward by the 6 Wins for Social Equity Network and others for an **Equity, Environment & Jobs 2.0 Scenario**. Based in part on input from environmental justice advocates and community residents, this scenario would 1) systematically prioritize the needs of under-served communities, 2) expand local transit service, 3) create and preserve affordable housing opportunities in transit-rich and high-opportunity communities, 4) directly protect low-income residents from displacement, 5) focus on creating living-wage and middle-wage jobs for local residents, and 6) improve health and safety in under-served communities.<sup>84</sup>

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## LEADING PRACTICE

### **Help rural communities improve mobility, health, and quality of life while reducing dependence on driving.**

#### WHY IT MATTERS

From San Diego to Shasta, many residents of the state's 18 MPO regions live in rural communities.<sup>85</sup> These communities often have limited access to jobs, public transportation and essential services, and some face social and environmental vulnerabilities at least as severe as those of their regions' urban centers.<sup>86</sup> Well-planned investments can help address these disparities. Moreover, by improving jobs/housing balance and fit, they can reduce the need for long commutes to distant urban centers, thereby lowering per-capita VMT and GHG emissions while increasing residents' access to daily essentials.

#### KEY ELEMENTS OF IMPLEMENTATION

- **Address rural needs in land use scenarios:** Ensure that land use scenarios incorporate housing, jobs, and equitable access to services for rural communities.
- **Expand transportation options in rural areas:** Develop practical low-VMT transportation strategies particular to the rural context and prioritize these for investment.

#### EXAMPLES

One of the most thorough attempts by an MPO to understand and address rural needs is **SACOG's Rural-Urban Connections Strategy (RUCS)**. In 2008, SACOG began developing a program to implement the Sacramento Region Blueprint in rural areas, with an emphasis on ensuring that land use and transportation decisions supported the agricultural economy.<sup>87</sup> Building on extensive input from rural stakeholders, a wide range of land use data, and the I-

PLACE<sup>3</sup>S mapping tool, RUCS now includes detailed, parcel-specific data on the cropping patterns on . . . farms in the region, as well as planning and economic analytical tools to help understand the economics of farming and how infrastructure, land use and market factors affect the ability of farmers to profitably get their goods to market.<sup>88</sup>

Taken together, these tools and datasets provide an increasingly nuanced view of how land use and transportation interact with the rural economy.<sup>89</sup>

SACOG incorporated results from RUCS into scenario development for its 2012 and 2016 SCSs. Its current MTP/SCS emphasizes **transportation connectivity between urban and rural areas**, open space protection, and other goals that support the economic viability of rural communities.<sup>90</sup> SACOG continues to develop new tools and datasets for RUCS, so its capabilities are likely to increase over time.<sup>91</sup>

MPOs in the San Joaquin Valley have also sought to address rural needs. **Kern COG's** 2014 RTP/SCS, for example, incorporates a set of **Intelligent Transportation Systems (ITS) programs** that go further than any previous ITS programs in the state to integrate urban and rural systems.<sup>92</sup> These range from the Smart Transit Program, which coordinates the schedules of transit systems serving the Bakersfield area and Kern County more broadly, to a Kern 511 Traveler Information Service that supports safety in both urban and rural areas.<sup>93</sup>

## GOING FURTHER

Further innovation is needed to address rural needs, but a current **SCAG** initiative and a land use scenario considered by **Fresno COG** offer promising places to start. In partnership with UC Davis, SCAG is applying for a **California Sustainable Transportation Grant** to study first- and last-mile transportation needs in rural areas, including disadvantaged communities.<sup>94</sup> The results will be used to develop a comprehensive **Rural First/Last Mile Plan** and expand access to ride-sourcing and micro-transit.<sup>95</sup> If successful, this initiative will improve access to employment, education, and essential services.

Fresno COG's **Scenario D**, which was put forward by a Community Equity Coalition of local organizations with support from ClimatePlan, modeled a growth shift in which other scenarios' rural ranchette and new town development instead occurred in existing small towns and rural communities.<sup>96</sup> Although Scenario D was not adopted in the first round, development and adoption of similar scenarios in future rounds could help create **complete rural communities** by providing access to nearby services, and reduce per-capita VMT by shortening trips to distant urban centers.

## LEADING PRACTICE

# Build climate resilience into land use forecasts and transportation investments.

## WHY IT MATTERS

From coastal cities facing sea level rise to rural communities threatened by changing wildfire regimes, the impacts of climate change in California are already apparent and likely to become more severe over time. In some regions, higher temperatures and increased flood risk will affect maintenance costs for existing infrastructure, while in others, the prospect of inundation will have far-reaching impacts on land use and the viability of future projects.<sup>97</sup> MPOs that take these impacts into account now will be better prepared to address them.

## KEY ELEMENTS OF IMPLEMENTATION

- **Conduct a vulnerability assessment:** Identify probable climate impacts and determine where developed areas, natural resources, and current and proposed transportation infrastructure are likely to be affected. Where local jurisdictions have conducted climate vulnerability assessments as part of their general plan safety elements or hazard mitigation plans, as required under SB 379, MPOs should take into account the results of these assessments. Where they have not, MPOs should consider adapting the sources and methodology described in SB 379 to their own climate planning.<sup>98</sup>
- **Plan for climate adaptation:** Based on the results of the vulnerability assessment, identify goals, policies, and objectives to support climate resilience, including but not limited to addressing impacts to the region's transportation sector. Develop feasible implementation measures, such as siting and design criteria for project selection, to ensure that objectives are met.
- **Use natural infrastructure:** In accordance with Executive Order B-30-15, address climate impacts through natural infrastructure, rather than additional built infrastructure, wherever possible.<sup>99</sup>
- **Incorporate economic, equity, and rural concerns:** To the extent possible, climate planning should incorporate economic impacts, anti-displacement and social cohesion concerns, and alternatives for rural communities.

## EXAMPLES

Several MPOs have begun to consider climate impacts, but **SACOG** has gone further than many to link them to land use and transportation planning. Prior to preparing its 2016 MTP/SCS, SACOG collaborated with CivicSpark, a Governor's Initiative AmeriCorps Program implemented

by the Local Government Commission, to develop the **Sacramento Region Transportation Climate Adaptation Plan (SRTCAP)**. The SRTCAP examines the likely effects of four climate impacts—extreme heat, changes in precipitation, wildfire, and landslides—on different types of transportation infrastructure, assigning risk levels to each combination.<sup>100</sup> For example, extreme heat poses a high risk to roads, railways, and bridges because of its effects on asphalt, rail tracks, and bridge joints, a moderate risk to public transit due to “[d]ecreased comfort, transit vehicles overheating [and] network delays,” and a lower risk to drainage infrastructure.<sup>101</sup> To address these risks, the SRTCAP offers **planning, design, and maintenance strategies** for each type of infrastructure, as well as a broader action plan built around stakeholder engagement, more granular assessments of climate impacts, incorporation of climate adaptation into transportation funding decisions, and long-term monitoring.<sup>102</sup> These strategies, in turn, are incorporated into SACOG’s 2016 MTP/SCS.<sup>103</sup> The MTP/SCS also points out that climate adaptation can “[i]ncorporate ecosystem resilience and protection of ecosystem services,” though its strategies to protect transportation assets do not rely extensively on natural infrastructure.<sup>104</sup>

Other regions are also beginning to address climate impacts. Prior to adopting its second SCS in 2015, for example, **SANDAG** prepared a **Climate Change Mitigation and Adaptation White Paper**, which discussed strategies for reducing GHG emissions as well as addressing expected climate impacts such as increased temperature, sea level rise, wildfire, stress on freshwater resources, and threats to habitat and public health.<sup>105</sup> Building on the work of local jurisdictions, more than half of which have prepared or are currently preparing Climate Action Plans, the White Paper discusses strategies to address climate-related impacts to transportation infrastructure, coastlines, and habitat.<sup>106</sup> San Diego’s second SCS, in turn, commits to “consider the potential impacts of climate change on transportation projects by designing infrastructure to withstand impacts such as sea level rise, extreme heat, and intense rain events;” continue using TransNet funds to support climate resilience in habitat areas; and work with others to protect beaches from inundation.<sup>107</sup>

Similarly, **ABAG** and **MTC** are currently developing a **regional vulnerability assessment** of transportation infrastructure, Priority Conservation Areas, Priority Development Areas, and disadvantaged communities for their 2017 SCS, though they anticipate that vulnerability data will not be fully incorporated into land use scenarios until the following round.<sup>108</sup> They have also been conducting climate resilience studies focused on impacts to specific communities, coastlines and transportation assets.<sup>109</sup>

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## LEADING PRACTICE

**Support sustainable water management with land use forecasts and transportation investments.**

## WHY IT MATTERS

Water is essential to life. Without it, even the best-planned communities are uninhabitable, and transportation infrastructure serving those communities becomes a stranded asset. But many Californians lack reliable access to clean and affordable water. The current drought has placed additional stress on urban water supplies, while severely impacting the farms and ranches that grow food we eat. It has also led to increased reliance on groundwater, with some aquifers being depleted so rapidly that land subsidence now threatens transportation infrastructure. And recent research suggests that climate change may lead to longer and more severe droughts during the current century.<sup>110</sup> MPOs that align their land use forecasts and transportation investments with a careful accounting of regional water needs will be better prepared to address these challenges, and to ensure that today's transportation investments do not become tomorrow's lost assets.

## KEY ELEMENTS OF IMPLEMENTATION

- **Maintain an ongoing dialogue with water experts:** MPOs should coordinate and collaborate with water agencies, Integrated Regional Water Management Plan (IRWMP) stakeholders, Groundwater Sustainability Agencies (GSAs), community organizations, and other water experts. This should be a two-way exchange, with MPOs asking for input and review of SCSs and providing input and review of water-related plans, documents, and processes.
- **Align growth projections with accurate projections of water needs and supply:** MPOs should ensure that SCS growth projections align with 1) regional water agencies' projections regarding population growth, 2) water use projections under local drought contingency plans, 3) anticipated water use efficiency standards, 4) Groundwater Sustainability Plans prepared by GSAs, and 5) the best available projections of future water supply reliability.
- **Assumptions about water needs and supply should prioritize existing low-income rural communities:** Recognizing that some longstanding low-income rural communities have been excluded from adequate water supply and wastewater infrastructure, MPOs should interpret available information in a way that assumes those communities are first in line for available water.
- **Support growth patterns consistent with water supply reliability and sustainable water management:** Based on the information above, MPOs should avoid forecasting additional development or funding transportation projects to support such development in newly planned communities that lack reliable long term access to water, or in areas where conversion of habitat, farmland, or other open space would reduce groundwater recharge.

## EXAMPLES AND NEXT STEPS

Some MPOs are already incorporating sustainable water management into their assumptions about future growth. **TCAG**'s 2014 RTP/SCS, for example, treats **groundwater recharge areas as constraints to development** in its land use forecast.<sup>111</sup> **SJCOG**'s 2014 RTP/SCS is designed in part to be consistent with the **Delta Plan**'s goals of "providing reliable water supply for California and protecting, restoring, and enhancing the [San Joaquin] Delta ecosystems."<sup>112</sup> Other MPOs have recognized **water agencies as important stakeholders** and sought input from them, as **SACOG** did in focus groups for its 2012 MTP/SCS and the Sounding Board for its 2016 MTP/SCS.<sup>113</sup> But most MPOs need to go further to ensure that their land use forecasts and transportation investments align with accurate accountings of water need and water supply reliability. The implementation steps described above would be an excellent start.

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## C. MOVING FORWARD: CHOOSING TRANSPORTATION INVESTMENTS

### LEADING PRACTICE

**Select the best transportation projects based on clear goals, using a transparent process.**

### WHY IT MATTERS

One of the most important functions of regional transportation planning is selecting which specific projects will be funded. While this process can be bureaucratic and opaque, it can also make the difference between either building a new highway to a poorly planned exurb, or improving transit service and walking and biking infrastructure in existing communities. To ensure that projects serve the greatest needs and help to improve outcomes related to health, equity, and sustainability, it is essential that the process for selecting them be rational and transparent, and that the results genuinely reflect public input.

### KEY ELEMENTS OF IMPLEMENTATION

- **Consider every project on the merits:** Minimize the number of committed projects that are automatically included.
- **Use a rational and open scoring process:** Select projects via a rational and transparent scoring system with performance standards linked to the overall goals of the SCS process.<sup>114</sup> Apply these standards strictly and consistently, and cut projects that score poorly.

- **Publicly track the results:** Provide transparent, real-time information about project impacts, costs, and phasing during the term of the SCS.

## EXAMPLES

As noted above, **ABAG** and **MTC** drew upon extensive public input to develop a set of ten performance targets and used these targets to evaluate transportation projects.<sup>115</sup> To consider as many projects as possible on the merits, they **limited “committed” projects** to those that had completed the environmental review process and were already funded, and used the ten **performance targets to evaluate the rest.**<sup>116</sup> Projects that would make it more difficult to meet the targets, or that were unlikely to produce benefits outweighing their costs, were subject to further scrutiny, and over 30 were cut from the final list.<sup>117</sup>

Other MPOs have incorporated SCS goals into project selection criteria, taken new approaches in determining when specific projects will be built, and made strides in publicly tracking the results of these processes. **Kern COG**, for example, added **VMT reduction, emissions reduction, and livability** to its project selection criteria.<sup>118</sup> **SANDAG** used new evaluation criteria and performance measures to determine when specific transportation investments would be made, resulting in decisions to build transit projects sooner than previously planned.<sup>119</sup> **SCAG** worked with the UCLA Lewis Center for Regional Policy Studies to develop **REVISION**, a web-based mapping and planning tool that can analyze demographic, socio-economic, housing, environmental, and other changes at a neighborhood scale, and is using this tool to monitor RTP/SCS implementation.<sup>120</sup> **SACOG** focused on aligning project timing with the timing of growth, and removed projects that scored particularly poorly on a performance assessment. And, as illustrated in Figure 2 below, SACOG maintains an **interactive map** of the location, type, cost, and timing of transportation projects in its current MTP/SCS.<sup>121</sup>

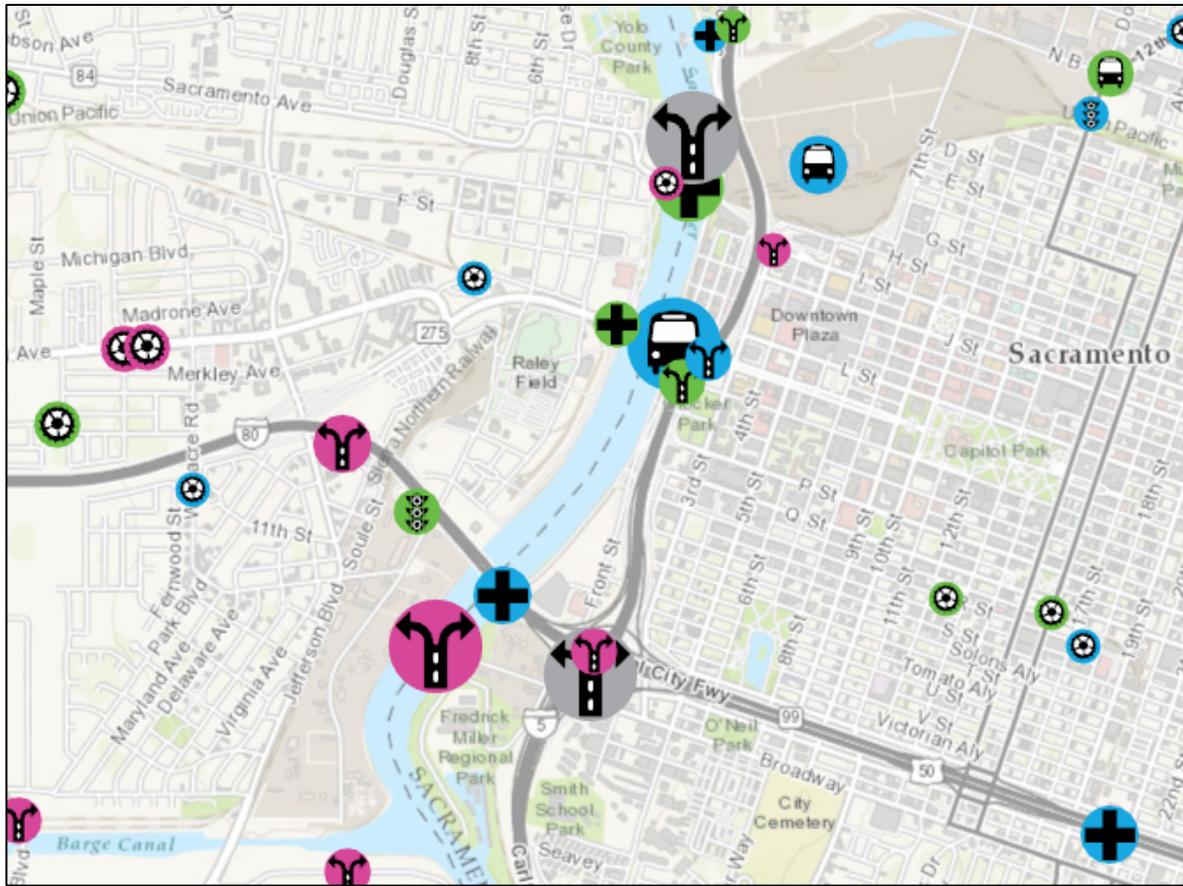


Figure 2: Sample screen from interactive map of SACOG projects (SACOG, 2016b).

Projects are mapped by location and type, as well as cost (represented by dot size) and phasing (blue for 2008 – 2019, green for 2020 – 2025, pink for 2026 – 2036, and grey for “project development only”), and clicking on an individual project reveals additional information.<sup>122</sup> Taken together, these attributes allow residents of the Sacramento region to see at a glance where their transportation dollars are going.

## LEADING PRACTICE

**Shift funds away from road expansion, toward investments that help meet regional health, equity, and sustainability goals.**

## WHY IT MATTERS

Historically, transportation funding decisions have often prioritized road expansion and highway construction. In parts of California, this has led to a widely dispersed, car-dependent pattern of

development, marginalization of those who cannot drive or afford a vehicle, and some of the worst air quality in the country.<sup>123</sup> SB 375 was designed in part to reverse these trends, giving MPOs a framework to reduce GHG emissions by supporting conservation, compact growth, and alternatives to driving. But if communities are to benefit from new approaches to land use and transportation, MPOs must find the flexibility to fund projects that support these approaches.

## KEY ELEMENTS OF IMPLEMENTATION

- **Prioritize health, equity, and sustainability over highway construction:** When creating a transportation budget, move away from prioritizing unsustainable highway construction. Instead, maximize funding for healthy, equitable, and sustainable communities, and the transportation choices that make them possible. Transit operations should be prioritized wherever possible, as many federal and state transit funding sources are limited to capital projects.<sup>124</sup>
- **Go beyond conventional alternatives to driving:** While investment in traditional alternatives to driving, such as transit, bicycle, and pedestrian amenities, is important, MPOs should go further and fund planning grants for local communities, free transit passes for youth, active transportation education, conservation of resource areas and farmland, shared use mobility, and more.
- **Maximize flexibility from sales tax measures:** Wherever possible, find flexibility in existing, highway-heavy sales tax measures to meet health, equity, and sustainability goals. MPOs partnering with local jurisdictions to propose new sales tax measures should design them to support projects that lower per-capita VMT, reduce air pollution, conserve natural and working lands, and expand transportation and housing options for those who need them most.

## EXAMPLES

An innovative approach to transparent transportation budgeting was taken by **Fresno COG** in 2014. Instead of ranking a single list of possible transportation investments, Fresno COG developed **criteria for four types of projects**: 1) active transportation; 2) road construction and expansion; 3) road operations and maintenance; and 4) transit.<sup>125</sup> Projects submitted in response to a call for projects were divided into these four categories, and prioritized within each category. Thus, active transportation projects were compared only to other active transportation projects, transit projects to other transit projects, and so on.<sup>126</sup>

Fresno COG also developed **four “revenue projection scenarios,”** each of which allocated funds differently between the four categories of projects.<sup>127</sup> For example, the “Traditional” projection allocated less than 4% to bike and pedestrian projects and just under 31% to transit, whereas the “Emphasis on Active Transportation” projection allocated over 9% to bike and

pedestrian projects and 34% to transit.<sup>128</sup> Within each of these budgets, the top projects in each category would be funded up to the total amount allocated to that category.

The four budgets yielded similar project lists because there were relatively few submissions in response to the call for projects.<sup>129</sup> But in regions where the cost of all proposed projects greatly exceeds the resources available to fund them, Fresno COG's approach provides a rational way to rank projects by type, and **explore a range of options in allocating funds between project types.**

Other regions are also redirecting funds from highway projects to more sustainable alternatives. For example, the **One Bay Area Grant Program** uses federal Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP 21) Act funding to support conservation in Priority Conservation Areas and focused housing growth in Priority Development Areas.

## GOING FURTHER

A recent TransForm report provides a valuable roadmap for finding **flexibility in sales tax measures** like San Diego's TransNet.<sup>130</sup> Analyzing both the text of TransNet and the history of its implementation, the authors find that funding allocations can be adjusted by a supermajority of the SANDAG Board, that the scope of highway projects can be changed with the approval of the MPO and Caltrans, and that specific projects can be accelerated or delayed as priorities change.<sup>131</sup> While each sales tax measure is unique, it is likely that at least some of these mechanisms will be applicable for other measures around the state. MPOs that leverage them will be better equipped to lower per-capita VMT and help their regions build healthy, equitable, and sustainable communities.

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## LEADING PRACTICE

### **Invest to meet the needs of under-served communities and vulnerable populations.**

#### WHY IT MATTERS<sup>132</sup>

Patterns of inequitable investment and development over past decades systematically isolated and harmed low-income communities of color, while providing a disproportionate share of benefits to other communities. Urban renewal programs and highway construction, for example, devastated under-served downtown neighborhoods. The burdens of poor land use planning, environmental degradation, and lack of mobility reinforces these legacies today. For this reason, it is essential to provide investment and support development that meets the needs of under-served communities without displacing vulnerable families.

## KEY ELEMENTS OF IMPLEMENTATION

- **Start with the needs:** Include an early process for assessing the critical transportation needs of the region as a whole and of under-served communities in particular. Provide participants with a clear explanation of how this process will work and how needs will be prioritized.
- **Create environmental justice advisory groups:** As part of this process, convene environmental justice advisory groups to identify disproportionate impacts and transportation gaps for under-served communities. These groups should be drawn from the communities themselves, and wherever possible, MPOs should hire community-based organizations to provide training and support.
- **Help under-served communities submit projects:** Open up calls for RTP projects to under-served communities themselves, rather than limiting them to local and regional transportation agencies. Offer planning grants and assistance to help under-served communities submit projects.
- **Create funding programs for under-served communities:** Create incentive programs and other funding mechanisms to address the needs of under-served communities. Follow the model of SB 535 by allocating an appropriate proportion of regional transportation funding to address needs prioritized by under-served communities, and make these investments early in the timeframe of the plan.<sup>133</sup>
- **Fill transportation gaps for vulnerable populations:** Design, and prioritize in scoring, transportation projects and programs (such as late-night bus service) that serve third-shift workers, rural residents, and other vulnerable populations.

## EXAMPLES

Most regions have further to go in identifying and prioritizing the needs of disadvantaged communities. **Fresno COG**, however, has taken steps toward this goal through a **Circuit Rider Program** and a **Transportation Needs Assessment** conducted after adoption of its first SCS. Using a Proposition 84 grant from the Strategic Growth Council, the Circuit Rider Program provided funding for smart growth planning by local jurisdictions, as well as technical assistance for grant applications.<sup>134</sup> It worked exclusively with small cities, but has significant potential to address the needs of under-served communities if extended to unincorporated rural areas and “legacy communities” near the region’s incorporated cities.<sup>135</sup> Fresno COG has committed to provide ongoing annual funding for circuit planning and engineering assistance for smaller agencies in the region, with the goal of continuing coordination between local agencies and SCS implementation efforts.<sup>136</sup>

In response to concerns that under-served communities were not allocated a proportionate share of transportation funding, Fresno COG committed to undertake a Transportation Needs Assessment focusing in part on walkability, bikeability, and transit access in disadvantaged communities.<sup>137</sup> This program has not emphasized rural, unincorporated areas, but it has identified needs relating to walkability in and across communities, including disadvantaged communities.<sup>138</sup> Fresno COG has also committed to create a **Sustainable Planning and Infrastructure Grant Program**, which is still under development, but could potentially help under-served communities address these needs.<sup>139</sup>

In addition to identifying needs, Fresno and other regions are directly funding transportation projects to serve vulnerable populations, or revisiting project selection criteria to prioritize these investments in the future. **Fresno COG's** Measure C, a local half-cent sales tax measure, provides \$20 million over two decades to **subsidize a vanpool program** for both commuters and agricultural workers.<sup>140</sup> **SCAG's** 2016 RTP/SCS commits nearly \$2 million in funding for a **pilot vanpool program** designed in part to **serve agricultural workers** in the Eastern Coachella Valley, and provides additional funding for the SunLine Transit Agency to meet other needs in this area.<sup>141</sup> And a recent amendment to the **Merced County Association of Governments'** (MCAG's) 2014 RTP/SCS includes a policy of **re-evaluating project selection criteria** to emphasize "avoiding disproportionately high and adverse effects, including social and economic impacts, on traditionally disadvantaged communities, especially communities of color and low-income communities."<sup>142</sup>

## GOING FURTHER

More must be done to identify the needs of vulnerable populations and under-served communities, and ensure that transportation investments prioritize these needs. As described above, one place to start may be the development and adoption of equity-focused scenarios based on the principles outlined for the Equity, Environment, & Jobs 2.0 Scenario proposed in the Bay Area. A second approach was proposed by the 6 Wins for Social Equity Network in response to a recent call for projects by MTC. 6 Wins requested that MTC devote **25% of discretionary revenue** over the first four years to projects selected through a community-run deliberative process within each of the areas identified as a "Community of Concern," and asked MTC to provide \$2 million in **planning grants** so that locally based organizations could lead **authentic community processes**.<sup>143</sup> Through these and similar approaches, MPOs can draw upon the knowledge of residents to identify needs, and prioritize those needs in transportation funding decisions.

## LEADING PRACTICE

# Support walking and biking by prioritizing active transportation in plans and investments.

## WHY IT MATTERS

Transportation planning has historically emphasized road expansion and maintenance, with some regions also investing in public transit. But with the right land use pattern and infrastructure investments, many shorter trips—and the first and last mile of many longer trips—can be made by foot or bike. This not only takes cars off the road, making it easier to meet state GHG reduction targets, but also supports public health through increased physical activity, improved air quality, and safer routes to school and transit.<sup>144</sup>

## KEY ELEMENTS OF IMPLEMENTATION

- **Integrate walking and biking into transportation planning:** Develop Active Transportation Plans, including first- and last-mile strategies, and incorporate them into RTPs.
- **Prioritize active transportation in funding decisions:** Maximize and front-load the portion of transportation funding that supports walking, biking, and other active transportation.

## EXAMPLES

While a number of regions have expanded their investments in active transportation, **Tahoe's** approach has been particularly thoroughgoing. Prior to preparing their 2012 RTP/SCS, the Tahoe Metropolitan Planning Organization (TMPO) and Tahoe Regional Planning Agency (TRPA) prepared the **Lake Tahoe Bicycle and Pedestrian Plan (LTBPP)**.<sup>145</sup> This plan includes projects that would create a **nearly continuous network of shared-use paths** separated from automobile traffic around Lake Tahoe, and significantly expand the reach of sidewalks and bike paths in South Lake Tahoe and other communities.<sup>146</sup> It also contains a Bicycle and Pedestrian Accommodation Policy that provides a **regional guide for complete streets** improvements.<sup>147</sup>

TMPO and TRPA then **incorporated the LTBPP by reference into their 2012 RTP/SCS**, and incorporated language supporting bicycle and pedestrian facilities into the Regional Plan adopted at the same time.<sup>148</sup> Based in part on the LTBPP, Tahoe's fiscally constrained project list devotes 5% of expenditures to active transportation and 9% to "corridor revitalization projects" that include complete streets elements.<sup>149</sup>

Other regions are also working to realize the potential of active transportation. **SCAG's** 2016 RTP/SCS, for example, emphasizes both **complete streets and first- and last-mile strategies**

and front-loads active transportation projects compared to previous plans.<sup>150</sup> **ABAG** and **MTC** commit \$4.6 billion over the life of Plan Bay Area to walking and biking projects, plus up to \$14.6 billion in **One Bay Area Grant** funds for complete streets projects.<sup>151</sup> And **SANDAG**'s second SCS incorporates an **Active Transportation Implementation Strategy**, which includes Regional Bike Plan projects, additional bike and pedestrian improvements focusing on safer access to school and transit, and outreach and data collection programs.<sup>152</sup> This approach is complemented by **SANDAG**'s **Active Transportation Grant Program**, which uses TransNet sales tax revenue to support “bike and pedestrian plans, projects, and education and training programs.”<sup>153</sup>

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## D. CHECKING IN: EVALUATING GROWTH PLANS AND MITIGATING IMPACTS

### LEADING PRACTICE

#### **Develop transportation models that fully convey the many benefits of walkable communities and better travel choices.**

### WHY IT MATTERS

Planners depend on models to predict how different transportation investments will affect mobility and land use in their regions. The closer these models come to reality, the better equipped planners will be to choose between projects. In regions that have historically had low-density, car-dependent patterns of development, it is particularly important that transportation models take into account the benefits of compact, mixed land uses, and the return on investments in public transit, active transportation, and equitable communities.

### KEY ELEMENTS OF IMPLEMENTATION

- **Develop the right tools:** Build on existing tools, and develop new tools as appropriate, to ensure that models adequately convey the relationships between land use patterns, transportation investments, and other factors.
- **Show important consequences of land use and transportation decisions:** Make models publicly available and ensure that they show the relationships between transportation investments and performance targets—including health, equity, and sustainability indicators—identified with public input.

- **Capture the benefits of new policy inputs:** In addition to considering outcomes, such as changes in the average amount of time spent walking or the economic consequences of farmland conversion, models should be able to show the effects of new policy “inputs,” including particular transportation investments.

## EXAMPLES

One of the most thorough efforts to incorporate **active transportation and public health** into transportation modeling was undertaken by **SCAG**. SCAG’s underlying approach was to 1) build a Scenario Planning Model (SPM) based on the Urban Footprint tool developed by Calthorpe Associates, 2) use this tool to model each land use scenario, and 3) use the results as inputs to a travel demand model.<sup>154</sup> Instead of waiting until the final stage to address active transportation, however, SCAG developed an **Active Transportation Enhancement** for the SPM.<sup>155</sup> This tool incorporated a mix of 35 different place types divided into six categories by population density, mapped down to the parcel level. To these place types, it added active transportation infrastructure, as well as “various socio-economic variables describing the [individual] travelers such as their age and worker status.”<sup>156</sup> It treated the land use, transportation infrastructure and socio-economic factors as independent variables, and measured their effects on travel mode (i.e., how each individual traveler would choose to make each trip). Using this approach, SCAG found that implementing the active transportation component of its RTP/SCS would lead to a 113% increase in walking trips and a 273% increase in bike trips in its most urbanized areas, and a smaller increase in bike trips in rural areas.<sup>157</sup> Based in part on these results, SCAG’s 2016 RTP/SCS integrates walking and biking into road and transit projects through complete streets and first- and last-mile strategies.<sup>158</sup> In addition, it front-loads active transportation investments to a greater extent than the 2012 RTP/SCS.<sup>159</sup>

SCAG also sought a deeper understanding of the public health impacts of its choices. Urban Footprint already includes health-related metrics, but **SCAG**, in partnership with SACOG, the Governor’s Office of Planning and Research and the Strategic Growth Council (SGC), developed the **California Public Health Assessment Model** (CPHAM) to take a closer look at the effects of transportation choices on chronic diseases related to physical inactivity, as well as air quality, accessibility, and other concerns.<sup>160</sup> While CPHAM focuses largely on land use, and therefore may understate benefits from active transportation investments, it finds that communities where land use patterns change due to SCAG’s RTP/SCS are likely to experience an increase in average daily amounts of physical activity, and small decreases in the rates of obesity, high blood pressure, heart disease, and Type 2 diabetes.<sup>161</sup> Taking a “**Health in All Policies**’ approach,” SCAG incorporated a variety of additional public health metrics into its modeling. These metrics, which addressed the health effects and fiscal impacts of air pollution, as well as transportation fatality rates and other indicators, allowed for more informed choices about transportation investments.<sup>162</sup>

Other regions are also taking innovative approaches to transportation modeling. **SACOG**, for example, developed **RUCS** to map and measure relationships between land use, transportation, and the rural agricultural economy.<sup>163</sup> As discussed above, RUCS goes beyond traditional

modeling efforts. But its conclusions have played an integral role in scenario development for SACOG’s 2012 and 2016 MTP/SCSs, and in SACOG’s decision to prioritize transportation projects that benefit rural areas and expand their connections to urban centers.<sup>164</sup> And, as noted above, **ABAG**, **MTC**, and **SANDAG** had access to results from a quantitative health analysis tool, the **Integrated Transportation and Health Impacts Model**, when developing public health-related targets for their most recent SCSs.<sup>165</sup>

## GOING FURTHER

To make it possible for MPOs to select the best projects, transportation models should not only account for a broader range of impacts from existing policies, but also capture the benefits of new policy “inputs.” **SANDAG** has taken a significant step in this direction by including a fully operational **Active Transportation Model** in its modeling suite and has developed other models to account for factors such as cross-border and visitor trips.<sup>166</sup> MPOs that build on this work and develop models to quantify the benefits of additional policy inputs, such as shared use mobility, will be well equipped to identify the most promising transportation investments.

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## LEADING PRACTICE

### **Maximize greenhouse gas reductions through changes in land use and transportation.**

#### WHY IT MATTERS

Climate change is likely to affect every region of California, and without significant reductions in GHG emissions, its impacts may be catastrophic. The transportation sector is a major source of atmospheric CO<sub>2</sub>, and California has led the way in supporting new vehicle technology and low carbon fuel. But as SB 375 explicitly recognizes, “even taking these measures into account, it will be necessary to achieve significant additional [GHG] reductions from changed land use patterns and improved transportation.”<sup>167</sup> The models that many MPOs use to understand the relationships between land use, transportation, and GHG emissions consider a number of interrelated factors, making it difficult to attribute specific proportions of GHG reductions to individual strategies. But a recent lawsuit underlines the importance of the issue. In *Bay Area Citizens v. Association of Bay Area Governments*, the California Court of Appeal considered whether the Bay Area’s GHG reduction targets could have been met by relying on reductions expected from other statewide mandates, as opposed to the land use and transportation strategies described in Plan Bay Area. Upholding a Superior Court decision in favor of ABAG and MTC, the Court of Appeal determined that:

[t]he only legally tenable interpretation of Senate Bill 375 is that it requires the [Air Resources] Board to set targets for, and [MPOs] to strive to meet these targets by, *emissions reductions resulting from regionally developed land use and transportation strategies*, and that it requires these reductions be in addition to those expected from the [other] statewide mandates.<sup>168</sup>

MPOs should endeavor to meet this challenge and, to the extent that modeling technology permits, be transparent about how it is met.

#### KEY ELEMENTS OF IMPLEMENTATION

- **Focus on land use and transportation:** Develop an SCS that meets GHG reduction targets through “changed land use patterns and improved transportation.”<sup>169</sup>
- **Analyze and maximize reductions:** Analyze projects, programs, and scenarios to discover which will most effectively reduce GHG emissions while supporting healthy, equitable, and sustainable communities.
- **Integrate emerging strategies to reduce GHG emissions while expanding mobility:** Incorporate innovative approaches, including electric vehicle incentives and shared-use mobility strategies such as bike sharing and ride-sourcing, to further reduce GHG emissions, making sure these strategies are deployed in ways that benefit disadvantaged communities.
- **Provide transparency:** To the extent that modeling technology permits, publicly identify the strategies used to achieve GHG reductions. After adoption of the SCS, publicly track the success of these strategies in reducing GHG emissions.

#### EXAMPLE

Many MPOs describe in qualitative terms the strategies they use to reduce GHG emissions, and some are exploring sensitivity analyses to quantify the impacts of specific approaches. The **Tahoe Metropolitan Planning Organization (TMPO)** and **Tahoe Regional Planning Agency (TRPA)**, however, have gone further. As illustrated in Figure 3 below, their 2012 RTP/SCS explicitly states that changes in land use and transportation are expected to reduce per-capita GHG emissions 3% and 4%, respectively, by 2035.<sup>170</sup>

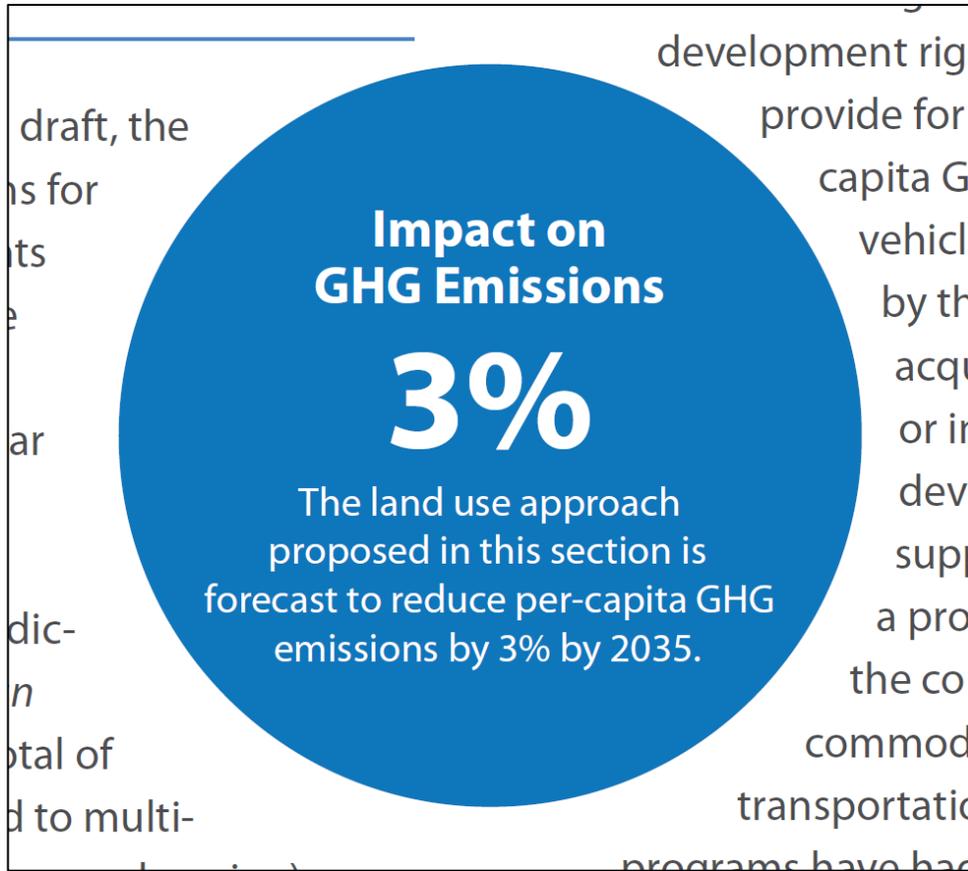


Figure 3: Graphic in Tahoe RTP/SCS predicting specific reduction in per-capita GHG emissions due to changes in land use. TMPO and TRPA use a similar graphic to attribute a 4% reduction to transportation investments and strategies (TMPO et al., 2012).

The increasing complexity of land use and transportation models may make it difficult for some MPOs to attribute GHG reductions with this level of specificity. But MPOs should strive to understand whether—and by how much—their proposed land use and transportation strategies would reduce GHG emissions. And, as Tahoe sought to do, they should be transparent about the results.

More broadly, every region must do more to reduce GHG emissions. Climate change is already impacting California's communities and the natural and working lands that sustain them. Without a steep drop in emissions—including those from the transportation sector—its results may be catastrophic. To avoid this outcome, and meet the statewide goal of reducing GHG emissions 40% below 1990 levels by 2030, further reductions from land use and transportation are essential.<sup>171</sup> Strategies that can help make this possible include, but are not limited to, the following:

- Evaluate projects for their GHG reduction benefits, as ABAG and MTC have done;<sup>172</sup>

- Direct new growth to existing communities and specifically incentivize compact, mixed-use development, as multiple MPOs are doing;
- Protect natural and working lands that sequester carbon or have much lower per-acre GHG emissions than those of urbanized areas,<sup>173</sup> as multiple MPOs are doing; and
- Shorten commutes and balance jobs and housing by promoting affordable housing near transit.

State agencies can and should help MPOs to implement these strategies, but it is important for MPOs to maximize GHG reductions, and be as transparent as possible about the approaches used to do so.

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## LEADING PRACTICE

### **Use equity analyses to evaluate and address the impacts of land use scenarios on disadvantaged communities.**

#### WHY IT MATTERS

Historically, land use and transportation planning have inflicted disproportionate harm on some communities while delivering disproportionate benefits to others. Identifying the priorities of disadvantaged communities and modeling the impacts that different approaches to growth would have on these priorities can help ensure that land use forecasts do not perpetuate longstanding disparities, and that the needs of the most vulnerable take priority.

#### KEY ELEMENTS OF IMPLEMENTATION<sup>174</sup>

- **Identify disadvantaged communities:** In consultation with equity advocates, develop regionally nuanced criteria to identify under-served communities.
- **Develop metrics based on community priorities:** Gather input from community residents about the needs they prioritize, and tailor metrics accordingly.
- **Evaluate land use scenarios:** Using these metrics, quantify the impacts of land use scenarios on regional equity by gauging improvement in each community according to the metrics developed for it.
- **Mitigate impacts:** Identify specific actions that will be taken in the implementation of the plan to mitigate impacts and address disparities.

- **Measure progress:** Measure progress in addressing the needs of each disadvantaged community annually during implementation of the SCS.

## EXAMPLES

Most regions could do more to incorporate the needs of under-served communities into the scenario development process. **SACOG**, however, has gone further than most MPOs in developing nuanced, regionally specific criteria for under-served communities and seeking to understand impacts on these communities. For its Environmental Justice Analysis, SACOG focused on **identifying Low Income High Minority (LIHM) communities**, taking into account U.S. Census data on poverty and racial composition, as well as vulnerability criteria such as housing cost burden, prevalence of single parent households, educational attainment, and linguistic isolation.<sup>175</sup> It then developed a variety of **performance measures** to evaluate the **impacts of scenarios on LIHM communities**, ranging from daily transit service hours and 30-minute transit access to jobs, parks, and higher education, to transportation mode share and exposure to toxic air contaminants.<sup>176</sup> While these measures were not customized to individual communities based on priorities identified by residents, they captured a wider range of impacts than the equity measures used by many MPOs.

**SCAG** also developed its own criteria to identify under-served communities and sought a more sophisticated understanding of impacts on these communities. Rather than a single category of communities, SCAG identified **criteria for Environmental Justice Areas** (higher concentrations of minority populations or low-income households), **SB 535 disadvantaged communities** (census areas “disproportionately burdened by and subject to multiple sources of pollution”) and **Communities of Concern** (areas that have high concentrations of both minority populations and low-income households).<sup>177</sup> It then developed **18 metrics** to compare how each type of community would be impacted under the preferred scenario and under business as usual.<sup>178</sup> These measures ranged from tax burden, share of transportation system usage, and 2016 RTP/SCS investments, to jobs/housing balance, exposure to pollution and noise, and access to parks and natural areas.<sup>179</sup> While not customized to individual communities, and not fully integrated into the scenario development process, SCAG’s metrics represent a more sophisticated analysis of the impacts of the preferred scenario on under-served communities, including but not limited to disadvantaged communities, than that used in previous RTPs.<sup>180</sup>

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## LEADING PRACTICE

**Provide comprehensive regional mitigation for natural and working lands impacted by transportation projects.**

## WHY IT MATTERS

The California Environmental Quality Act (CEQA) requires that public agencies, such as MPOs, avoid or identify feasible mitigation for a project's significant environmental impacts.<sup>181</sup> For example, if a road expansion results in the conversion of habitat or farmland, the agency carrying out the project could offset the impact by paying for the permanent protection of a similar type of habitat or farmland. This can be a significant portion of the project cost, and if the parameters for mitigation are set anew for each project, the permitting process can be expensive and unpredictable. Regional advance mitigation planning (RAMP) programs, on the other hand, link mitigation investments to science-based conservation priorities. While these programs do not eliminate the need for transportation projects to support compact patterns of development, identifying and acquiring mitigation lands in advance can make the permitting process more predictable, and mitigation itself more cost-effective.

## KEY ELEMENTS OF IMPLEMENTATION<sup>182</sup>

- **Identify natural and working lands and set priorities:** Develop a comprehensive natural resource analysis, including at a minimum 1) all categories of “resource areas” listed in Cal. Gov. Code § 65080.01(a), 2) all prime farmland, farmland of statewide importance, unique farmland, and grazing land in the region, 3) resources identified by any local or regional “Greenprint” (such as the San Joaquin Valley Greenprint), and 4) input from leading conservation organizations.<sup>183</sup> Use this analysis to set priorities for RAMP.
- **Link priorities to mitigation for transportation projects:** Require, as a condition of transportation funding and consistency with the SCS, that projects 1) avoid or minimize impacts to natural and working lands wherever possible, and 2) provide mitigation for any unavoidable impacts in accordance with RAMP priorities, including acquiring and restoring mitigation lands in advance to avoid temporal gaps in habitat function.
- **Ensure reliable long-term stewardship of mitigation lands:** Conservation easements acquired as part of a RAMP program should be held by Land Trust Alliance-accredited land trusts.

## EXAMPLES

Multiple MPOs have developed, begun pursuing, or endorsed regional approaches to mitigation. But one of the earliest and most comprehensive examples is SANDAG's Environmental Mitigation Program (EMP), which began over a decade ago and is explicitly incorporated into SANDAG's first and second SCSs. In 2004, San Diego voters approved a half-cent sales tax measure that included \$850 million in funding for the EMP. Since then, SANDAG has used this program to mitigate for the impacts of future transportation projects. Mitigation is provided by directly purchasing priority habitat identified in San Diego's Multiple Species Conservation Plan (MSCP)

and Multiple Habitat Conservation Plan (MHCP), and by **offering competitive grants** for others to acquire, manage, and monitor these lands.<sup>184</sup>

The EMP is notable for being both more ambitious and more cost-effective than other ad-hoc, project-by-project approaches to mitigation. As of August 2016, it has conserved or restored over 6,500 acres of natural and working lands,<sup>185</sup> creating “a **de facto urban growth boundary** for the region.”<sup>186</sup> And it has **saved money** by leveraging funds from conservation partners and “buy[ing] land early and in large parcels.”<sup>187</sup> These savings, in turn, have funded the acquisition of additional priority habitat, making the program even more effective at mitigating the impacts of transportation projects.<sup>188</sup>

Other regions are taking similar approaches. **Orange County**’s first subregional SCS, for example, incorporates the **Mitigation and Resource Protection Program**, which provides landscape-level mitigation using 5% of the funding from a sales tax measure for 13 freeway projects, as well as a separate open space mitigation program associated with Orange County’s toll road network.<sup>189</sup> Elsewhere in Southern California, **SCAG** has **provided funding** for the San Bernardino Associated Governments to begin planning work for a **county-scale RAMP program**.<sup>190</sup> Similarly, the EIR for Plan Bay Area presents RAMP as an optional mitigation measure for local agencies, and ABAG and MTC are working to **develop a Bay Area RAMP program** for the second round.<sup>191</sup>

## GOING FURTHER

MPOs can **reduce the need for mitigation** by minimizing demand for transportation projects that lead to conversion of natural and working lands. One way to do so is to **provide incentives** for cities and counties **to direct new development into existing communities**. SB 375 explicitly endorses this approach, calling upon MPOs to “consider financial incentives for cities and counties that have resource areas or farmland,” including “financial assistance for counties . . . that contribute towards the [GHG] reduction targets by implementing policies for growth to occur within their cities.”<sup>192</sup>

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## E. GETTING IT DONE: IMPLEMENTING SUSTAINABLE COMMUNITIES STRATEGIES

### LEADING PRACTICE

**Reduce the risk of displacement using funding and other incentives.**

## WHY IT MATTERS

Providing low-income housing is both a legal requirement and a necessary component of any strategy to reduce displacement and regional segregation. It also shortens commute times and lowers VMT for workers who could not otherwise afford homes near their jobs. For these reasons, MPOs should ensure that SCS implementation actively promotes the preservation of existing affordable housing and the development of new affordable homes.

## KEY ELEMENTS OF IMPLEMENTATION

- **Directly fund affordable housing:** Provide direct financial support for transit-oriented affordable housing.
- **Incentivize preservation and construction of affordable housing:** Track Regional Housing Needs Allocation (RHNA) compliance and provide incentives for local jurisdictions that meet RHNA requirements for affordable housing.
- **Use regional funding programs to promote policies that reduce displacement:** Provide funding incentives for jurisdictions that adopt strong tenant protections, and implement land use strategies that support the development of housing that low-income residents can afford. For example, provide funding for jurisdictions that increase height and density limits, allow for reduced and shared parking, and ensure a sufficient supply of multifamily-zoned land.

## EXAMPLES

As with incorporation of affordable housing into scenario development, most regions could do more to invest in affordable housing. The Bay Area, however, is one of the regions that has made progress. In response to advocacy by the Great Communities Collaborative (GCC), **MTC** established the **Transit-Oriented Affordable Housing (TOAH)** Fund, which provides “revolving loan[s] . . . for affordable housing developers to finance land acquisition near rail and bus lines.”<sup>193</sup> MTC contributed \$10 million in seed funding for TOAH, which has since been leveraged to \$50 million from community development funds, foundations and banks.<sup>194</sup>

MTC also committed to tie **\$350 million in One Bay Area Grant funding to anti-displacement criteria** in response to advocacy from the 6 Wins for Social Equity Network and others, with \$30 million for cities that provide the largest quantities of affordable housing.<sup>195</sup> Other efforts focused on **preserving housing that is currently affordable** with stabilization finance tools. MTC provided \$10 million in seed funding for the Bay Area Preservation Fund to acquire and rehabilitate unrestricted market-rate housing that has historically been affordable to low- and moderate-income populations.

Other regions have also sought to incentivize affordable housing. **SANDAG's Smart Growth Incentive Program**, for example, takes affordable housing into account in selecting which projects to fund.<sup>196</sup> In the most recent grant cycle, SANDAG awarded points to projects that created **new affordable housing** or restricted units to low- or very low-income residents.<sup>197</sup>

## GOING FURTHER

MPOs should consider **additional incentives** for local jurisdictions to promote affordable housing and reduce displacement risk for low-income residents. An excellent start would be to adopt a best practice put forward by Public Advocates in the context of the 2016 Regional Transportation Plan Guidelines Update:

make a portion of **regional transportation funding** available only to those local governments that (1) adopt an HCD-certified Housing Element and commit to implement its action programs and report annually on implementation progress, (2) produce a substantial portion of their lower-income RHNA need, and (3) adopt effective **tenant protections and other anti-displacement policies** to ensure that high-propensity transit riders are not displaced from transit-oriented locations.<sup>198</sup>

Similarly, MPOs could explicitly define transit-oriented affordable housing as a **land use objective**, and focus funding on projects that support this objective.<sup>199</sup>

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## LEADING PRACTICE

### **Support local implementation of the region's Sustainable Communities Strategy.**

#### WHY IT MATTERS

While MPOs can develop scenarios about where and how their regions will grow, and select transportation projects consistent with those scenarios, they cannot control zoning or permitting decisions for individual developments.<sup>200</sup> But MPOs can and should support SCS implementation in other ways, including competitive grants, collaboration with local governments, technical assistance, state funding recommendations, and CEQA incentives. Taken together, these approaches can help ensure that the commitments made in SCSs are kept.

## KEY ELEMENTS OF IMPLEMENTATION

- **Help fund SCS implementation:** Offer local jurisdictions competitive grants with strong eligibility requirements; condition other funding on actions consistent with regional goals.
- **Collaborate with implementing agencies:** Through Memoranda of Understanding (MOUs), working with collaborative entities such as Enhanced Infrastructure Financing Districts (EIFDs), and other mechanisms, work directly with local jurisdictions and agencies to support SCS implementation.
- **Provide technical assistance:** Offer technical assistance on planning and projects that support SCS implementation, particularly in under-served or rural communities where capacity may be limited.
- **Support state funding for SCS implementation:** Review Affordable Housing and Sustainable Communities (AHSC) and Active Transportation Program (ATP) proposals, and submit recommendations for projects that support regional priorities. Where appropriate, provide technical assistance on applications.
- **Facilitate streamlined environmental review:** For certain proposed developments consistent with an SCS, SB 375 allows streamlining of the environmental review process that would otherwise be required by CEQA.<sup>201</sup> To make this incentive matter, MPOs should identify the types of projects that can benefit from this provision, and clearly specify eligibility requirements.

## EXAMPLES

One of the widest-ranging efforts to fund SCS implementation is the **One Bay Area Grant Program** (OBAG) administered by **MTC**. As noted above, OBAG funds are used to support land use patterns and transportation investments consistent with Plan Bay Area in a variety of contexts, including but not limited to the following:

- Conservation planning and land protection in Priority Conservation Areas (\$10 million in Plan Bay Area, followed by \$16 million in a subsequent round of OBAG funding);
- Incentives for focused, transit-oriented growth in Priority Development Areas (\$300 million);
- Funding for active transportation projects designed to support complete streets and safe access to transit and schools (up to \$14.6 billion in during the term of Plan Bay Area); and
- Grants to reward cities for providing affordable housing and to protect affordable units in low-income communities (\$30 million and \$10 million, respectively, with \$350 million in overall OBAG funding conditioned on anti-displacement criteria).

OBAG funding complements other measures that support SCS implementation, including **MOUs with local jurisdictions** and MTC's pre-existing **Resolution 3434**, which conditions funding for certain transit extension projects on planning for a minimum number of new housing units within a half-mile of transit stations.<sup>202</sup>

**SCAG**, meanwhile, is supporting SCS implementation at the local level through funding incentives, collaboration with County Transportation Commissions and other innovative approaches.<sup>203</sup> Since 2012, its **Sustainability Planning Grant Program** has provided approximately \$9 million for projects linking local land use plans with RTP/SCS goals.<sup>204</sup> This funding has allowed local jurisdictions to update general plans and zoning codes, complete specific plans for town centers and transit-oriented development, and develop active transportation and climate action plans. SCAG has also developed and helped to fund **joint work programs with six County Transportation Commissions**, enabling coordination on first- and last-mile planning around key transit stations, evaluation of progress on sustainability indicators, and habitat and open space conservation. Similarly, it is working with local jurisdictions in SCAG on pilot implementation of **EIFDs** and **Community Revitalization and Investment Authorities**. These entities can help local governments fund infrastructure and housing development, while bridging the gap between SCS planning and implementation.

Elsewhere, MPOs are using direct funding, technical assistance, and other approaches to support implementation. **SANDAG** and **SJCOG**, for example, have each established a **Smart Growth Incentive Program** that uses sales tax revenue to incentivize projects that support compact growth.<sup>205</sup> Prior to preparing its 2016 MTP/SCS, **SACOG** secured Strategic Growth Council (SGC) funding for **technical assistance** to help local jurisdictions implement projects, as well as SGC and foundation funding for capacity building in disadvantaged communities.<sup>206</sup> The **Association of Monterey Bay Area Governments (AMBAG)** has committed to **recommend proposed AHSC projects** that support regional priorities, while **SJCOG** has used sales tax revenue and an SGC grant to fund **technical assistance on AHSC and ATP proposals** and support jurisdictions whose projects were not chosen.<sup>207</sup> And **Kern COG** went further than most MPOs to provide **explicit criteria for CEQA streamlining**, stating in the Environmental Impact Report (EIR) for its 2014 RTP/SCS that certain mitigation measures "are intended to be used by projects seeking to use this Program EIR for CEQA streamlining."<sup>208</sup>

## CONCLUSION

The leading practices above were developed by MPOs around the state to address a wide range of needs. But in areas ranging from scenario development, project selection, and public outreach to conservation, active transportation, and meeting rural needs, they represent possibilities for other MPOs seeking better ways to achieve the goals of the SCS process. By adopting and improving on these practices, and going further to address challenges such as climate change, sustainable water management, and displacement, MPOs can help their regions to build healthy, equitable, and sustainable communities.

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## ENDNOTES

<sup>1</sup> These regions cover all of California's major urban centers, a majority of its population and much of its land area. But they omit significant portions of Northern California and the Sierra Nevada, including the entire Eastern Sierra between Tahoe and Kern.

<sup>2</sup> 2008 Cal. Stat. Ch. 728, § 1(c).

<sup>3</sup> SB 375 does not grant MPOs direct control over land use, but it does call upon each MPO to create a "land use allocation" and a fiscally constrained plan for transportation investments consistent with that scenario. Cal. Gov. Code §§ 65080(b)(2)(B)(2)(J) and 65080(b)(2)(B)(4); 2008 Cal. Stat. Ch. 728, §1(e).

<sup>4</sup> See Cal. Gov. Code § 65080(b)(2)(B) (specifying that an SCS must "identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth," including areas "sufficient to house an eight-year projection of the regional housing need . . . pursuant to [California Government Code] Section 65584"); Cal. Gov. Code § 65584 (outlining process for allocating housing need by income to "all cities and counties within the region in an equitable manner," and providing that such allocations must "[p]romot[e] infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns").

<sup>5</sup> Cal. Gov. Code §§ 65080(b)(2)(B) and 65080(b)(2)(F).

<sup>6</sup> Cal. Gov. Code § 65080(b)(2)(B).

<sup>7</sup> See, e.g., Cohen, 2013 (public health opportunities in the transportation planning process); Livingston, 2016 (conservation best practices from the first round of the SCS process and model policies for future rounds); and Barbour, 2016 (dissertation on institutional dynamics of the SCS process). Resources like these, along with MPO staff, advocates and others, can also provide more information on the leading practices identified below.

<sup>8</sup> See Cal. Gov. Code § 65080(b)(2)(F) (elements of public participation plan for development of an SCS or APS).

<sup>9</sup> Cf. 23 C.F.R. § 450.316(a)(1)(vii) (providing that MPOs' participation plans should include "procedures, strategies and desired outcomes" for "[s]eeking out and considering the needs of those traditionally under-served by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services").

<sup>10</sup> Barbour, 2016.

<sup>11</sup> Barbour, 2016.

<sup>12</sup> Barbour, 2016.

<sup>13</sup> SACOG, 2012.

<sup>14</sup> SACOG, 2012.

<sup>15</sup> SACOG, 2012; Barbour, 2016.

<sup>16</sup> SACOG, 2016a; SACOG, 2013.

<sup>17</sup> SACOG, 2016a.

<sup>18</sup> SACOG, 2016a.

<sup>19</sup> SACOG, 2016a.

<sup>20</sup> K. Lizon (personal communications, April 15 – 22, 2016).

<sup>21</sup> Fresno COG, 2014; B. Veenendaal (personal communication, September 30, 2016). One such mini-grant was used by ClimatePlan and California Rural Legal Assistance to provide microgrants to community-based organizations for education and outreach prior to the workshops. Knecht, 2013.

<sup>22</sup> Fresno COG, 2014.

<sup>23</sup> Knecht, 2013.

<sup>24</sup> Fresno COG, 2014.

<sup>25</sup> R. Rundle (personal communication, September 6, 2016).

<sup>26</sup> SANDAG, 2015; R. Rundle (personal communication, September 6, 2016).

<sup>27</sup> Kern COG, 2014a; Kern COG, 2014b.

<sup>28</sup> Kern COG, 2014a.

<sup>29</sup> K. Anderson (personal communication, September 9, 2016).

<sup>30</sup> C. Knecht (personal communication, October 3, 2016); K. Anderson (personal communication, October 3, 2016).

<sup>31</sup> SRTA, 2015; U.S. Census Bureau, 2016.

<sup>32</sup> K. Fink (personal communication, April 15, 2016).

<sup>33</sup> Barbour, 2016.

<sup>34</sup> Barbour, 2016.

<sup>35</sup> ABAG and MTC, 2013.

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<sup>36</sup> ABAG and MTC, 2013; Transportation for America, 2014. ABAG and MTC also adopted a separate list of equity-related targets. R. Marcantonio (personal communication, September 7, 2016).

<sup>37</sup> Dyett & Bhatia, et al., 2013; see also Barbour, 2016; Marcantonio and Karner, 2014.

<sup>38</sup> Dyett & Bhatia, et al., 2013; Barbour, 2016.

<sup>39</sup> ABAG and MTC, 2013.

<sup>40</sup> ABAG and MTC, 2013.

<sup>41</sup> ABAG and MTC, 2013.

<sup>42</sup> ABAG and MTC have refined these targets to better address issues such as displacement, quality jobs and public health in their 2017 SCS. M. Vander Sluis (personal communication, September 10, 2016).

<sup>43</sup> Fresno COG, 2014.

<sup>44</sup> TransForm, 2016; SJCOG, 2014; Cohen, 2013.

<sup>45</sup> TCAG, 2014; AMBAG, 2014; Cal. Gov. Code § 65080.01(b).

<sup>46</sup> SCAG, 2016a.

<sup>47</sup> Cal. Gov. Code § 65080(b)(2)(B).

<sup>48</sup> Barbour, 2016; G. Sciara (personal communication, May 16, 2016); Dyett & Bhatia, et al., 2013.

<sup>49</sup> Dyett & Bhatia, et al., 2013.

<sup>50</sup> Dyett & Bhatia, et al., 2013.

<sup>51</sup> Dyett & Bhatia, et al., 2013.

<sup>52</sup> VRPA Technologies, 2014; ClimatePlan et al., 2013.

<sup>53</sup> Fresno COG, 2014.

<sup>54</sup> Impact Sciences, 2014.

<sup>55</sup> R. Rundle (personal communication, September 6, 2016).

<sup>56</sup> VRPA Technologies, 2014; Impact Sciences, 2014; SANDAG, 2015b.

<sup>57</sup> See, e.g., CDFR, 2015 (crop receipts by county); Livingston, 2013 (economic benefits of conservation in four MPO regions in the Southern San Joaquin Valley); Gies, 2006 (public health benefits of parks).

<sup>58</sup> Shaffer and Thompson, 2015.

<sup>59</sup> ABAG and MTC, 2013; M. Vander Sluis (personal communication, September 10, 2016). New PCAs have been designated since 2013, bringing the current number to 165. ABAG, 2016.

<sup>60</sup> ABAG and MTC, 2013.

<sup>61</sup> ABAG and MTC, 2013.

<sup>62</sup> ABAG and MTC, 2013; TransForm, 2016; Barbour, 2016. A second round of One Bay Area Grant funding will provide an additional \$16.4 million for conservation of PCAs. ABAG, 2016.

<sup>63</sup> ABAG and MTC, 2013.

<sup>64</sup> San Joaquin, for example, focuses growth in areas identified in SJCOG’s Regional Smart Growth Transit-Oriented Development Plan, and directs a majority of new residential development into the City of Stockton’s 2008 city limits. SJCOG, 2014a; K. Anderson (personal communication, September 9, 2016). Similarly, Tulare incorporates the Tulare County Regional Blueprint goal of increasing residential density by 25%, which would entail an increase in the proportion of new residential development going into existing communities. TCAG, 2014.

<sup>65</sup> Livingston, 2016.

<sup>66</sup> BCAG, 2012.

<sup>67</sup> BCAG, 2012.

<sup>68</sup> BCAG, 2012.

<sup>69</sup> TCAG, 2014; SBCAG, 2013.

<sup>70</sup> TCAG, 2014 (specific resource layers described in Appendix P). The San Joaquin Valley Greenprint is a valley-wide effort led by Fresno COG to identify challenges and opportunities in managing land, water and other resources in the region.

<sup>71</sup> SBCAG, 2013.

<sup>72</sup> SCAG, 2016a (Natural and Farm Lands Appendix).

<sup>73</sup> SLOCOG, 2015; KCAG, 2014. KCAG’s criteria include minimizing impacts to special status species and avoiding “disruption to natural beauty.” KCAG, 2014.

<sup>74</sup> Livingston, 2016.

<sup>75</sup> Portions of this section, and of the key elements of implementation, are drawn from input provided by Richard Marcantonio of Public Advocates (personal communications, August 17, 2016 and September 7, 2016).

<sup>76</sup> C. Creswell (personal communication, September 7, 2016).

<sup>77</sup> Fresno COG, 2016a. Outside the SCS process, the City/County Association of Governments of San Mateo County (C/CAG) has taken a similar approach, preparing a Housing Element Update Kit to inform housing elements in all 21 jurisdictions within San Mateo County. C/CAG, 2016; C. Creswell (personal communication, September 7, 2016).

<sup>78</sup> Fresno COG, 2016a.

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- <sup>79</sup> Fresno COG, 2016a.
- <sup>80</sup> Fresno COG, 2016a.
- <sup>81</sup> SACOG, 2016a; SACOG, 2012.
- <sup>82</sup> SACOG, 2016a; J. Snyder (personal communication, May 16, 2016).
- <sup>83</sup> Dyett & Bhatia, et al., 2013; see also Benner and Karner, 2016.
- <sup>84</sup> Alliance of Californians for Community Empowerment et al., 2015.
- <sup>85</sup> See SANDAG, 2015a (noting “rural villages” as a land use category); SRTA, 2015 (explaining that much of Shasta County is “unpopulated or rural”).
- <sup>86</sup> London, 2011.
- <sup>87</sup> SACOG, 2016a.
- <sup>88</sup> SACOG, 2016a. For more on these tools, see SACOG, 2016a (Appendix E-2).
- <sup>89</sup> SACOG, 2016a (Appendix E-2); see also SACOG, 2015 (using RUCS to evaluate labor and agricultural production in the context of land use, transportation and long term sustainability in rural areas).
- <sup>90</sup> SACOG, 2016a.
- <sup>91</sup> SACOG, 2016a (Appendix E-2).
- <sup>92</sup> Kern COG, 2014a; SJCOG, 2014b.
- <sup>93</sup> Kern COG, 2014a.
- <sup>94</sup> P. Chang (personal communication, September 9, 2016).
- <sup>95</sup> P. Chang (personal communication, September 9, 2016).
- <sup>96</sup> ClimatePlan et al., 2013; VRPA Technologies, 2014.
- <sup>97</sup> Cf. Fresno COG, 2014 (pointing out a range of climate impacts that could increase maintenance costs); ABAG and MTC, 2013 (mapping portions of the Bay Area that would be inundated with a 12-inch rise in sea level).
- <sup>98</sup> See Cal. Gov. Code § 65302(g)(4) (listing sources to consult and steps to take in preparing climate adaptation strategies for a city or county general plan).
- <sup>99</sup> Executive Order B-30-15, § 7.
- <sup>100</sup> SACOG and CivicSpark, 2015.
- <sup>101</sup> SACOG and CivicSpark, 2015.
- <sup>102</sup> SACOG and CivicSpark, 2015.
- <sup>103</sup> SACOG, 2016a.
- <sup>104</sup> SACOG, 2016a.
- <sup>105</sup> SANDAG, 2014.
- <sup>106</sup> SANDAG, 2014.
- <sup>107</sup> SANDAG, 2015a; R. Rundle (personal communication, April 12, 2016).
- <sup>108</sup> A. Brooks (personal communication, August 17, 2016).
- <sup>109</sup> A. Brooks (personal communication, August 17, 2016).
- <sup>110</sup> Cook et al., 2015.
- <sup>111</sup> TCAG, 2014.
- <sup>112</sup> SJCOG, 2014a.
- <sup>113</sup> SACOG, 2012; SACOG, 2016a.
- <sup>114</sup> Cf. Elkind, 2015 (recommending the development of “performance measures for transportation projects that align with broader environmental and energy goals so that spending on transportation projects achieves specific outcomes, based on key environmental and economic metrics”).
- <sup>115</sup> ABAG and MTC, 2013.
- <sup>116</sup> ABAG and MTC, 2012.
- <sup>117</sup> ABAG and MTC, 2013.
- <sup>118</sup> Kern COG, 2014a.
- <sup>119</sup> R. Rundle (personal communication, September 6, 2016); E. Lowe (personal communication, September 19, 2016).
- <sup>120</sup> SCAG and UCLA Lewis Center, 2016; P. Chang (personal communication, September 9, 2016).
- <sup>121</sup> SACOG, 2016b.
- <sup>122</sup> SACOG, 2016b.
- <sup>123</sup> American Lung Association, 2016.
- <sup>124</sup> R. Marcantonio (personal communication, September 7, 2016).
- <sup>125</sup> Fresno COG, 2014.
- <sup>126</sup> Fresno COG, 2014.
- <sup>127</sup> Fresno COG, 2014.
- <sup>128</sup> Fresno COG, 2014.

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<sup>129</sup> Specifically, the “Traditional” and “Increased Active Transportation” budgets converged on a single list, and the “Emphasis on Active Transportation” and “Emphasis on Maintenance” budgets did the same. These two project lists did not differ significantly. Fresno COG, 2014.

<sup>130</sup> Wiggins, et al., 2015.

<sup>131</sup> Wiggins, et al., 2015.

<sup>132</sup> Significant portions of this section, and of the key elements of implementation, are drawn from input provided by Richard Marcantonio of Public Advocates (personal communication, August 17, 2016).

<sup>133</sup> See Cal. Health & Safety Code § 39713 (requiring that at least 25% of Greenhouse Gas Reduction Fund investments benefit disadvantaged communities, and at least 10% be located in these communities).

<sup>134</sup> V. Garibay (personal communication, August 1, 2016).

<sup>135</sup> V. Garibay (personal communication, August 1, 2016).

<sup>136</sup> K. Cai (personal communication, September 7, 2016).

<sup>137</sup> Fresno COG, 2016b.

<sup>138</sup> V. Garibay (personal communication, August 1, 2016).

<sup>139</sup> Fresno COG, 2016c.

<sup>140</sup> K. Cai (personal communication, September 7, 2016).

<sup>141</sup> SCAG, 2016a (Transportation System Project List Appendix).

<sup>142</sup> MCAG, 2016; V. Garibay (personal communication, August 1, 2016).

<sup>143</sup> R. Marcantonio (personal communication, August 17, 2016).

<sup>144</sup> See, e.g., SCAG, 2016a (Public Health Appendix projecting lower rates of obesity, high blood pressure, heart disease and Type 2 diabetes in communities where average daily physical activity increases during the term of the SCS).

<sup>145</sup> TMPO et al., 2012; TRPA and TMPO, 2010.

<sup>146</sup> TMPO et al., 2012; TRPA and TMPO, 2010.

<sup>147</sup> TRPA and TMPO, 2010; K. Fink (personal communication, April 15, 2016).

<sup>148</sup> TMPO et al., 2012.

<sup>149</sup> TMPO et al., 2012.

<sup>150</sup> SCAG, 2016a (RTP/SCS); B. Sadler (personal communication, May 16, 2016).

<sup>151</sup> ABAG and MTC, 2013.

<sup>152</sup> SANDAG, 2015a; R. Rundle (personal communication, September 6, 2016).

<sup>153</sup> SANDAG, 2015a; Sciara and Handy, 2013.

<sup>154</sup> SCAG, 2016a (RTP/SCS and Active Transportation Appendix).

<sup>155</sup> SCAG, 2016a (Active Transportation Appendix).

<sup>156</sup> SCAG, 2016a (Active Transportation Appendix).

<sup>157</sup> SCAG, 2016a (Active Transportation Appendix).

<sup>158</sup> SCAG, 2016a (RTP/SCS); B. Sadler (personal communication, May 16, 2016).

<sup>159</sup> SCAG, 2016a (RTP/SCS); B. Sadler (personal communication, May 16, 2016).

<sup>160</sup> SCAG, 2016a (Public Health Appendix); P. Chang (personal communication, September 12, 2016).

<sup>161</sup> SCAG, 2016a (Public Health Appendix, Table 9).

<sup>162</sup> SCAG, 2016a (Public Health Appendix).

<sup>163</sup> SACOG, 2016a.

<sup>164</sup> SACOG, 2016a.

<sup>165</sup> TransForm, 2016; SJCOG, 2014; Cohen, 2013.

<sup>166</sup> R. Rundle (personal communication, September 6, 2016).

<sup>167</sup> 2008 Cal. Stat. Ch. 728, § 1(c).

<sup>168</sup> Bay Area Citizens v. Association of Bay Area Governments, et al., 248 Cal. App. 4<sup>th</sup> 966, 998 (June 30, 2016) (emphasis added).

<sup>169</sup> 2008 Cal. Stat. Ch. 728, § 1(c).

<sup>170</sup> TMPO et al., 2012.

<sup>171</sup> See Cal. Health & Safety Code § 38566 (codifying GHG reduction target established by SB 32).

<sup>172</sup> ABAG and MTC, 2013.

<sup>173</sup> See Shaffer and Thompson, 2015 (finding that “per acre greenhouse gas emissions from urban land uses [in California] average 58 times greater than those from crop production”).

<sup>174</sup> Portions of this section are drawn from input provided by Richard Marcantonio of Public Advocates (personal communication, August 17, 2016); see also Marcantonio and Karner, 2016.

<sup>175</sup> SACOG, 2016a (Appendix C-5).

<sup>176</sup> SACOG, 2016a; K. Garcia (personal communication, May 16, 2016); see also Transportation for America, 2014 (describing “opportunity indicators” used by SACOG to measure impacts on LIHM communities in 2012 MTP/SCS).

<sup>177</sup> SCAG, 2016a (Environmental Justice Appendix).

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<sup>178</sup> SCAG, 2016a (Environmental Justice Appendix).  
<sup>179</sup> SCAG, 2016a (Environmental Justice Appendix).  
<sup>180</sup> B. Sadler (personal communication, May 16, 2016); M. Hasson (personal communication, May 16, 2016).  
<sup>181</sup> See Cal. Pub. Res. Code §21002.1(b).  
<sup>182</sup> Adapted from Livingston, 2016.  
<sup>183</sup> Where appropriate, this analysis could be developed in the context of a Regional Conservation Investment Strategy, as described in AB 2087. See Cal. Fish and Game Code §§ 1850 *et seq.*  
<sup>184</sup> SANDAG, 2015a; SANDAG, 2011.  
<sup>185</sup> SANDAG, 2016.  
<sup>186</sup> Barbour, 2016.  
<sup>187</sup> SANDAG, 2016; SANDAG, 2015a.  
<sup>188</sup> SANDAG, 2016.  
<sup>189</sup> Burke Consulting et al., 2011; OCTA, 2015.  
<sup>190</sup> K. Pauling (personal communication, September 8, 2016).  
<sup>191</sup> Dyett & Bhatia et al., 2013; L. O'Donoghue (personal communication, May 25, 2016).  
<sup>192</sup> Cal. Gov. Code § 14522.2(b)(4)(C).  
<sup>193</sup> Barbour, 2016; Seifel Consulting, 2013; S. Cohen (personal communication, May 16, 2016).  
<sup>194</sup> Barbour, 2016; Seifel Consulting, 2013.  
<sup>195</sup> Zisser, 2016.  
<sup>196</sup> SANDAG, 2015c.  
<sup>197</sup> SANDAG, 2015c.  
<sup>198</sup> Public Advocates, 2016 (emphasis added).  
<sup>199</sup> Public Advocates, 2016.  
<sup>200</sup> Cal. Gov. Code §§ 14522.2(b)(2)(J), 14522.2(b)(3) – (4); 2008 Cal. Stat. Ch. 728, §1(e).  
<sup>201</sup> Cal. Pub. Res. Code §§ 21155 *et seq.*; 2008 Cal. Stat. Ch. 728, § 1(f).  
<sup>202</sup> M. Vander Sluis (personal communication, September 10, 2016).  
<sup>203</sup> Significant portions of this paragraph are drawn from input provided by Ping Chang of SCAG. P. Chang (personal communication, September 9, 2016).  
<sup>204</sup> SCAG, 2016b; P. Chang (personal communication, September 9, 2016).  
<sup>205</sup> SJCOG, 2014b; ABAG and MTC, 2013; SANDAG, 2015a; G. Sciara (personal communication, May 16, 2016); K. Anderson (personal communication, September 9, 2016).  
<sup>206</sup> SACOG, 2016a.  
<sup>207</sup> AMBAG, 2015; A. Joe (personal communication, July 22, 2016); K. Anderson (personal communication, September 9, 2016).  
<sup>208</sup> Impact Sciences, 2014.



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