

Appendix A. MPO Target Recommendations and CARB Staff Recommendations

The following sections summarize the 18 MPO regions, and describe the SB 375 GHG emission reduction target recommendations and analysis submitted by MPO staff to CARB. CARB staff's recommendations are also presented relative to the MPOs' recommendations. For various policy and technical reasons, the discussions of MPO target recommendations are organized into three groups: 1) the four largest MPOs, 2) the eight MPOs in the San Joaquin Valley; and 3) the six remaining small MPOs.

A. The Four Largest MPOs

The four largest MPOs include the Metropolitan Transportation Commission (MTC)/Association of Bay Area Governments (ABAG), the Sacramento Area Council of Governments (SACOG), the San Diego Association of Governments (SANDAG), and the Southern California Association of Governments (SCAG). These four regions collectively comprise the majority (82 percent) of the State's population and associated GHG emissions from light-duty vehicles.

During the first round of target setting in 2010, the four largest MPOs shared information and conducted testing of various scenarios to compare relative GHG emission reduction benefits using their transportation models and other modeling tools. In 2010, the MPOs made their target recommendations to CARB based on these types of analyses, and CARB proposed targets that largely matched the MPOs' recommendations. The SCSs prepared by these MPOs since that time have demonstrated that, if implemented, they would meet or exceed their current targets.

Over the course of the last two years, CARB staff engaged with these MPOs to encourage them to be more aggressive in their SCSs and GHG outcomes. The MPOs largely indicated that their current SCSs represent the most aggressive and feasible scenarios with respect to land use and transportation policies.

The proposed targets for this group of MPOs are based on CARB staff's evaluation of a number of factors. They include a look at the strategies included within these MPOs most recently adopted SCSs, the strategies and rebound effect impacts they evaluated as part of their additional analyses submittal to CARB, as well as consideration of whether and how these larger MPOs have incorporated different strategy types and impacts.

Table 4 below characterizes CARB staff's understanding of strategy types included in each of these MPOs most current SCSs.

Table 4: SCS Strategy Examples

Strategy Type	Examples
Land Use	Infill development, increased multi-family and/or small lot development, increased densities for residential and commercial development, transit-oriented development, etc.
Transportation	Increased transit operations and efficiency, bike and pedestrian infrastructure, bikeshare systems, complete streets policies, etc.
Transportation Demand Management (TDM)	Carpool/vanpooling, rideshare and ridematching programs, carshare, high-occupancy vehicle (HOV) lanes, parking supply management, transportation incentive programs, etc.
Transportation Systems Management (TSM)	Traffic signal optimization, transit signal priority, ramp metering, incident management, intelligent transportation systems, integrated corridor management, etc.
Pricing Strategies	HOV toll lanes, congestion pricing, variable parking pricing, etc.
Vehicle Technology/Enhanced Mobility	ZEV/PHEV charging infrastructure, vehicle-to-vehicle technology, vehicle-to-infrastructure technology, neighborhood electric vehicles, autonomous vehicles, etc.

There are some SCS strategies that are included in existing SCSs but are not quantified for GHG emission reduction credit toward SB 375. These include transportation demand or system management components such as parking supply management employer sponsored rideshare and ridematching programs, and transportation aggregators like real-time travel information; transportation strategies such as bikeshare systems and neighborhood electric vehicles; and congestion pricing strategies.

Some strategies, like the emergence of autonomous vehicles, have not been quantified in any SCS. This includes potential GHG benefits of vehicle-to-vehicle technology and vehicle-to-infrastructure technology where automobiles can communicate with one another and infrastructure to optimize traffic flow. ARB and MPOs are working on quantification methodologies and gathering pertinent data for inclusion in future SCSs. These areas present additional opportunities for GHG emission reductions beyond existing SCSs.

Table 5 summarizes the strategy opportunity areas CARB staff requested the MPOs analyze for potential further reduction in future SCSs, which areas each MPO evaluated for additional reductions as part of their most recent analyses, and CARB staff’s review.

Table 5: Potential GHG Target Impacts – MPO Analysis and CARB Review

Strategy Type	SACOG*	MTC*	SANDAG*	SCAG*	CARB
Land Use	-4%	Value Not Provided	-2%	-0.1%	0 to -4%
Transit		Value Not Provided	-1%		
Active Transportation		Value Not Provided	Value Not Provided	-0.4%	
TDM/TSM	Value Not Provided	Value Not Provided	Value Not Provided	Value Not Provided	-0.5%
Regional/Local Pricing	Value Not Provided	Value Not Provided	Value Not Provided	Value Not Provided	-0.5%
Vehicle Technology: ZEV	-1%	Value Not Provided	-20%	Value Not Provided	-1%
Enhanced Mobility: CAVs	Value Not Provided	Value Not Provided	Value Not Provided	-2%	+/-
Demographic Changes	Value Not Provided	Value Not Provided	Value Not Provided	Value Not Provided	+/-
Rebound Effect	+2 to +3%	+1%	+1%	+4 to +5%	+1%
					-1 to -5%

*MPO values are not fiscally constrained

Based on the MPO test results above, consideration of the current research and recent policy developments, CARB staff expects MPOs to be able to achieve additional reductions beyond the adopted SCSs and beyond their target recommendations submitted to CARB. While differences across the regions mean the same strategies may produce different emission reduction outcomes, CARB staff estimate that through different combinations of strategies in each region, each may be able achieve additional reductions on the order of 1 to 5 percent compared to each of their currently adopted SCSs.

In Table 5, the column labeled CARB reflects CARB staff’s assumptions in developing the range. Assumed potential additional reductions from Land Use, Transit, and Active Transportation are taken from the range of effect provided by the four large MPO tests. Reductions from additional or enhanced TDM/TSM, regional/local pricing, and vehicle technology are conservative low bound estimates based on the latest empirical

literature⁹ and CARB staff's consideration of these types of strategies already included in these MPOs SCSs. CARB staff did not quantify or assume enhanced mobility strategies such as connected and autonomous vehicles and demographic factors as part of the target update range at this time. For estimating the rebound effect, CARB staff based its estimate on a review of the latest empirical literature.¹⁰

For the four large MPOs, CARB staff took the midpoint of the reduction range (3 percent) and applied it to the emission reduction estimate for their currently adopted SCS. CARB staff chose the midpoint recognizing that actual achievement by each MPO might vary given their regional differences and the strategies they would use, but overall is reasonable. A necessary consideration in CARB staff's approach has been whether challenges cited by the MPOs for including additional or enhanced land use and transportation strategy reductions, specifically the need for additional funding resources and tools, would be addressed between now and the 2035 target year. CARB staff's assumptions are comparatively less conservative than the MPO recommendations on this point, given new funding incentives affecting SCS strategies through passage of SB 1, the Greenhouse Gas Reduction Fund, Volkswagen Settlement, local tax measures, and new State commitments to achieve VMT reduction in the Scoping Plan Update that were not all analyzed as part of the MPOs target recommendations.

Furthermore, CARB and MPO staffs both consider and cite a rebound effect, of increased overall driving due to increasing vehicle fuel efficiency, as a factor that counteracts SCS GHG emission reductions. The MPO tests quantified the effect as ranging from a 1 to 5 percent increase, depending on the region. CARB's independent analysis of the rebound effect as part of its Advanced Clean Car Regulation and U.S. EPA's Mid-Term Review, as well as State commitments to develop pricing policies in the Scoping Plan Update that help counteract this effect, CARB staff assume the magnitude of impact to be no more than a 1 percent increase by 2035.

An overarching consideration to this approach has to do with the continued use and reliance on modeling to demonstrate progress in the SB 375 program. The experience

⁹ See Urban Land Institute, Moving Cooler An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions, Technical Appendices, October 2009.

¹⁰ See both California Air Resources Board, LEV III Economic Analysis Technical Support Document, Appendix S, December 7, 2011, <https://www.arb.ca.gov/regact/2012/leviiighg2012/levapps.pdf> and US Environmental Protection Agency, The Rebound Effect from Fuel Efficiency Standards: Measurement and Projection to 2035, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100N11T.PDF?Dockey=P100N11T.PDF>.

to date has been mixed, but both MPOs and CARB staff agree that part of increasing confidence in demonstrating higher target levels will be further work together to standardize modeling assumptions and methods affecting target achievement calculations, in a way that provides greater certainty that exogenous modeling factors will not detract from the ability to achieve higher targets. CARB staff is committed to this work with the MPOs as part of CARB staff's update of the methodology for reviewing emission reductions from SCSs.¹¹

Individual recommendations provided by each of the four large MPOs and CARB's recommended targets are discussed separately below.

1. Metropolitan Transportation Commission/Association of Bay Area Governments

The Metropolitan Transportation Commission/Association of Bay Area Governments (MTC/ABAG) region is located in the San Francisco Bay area, and includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. MTC/ABAG proposes per capita GHG emission reduction targets of 18 percent in 2035 relative to 2005 emissions. A 2020 target recommendation was not provided. MTC/ABAG's original SB 375 targets were a 7 percent reduction in 2020 and a 15 percent reduction in 2035 relative to 2005. The first SCS, adopted in July 2013, would, if implemented, achieve 10 percent per capita GHG emission reduction in 2020 and a 16 percent reduction in 2035 compared with 2005 levels.

	2020	2035
Existing Target	-7%	-15%
2013 SCS Performance	-10%	-16%
2017 SCS Performance	<i>pending</i>	<i>pending</i>
MTC/ABAG Proposed Target	n/a	-18%
CARB Staff Recommendation	-10%	-19%

MTC/ABAG's 2013 SCS encourages growth in locally nominated "priority development areas" while preserving land in identified "priority conservation areas", resulting in the accommodation of all of the region's growth within five percent of the region's land. With SCS implementation, the region's residential density will increase by about 5 percent between 2010 and 2020, and between 2010 and 2040 it will increase by about 19 percent. The SCS replaces and expands the transit fleet and capacity and

¹¹ See California Air Resources Board, Description of Methodology for CARB Staff Review of Greenhouse Gas Reductions from Sustainable Communities Strategies (SCS) Pursuant to SB 375, July 2011, http://www.arb.ca.gov/cc/sb375/scs_review_methodology.pdf.

incentivizes housing production near transit. The SCS also invests in several climate initiative programs that support reducing VMT and promoting cleaner fuels and technology such as: electric vehicle incentive programs, expansion of the electric vehicle charging network, vanpool incentives, and expansion of car-sharing services.

MTC/ABAG is currently developing their second SCS, which is anticipated to be adopted in summer of 2017. This plan will build upon existing strategies from the region's first SCS and will continue to address the region's housing needs, expand transportation to accommodate future growth, and maintain the existing infrastructure. The total budget for the draft RTP/SCS is \$303 billion in 2040 dollars.

Based on development of the 2017 SCS and additional analysis, MTC/ABAG staff recommended a per capita GHG reduction target of 18 percent in 2035 from 2005 levels. In total, MTC/ABAG's recommendation represents a GHG reduction commitment from additional or enhanced strategies in the range of an additional 2.5 percentage points. MTC/ABAG's analysis showed that in order to achieve these higher greenhouse gas reductions, the region will need significant investments in transit and aggressive market intervention for denser land use development. MTC/ABAG's SB 375 target recommendation is conditional on several factors such as: the need for a State pricing mechanism to increase auto-operating cost; a dedicated funding mechanism for transit, ridesharing, and active transportation; and additional funding for RTP/SCS implementation. It is important to note that increasing densities within the Bay area has the potential to lead to displacement and the addition of new pricing mechanisms, like a road user fee, may lead to equity concerns. The Bay area is sensitive to these issues due to the already high cost of housing.

The next RTP/SCS adopted by MTC/ABAG that will be subject to the updated SB 375 targets will be adopted in 2021. CARB staff recommends an SB 375 target of 10 percent in 2020 and 19 percent in 2035 compared with 2005 levels. CARB staff's 2035 target recommendation is 1 percentage point higher than MTC's target recommendation. This recommendation is based on review of analysis submitted by MTC and CARB staff's approach of applying the midpoint of the identified reduction range (3 percent) to what the region has achieved in their currently adopted SCS and the most recent modeling of their Draft 2017 SCS Preferred Scenario. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies.

2. Sacramento Area Council of Governments

The Sacramento Area Council of Government (SACOG) region is located in central California above the San Joaquin Valley and inland from the San Francisco Bay area. The region includes the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG proposes a per capita GHG emission reduction target of 18 percent in

2035 relative to 2005 emissions. A 2020 target recommendation was not provided. SACOG’s original SB 375 targets were a 7 percent reduction in 2020 and a 16 percent reduction in 2035 relative to 2005. The first SCS, adopted in April 2012, would, if implemented, achieve 10 percent per capita GHG emission reduction in 2020 and a 16 percent reduction in 2035 compared with 2005 levels. The second SCS, adopted in February 2016, would, if implemented, achieve a 7.6 percent per capita GHG emission reduction in 2020 and a 15.6 percent per capita GHG emission reduction in 2035.

	2020	2035
Existing Target	-7%	-16%
2012 SCS Performance	-10%	-16%
2016 SCS Performance	-8%	-16%
SACOG Proposed Target	n/a	-18%
CARB Staff Recommendation	-7%	-19%

In 2016, SACOG adopted its second Metropolitan Transportation Plan (MTP)/SCS, which continues to emphasize the key strategies from the first (2012) SCS that reduce barriers to infill development, and increase density in targeted areas served by transit to make the transit system more viable and efficient. SACOG also took a “fix-it-first” approach when prioritizing roadway funding where roadway maintenance and rehabilitation projects were prioritized over projects that would add new roadway capacity. SACOG is also implementing its complete streets policy by configuring on-street bike lanes and including pedestrian safety improvements into scheduled roadway maintenance projects. Since there is limited funding available to complete all the desired transportation projects in the region, SACOG applied project phasing criteria regarding roadway utilization and peak period congestion to determine which transportation projects should be completed within the 20-year plan horizon, and which projects would have to wait. The outcome of SACOG’s growth strategy in the 2016 SCS is to accommodate a 36 percent population increase on less than 2 percent of the region’s land area. The performance outcomes of SACOG’s 2016 MTP/SCS will include an increase in the number of homes and jobs near transit, improved jobs/housing balance, over a doubling of bike lane miles, and expansion of transit services. The total budget for the 2016 RTP/SCS is \$45.8 billion in 2036 dollars.

SACOG staff recommended a per capita GHG reduction target of 18 percent in 2035 from 2005 levels based on their recent analysis. SACOG’s analysis focused on strategies related to incentivizing early growth in infill and transit-oriented development areas, increasing transit services and modernizing deployment of transit services, as well as investment and innovation in locally-initiated programs to accelerate electric vehicle penetration. In total, SACOG’s recommendation represents a GHG reduction commitment from additional or enhanced strategies in the range of an additional

5 percentage points. SACOG’s analysis also identified several State supportive measures that would be needed to help achieve these additional GHG reductions.

The next MTP/SCS adopted by SACOG that will be subject to the updated SB 375 targets will be adopted in 2020. CARB staff recommends an SB 375 target of 7 percent in 2020 and 19 percent in 2035 compared with 2005 levels. CARB staff’s 2035 target recommendation is 1 percentage point higher than SACOG’s target recommendation, and is based on review of analysis submitted by SACOG and on CARB staff’s approach of applying the midpoint of the identified reduction range (3 percent) to what the region has achieved in their currently adopted SCS. Differences between CARB and MPO staff’s approaches include quantification of the rebound effect and potential for additional land use and transportation strategies.

3. San Diego Association of Governments

The San Diego Association of Governments (SANDAG) region is located in the Southern most area of California and shares a border with the country of Mexico and the Pacific Ocean. The SANDAG region shares the same boundary as the County of San Diego. SANDAG proposes a per capita GHG emission reduction target of 18 percent in 2035 relative to 2005 emissions. A 2020 target recommendation was not provided. SANDAG’s original SB 375 targets were a 7 percent reduction in 2020 and a 13 percent reduction in 2035 relative to 2005. The first SCS, adopted in October 2011, would, if implemented, achieve a 14 percent per capita GHG emission reduction in 2020 and a 13 percent reduction in 2035 compared with 2005 levels. The second SCS, adopted in October 2015, would, if implemented, achieve a 15 percent per capita GHG emission reduction in 2020 and a 21 percent per capita GHG emission reduction in 2035. In May 2017, SANDAG submitted a summary of updates made to their travel demand model since the 2015 SCS. Updates to various factors, like population, households, land use, and traffic counts, have lowered SANDAG’s GHG emission reduction estimates for the 2015 SCS. Instead of 21 percent reduction, SANDAG estimates that, if implemented, their 2015 SCS would result in an 18 percent per capita reduction from 2005 levels by 2035.

	2020	2035
Existing Target	-7%	-13%
2011 SCS Performance	-14%	-13%
2015 SCS Performance	-15%	-18%
SANDAG Proposed Target	n/a	-18%
CARB Staff Recommendation	-15%	-21%

In 2015, SANDAG adopted its second SCS, which continues to emphasize the key strategies from the first (2011) SCS that support a more sustainable future for the San Diego region. SANDAG anticipates cities will continue to grow within existing urban

boundaries and the SCS reflects smart growth trends in local general and specific plans, which direct growth in existing urbanized areas and along key transportation corridors. This development pattern will bring people and destinations closer together in more mixed-use, compact communities that facilitate walking and transit use. The SCS includes an extensive regional bus system, improved commuter and light rail service, an expanded regional bicycle network, improved pedestrian infrastructure, dedicated highway lanes for carpool and express buses, and several transportation demand management programs that reduce the number of vehicle trips. Overall, these types of strategies would result in closer proximity of homes and jobs to high frequency transit, with almost 70 percent of all jobs being within a half mile of transit by 2035, and almost 60 percent of new housing being within a half mile of transit by 2035. In addition, multi-family housing would make up 76 percent of new housing units through 2035, and the total share of multi-family units would increase from 37 percent in 2012 to 44 percent in 2035. Travel times in key corridors would be reduced by an average of 18 minutes by 2035 and ridership is expected to more than double from about 356,000 daily boardings in 2012 to over 775,000 in 2035. The total budget for the 2015 RTP/SCS is \$204 billion in 2050 dollars.

Based on analysis conducted throughout 2016 and 2017, SANDAG staff recommended a per capita GHG reduction target of 18 percent in 2035 from 2005 levels. SANDAG's analysis showed that limited GHG reductions can be achieved through aggressive land use changes and transit investment assumptions. The majority of additional GHG reductions would need to come from increasing the cost of driving and the number of zero-emission passenger vehicles, which are outside the direct control of SANDAG and SB 375.

The next RTP/SCS adopted by SANDAG that will be subject to the updated SB 375 targets will be adopted in 2019. CARB staff recommends an SB 375 target of 15 percent in 2020 and 21 percent in 2035 compared with 2005 levels. CARB staff's 2035 target recommendation is 3 percentage points higher than SANDAG's target recommendation, and is based on review of analysis submitted by SANDAG and CARB staff's approach of applying the midpoint of the identified reduction range (3 percent) to what the region has achieved in their currently adopted SCS based on updated modeling. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies.

4. Southern California Association of Governments

The Southern California Association of Governments (SCAG) region is located in Southern California, and includes the counties of Imperial, Orange, Los Angeles, Riverside, San Bernardino, and Ventura. SCAG proposes a per capita GHG emission reduction target of 18 percent in 2035 relative to 2005 emissions. A 2020 target

recommendation was not provided. SCAG’s original SB 375 targets were an 8 percent reduction in 2020 and a 13 percent reduction in 2035 relative to 2005. The first SCS, adopted in April 2012, would, if implemented, achieve a 9 percent per capita GHG emission reduction in 2020 and a 16 percent reduction in 2035 compared with 2005 levels. The second SCS, adopted in April 2016, would, if implemented, achieve an 8 percent per capita GHG emission reduction in 2020 and an 18 percent per capita GHG emission reduction in 2035.

	2020	2035
Existing Target	-8%	-13%
2012 SCS Performance	-9%	-16%
2016 SCS Performance	-8%	-18%
SCAG Proposed Target	n/a	-18%
CARB Staff Recommendation	-8%	-21%

In 2016, SCAG adopted its second SCS, which continues to emphasize the key land use and transportation strategies in the first (2012) SCS. The goals of SCAG’s first SCS include ensuring the region’s long-term economic competitiveness and improving quality of life for current and future generations. The region is working to reverse air pollution trends, increase investment in alternatives to single occupancy auto use, create greater opportunities for affordable housing and housing diversity, and strengthen the economy. It includes an extensive regional bus and bus rapid transit (BRT) system, improved commuter and light rail service, an expanded regional bicycle network, improved pedestrian infrastructure, dedicated highway lanes for carpool and express buses, and several TDM programs that reduce the number of vehicle trips. The outcomes of the 2016 SCS by 2035 include 46 percent of the total household growth and 55 percent of total employment growth will be located within high-quality transit areas. In addition, new housing development is anticipated to be 33 percent single-family and 67 percent multi-family, with the majority of new growth located in infill and compact walkable areas. The SCS also reduces spending on system expansion in favor of increased funding for roadway maintenance and rehabilitation compared to the 2012 RTP/SCS. By 2040, over 170,000 miles of bus routes and 72,000 miles of transit rail will be added to the system. The total budget for the 2016 RTP/SCS is \$556.5 billion in 2016 dollars.

SCAG staff recommended a per capita GHG reduction target of 18 percent in 2035 from 2005 levels based on their recent analysis. SCAG’s analysis focused on strategies related to active transportation, zero emission vehicles, and mobility innovations and indicated that an additional 2 to 2.5 percentage points achieved beyond the last plan through additional programs, investments, and mobility innovations, at an estimated cost of \$10 billion. As part of the target recommendation, SCAG also committed to an

additional 2 to 3 percentage points beyond their test results to be achieved through further innovative strategies. In total, SCAG's recommendation represents a GHG reduction commitment from additional or enhanced strategies in the range of an additional 4 to 5.5 percentage points. Additional reductions would partially be supported through a local sales-tax measure (Measure M) dedicated to transportation funding, which voters approved in Los Angeles County in 2016.

The next RTP/SCS adopted by SCAG that will be subject to the updated SB 375 targets will be adopted in 2020. CARB recommends an SB 375 target of 8 percent in 2020 and 21 percent in 2035 compared with 2005 levels. CARB staff's 2035 target recommendation is 3 percentage points higher than SCAG's target recommendation, and is based on review of analysis submitted by SCAG and CARB staff's approach of applying the midpoint of the identified reduction range (3 percent) to what the region has achieved in their currently adopted SCS. Differences between CARB and MPO staff's approaches include quantification of the rebound effect and potential for additional land use and transportation strategies.

B. The San Joaquin Valley MPOs

In general, limited technical data was available in 2010 on which to base target recommendations for the San Joaquin Valley (Valley) MPOs. The Valley MPOs collectively represent 11 percent of the State's population and 10 percent of the associated GHG emissions from light-duty vehicles. In 2010, CARB established placeholder targets of 5 percent in 2020 and 10 percent in 2035 for all Valley MPOs, with the expectation that the targets would be revised once transportation model improvements were completed and alternative scenario analyses could be provided. An initial round of model improvements was completed in 2013 for use in their 2014 RTP/SCSs. The per capita GHG emission reductions from the SCSs adopted in 2014 varied widely across the eight Valley MPOs. Some Valley MPOs produced transportation model results that showed that their 2014 SCSs would greatly exceed their targets, while others could not meet their targets. The Valley MPO staffs attributed the variability to several factors, including the models' treatment of interregional travel, model inputs and assumptions such as auto operating cost, and socioeconomic conditions such as recovery from the recession.

Updates and enhancements were made to the Valley MPOs' transportation models in the middle of 2016 (Valley Model Improvement Program 2, or VMIP2). It was important to the Valley MPOs that their target recommendations be based on the newest version of the transportation-modeling platform because the new modeling platform would also be used to estimate VMT and GHG emissions for their next round of SCSs, which would be evaluated against the new SB 375 targets. In contrast to the 2010 targets, which

were uniform across all eight Valley MPOs, the updated targets would be unique to each MPO.

The San Joaquin Valley MPOs submitted target analysis information using preliminary results from their most recent model improvement effort. This work utilizes the most recent Census, American Community Survey and California Household Travel Survey data, as well as implements changes to the model structure based on CARB feedback received during the last SCS evaluation period. The preliminary result looks to be a more accurate accounting of their current plan achievement. CARB staff used this information as the foundation for evaluating what would be ambitious and achievable for these MPOs.

Similar to the previous discussion for the largest four MPOs, CARB staff expects the Valley MPOs to be able to achieve additional reductions beyond the adopted SCSs and, in most cases beyond the target recommendations submitted to CARB. While the Valley MPOs did not provide quantitative test results, CARB staff considered the results from the large four MPOs, along with knowledge of what strategies the Valley MPOs have included in their SCSs to date, and applied a stepped reduction range, reasoning that certain strategies such as Regional and Local Pricing and Vehicle Technology would not yield as high a benefit as in the more urbanized MPOs.

Given the variability in population size and growth across the Valley MPOs, CARB staff applied a range of 1 to 2 percent additional reduction for the Valley MPOs compared to their adopted SCSs. For the four largest Valley MPOs (Kern, Fresno, San Joaquin, and Stanislaus) CARB staff applied an additional 2 percent reduction range to the estimated emission reductions range of their currently adopted SCS. For the smaller Valley MPOs (Merced, Madera, Kings and Tulare), CARB staff applied a 1 percent reduction range to the to the estimated emission reductions range of their currently adopted SCS.

Individual recommendations provided by each of the Valley MPOs are discussed separately below and CARB's recommended targets are discussed separately below.

1. Fresno Council of Governments

The Fresno Council of Governments (Fresno COG) region is located in the San Joaquin Valley and shares the same boundary as Fresno County. Fresno COG proposes per capita GHG emission reduction targets of 6 percent in 2020, and 13 percent in 2035 relative to 2005 emissions. Fresno COG's first SCS, adopted in June 2014, would, if implemented, achieve an 8.5 percent per capita GHG emission reduction in 2020 and a 10.5 percent reduction in 2035 compared with 2005 levels. The reduction in SCS GHG reductions for 2020 is due to updated forecasts showing higher employment and lower population growth than what Fresno COG used in their 2014 RTP/SCS.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-8.5%	-10.5%
Fresno COG Proposed Target	-6%	-13%
CARB Staff Recommendation	-6%	-13%

The 2014 SCS, if implemented, would change the region’s historical land use pattern and transportation investments. The plan assumes that local jurisdictions will maintain their historic rates of growth, but the growth would occur within existing urban service boundaries to encourage infill and minimize leapfrog development. Further, over 75 percent of the region’s population growth through 2035 is forecast to occur within the Fresno-Clovis Metro area, based on recently updated general plans for Fresno and Clovis. The 2014 SCS also increases transit and active transportation investments, which includes funding for five bus rapid transit lines in the city of Fresno and over 500 new lanes miles of bicycle facilities countywide. These strategies would increase the proximity of residents to transit and biking and walking facilities, leading to greater use of active modes of transportation. The 2014 SCS also includes transportation system management and transportation demand management measures (for example, carpooling, vanpooling, and ramp metering) to reduce trips and increase system efficiency. As a result of the strategies, the 2014 SCS would increase the average density of new residential development from 4.9 dwelling units per acre to 9.3 units per acre. This is due in part to the increased proportion of multi-family residential units from 22 percent to 47 percent of total new housing by 2035. This denser development also reduces the total amount of land consumed by development, leading to conversion of 38 percent less agricultural land than the prior RTP.

Fresno COG is currently in the process of developing its second SCS for adoption in 2018, which will be subject to the updated SB 375 targets. This SCS will incorporate updated General Plans for the Cities of Fresno and Sanger and the County of Fresno, as well as more aggressive investments in transit, vanpool/carpool, active transportation, and alternative transportation strategies, such as car/ridesharing. Land use strategies will build upon the 2014 SCS and continue to increase densities, promote infill development, and concentrate growth along transit corridors. Based on the preliminary modeling results, Fresno COG recommends a 13 percent GHG emission reduction target for 2035.

CARB staff recommends an SB 375 target of 6 percent in 2020 and 13 percent in 2035, consistent with the targets recommended by Fresno COG. CARB staff based its recommendation on review of analysis submitted by Fresno COG, updated forecasts that will be used in the 2018 RTP/SCS development process, and CARB staff’s approach applies a percent reduction to the currently adopted SCSs of 2 percent to the

four largest Valley MPOs and a 1 percent reduction to what the four smaller Valley MPOs by population size.

2. Kern Council of Governments

The Kern Council of Governments (Kern COG) region and is the southern-most county in the San Joaquin Valley. Kern COG shares the same boundary as Kern County. Kern COG proposes per capita GHG emission reduction targets of 9 percent in 2020 and a 13 percent in 2035 relative to 2005 emissions. Kern COG’s first SCS, adopted in June 2014, would, if implemented, achieve 14.1 percent per capita GHG emission reduction in 2020 and a 16.6 percent reduction in 2035 compared with 2005 levels. The Valley MPOs used the newest version of the transportation-modeling platform for the target recommendation and based on preliminary model runs, the 2014 SCS achieves a 9 percent reduction in 2020 and a 13 percent reduction in 2035. CARB staff used the latest model estimates for the target update process.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-9%	-13%
Kern COG Proposed Target	-9%	-13%
CARB Staff Recommendation	-9%	-15%

Implementation of the 2014 SCS would change the region’s historical land use pattern and transportation investments through 2040. The SCS calls for new growth to be focused within existing urban boundaries as compact, infill development. Over 60 percent of the region’s population growth is forecast to occur within the Metropolitan Bakersfield area. Additional SCS strategies include increasing the number of households and jobs with access to transit and increasing the proportion of multi-family and small-lot single-family homes. The plan also dedicates a greater amount of funding for active transportation infrastructure and public transit, compared to the prior RTP. Planned transit improvements include increasing the number of natural gas buses in transit fleets, and adding additional buses for fixed routes and express service throughout the region. The plan would establish additional transit transfer stations and add a new bus rapid transit system in Metropolitan Bakersfield. With this emphasis on more compact, transit-oriented development, approximately 62 percent of total housing and 75 percent of total jobs would be located within one-half mile of a transit station by 2040. Access to rural employment centers would also be improved, with plans to double the number of vanpool riders and construct the region’s first high-occupancy vehicle lanes to accommodate an increasing number of carpoolers.

Kern COG is currently in the process of developing its second SCS for adoption in 2018, which will be subject to the updated SB 375 targets. This SCS plans to build upon strategies found in the 2014 SCS with a focus on improving transit access, increasing opportunities for active transportation, increasing investment in express buses, high-occupancy vehicle lanes, park and ride facilities, vanpooling, and bus-rapid transit and commuter rail.

CARB staff recommends an SB 375 target of 9 percent in 2020 and 15 percent in 2035. This recommendation is the same as the MPO recommendation for 2020 and 2 percentage points higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by Kern COG, and CARB staff's approach of applying a stepped reduction range of 2 percent to what the four largest Valley MPOs, by population, have achieved in their currently adopted SCSs. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies, where the MPO recommendation is based on quantification of the existing 2014 RTP/SCS strategies with the updated MIP2 model only and CARB staff's recommendation includes an estimate of the benefits of additional strategies above and beyond the 2014 RTP/SCS.

3. Kings County Association of Governments

The Kings County Association of Governments (Kings CAG) region is adjacent to Tulare CAG and Kern COG located in the southern region of the San Joaquin Valley. Kings CAG shares the same boundary as Kings County. Kings CAG proposes per capita GHG emission reduction targets of 5 percent in 2020 and 12 percent in 2035 relative to 2005 emissions. The region's first SCS, adopted in June 2014, would, if implemented, achieve a 5.1 percent per capita GHG emission reduction in 2020 and a 12.1 percent reduction in 2035 compared with 2005 levels.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-5.1%	-12.1%
Kings CAG Proposed Target	-5%	-12%
CARB Staff Recommendation	-5%	-13%

Kings CAG's 2014 RTP/SCS prioritizes agricultural preservation while encouraging growth in existing urbanized areas. Efforts within local jurisdictions to increase connectivity and mix of uses will help provide more housing choices for residents and decrease travel distances to destinations. The SCS includes transportation projects that aim to meet the needs of residents such as a new park and ride facility, two new transit routes, and new bike and pedestrian facilities. Given the long commute

distances common in the county, vanpools will continue to be an effective alternative to single occupant vehicle travel for some residents.

Kings CAG is currently in the process of developing its second SCS for adoption in 2018, which will be subject to the updated SB 375 targets. For this SCS Kings CAG plans to build upon the ongoing efforts in the upcoming 2018 RTP/SCS. Member agencies and regional transit providers have taking several proactive steps by implementing additional sustainability measures. These include the investment of alternative fuel vehicle fleet replacement and installation of charging stations; pursuing competitive grant funds to build active transportation projects; enhanced existing transit service with additional routes of the regional bus transit system; an additional Amtrak passenger train that will increase ridership from the Hanford station; consideration of smart growth strategies in local agency General Plan updates and in planning for new residential and commercial development that embrace complete streets transportation strategies.

CARB staff recommends an SB 375 target of 5 percent in 2020 and 13 percent in 2035. This recommendation is the same as the MPO recommendation for 2020 and 1 percentage point higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by Kings CAG, and CARB staff's approach of applying a stepped reduction range of 1 percent to what the four smaller Valley MPOs, by population, have achieved in their currently adopted SCSs. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies, where the MPO recommendation is based on quantification of the existing 2014 RTP/SCS strategies with the updated MIP2 model only. CARB staff's recommendation includes an estimate of the benefits of additional strategies above and beyond the 2014 RTP/SCS.

4. Madera County Transportation Commission

The Madera County Transportation Commission (Madera CTC) region is adjacent to Fresno COG in the San Joaquin Valley and shares the same boundary as Madera County. Madera CTC proposes per capita GHG emission reduction targets of 10 percent in 2020 and between 15 and 20 percent in 2035 relative to 2005 emissions.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-10%	-15%
Madera CTC Proposed Target	-10%	-15% to -20%
CARB Staff Recommendation	-10%	-16%

Italics indicates an SCS that is adopted but not yet evaluated by CARB

An RTP was adopted by the Madera CTC Governing Board in 2014, but the sustainable communities strategies included with the plan did not meet the SB 375 targets. Since 2014, Madera CTC has been working to update the modeling tools and analyze the existing data, land use, and transportation strategies to provide a more accurate accounting of GHG emissions within the region. As a result, Madera CTC will amend the existing 2014 RTP/SCS and submit this plan to CARB in 2017. Madera CTC did submit a target recommendation to CARB that is based on the updated modeling and analysis for the RTP/SCS amendment.

CARB staff recommends an SB 375 target of 10 percent in 2020 and 16 percent in 2035, consistent with the targets recommended by Madera CTC. CARB staff based its recommendation on review of analysis submitted by Madera CTC and CARB staff's approach of applying a stepped reduction range of 1 percent to the low end of the range to what the four smaller Valley MPOs, by population, have achieved in their currently adopted SCSs.

5. Merced County Association of Governments

The Merced County Association of Governments (Merced CAG) region is located adjacent to Fresno COG in the San Joaquin Valley and shares the same boundary as Merced County. Merced CAG proposes per capita GHG emission reduction targets of 10.1 percent in 2020 and 12.7 percent in 2035 relative to 2005 emissions.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	<i>-10.1%</i>	<i>-12.7%</i>
Merced CAG Proposed Target	-10.1%	-12.7%
CARB Staff Recommendation	-10%	-14%

Italics indicates an SCS that is adopted but not yet evaluated by CARB

Merced CAG prepared an RTP/SCS in 2014, which did not meet the SB 375 targets, and an RTP/SCS amendment in 2016, which has not yet been submitted and evaluated by CARB.

CARB staff recommends an SB 375 target of 10 percent in 2020 and 14 percent in 2035. This recommendation is the same as the MPO recommendation for 2020 and approximately 1 percentage point higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by Merced CAG, and CARB staff's approach of applying a stepped reduction range of 1 percent to what the four smaller Valley MPOs, by population, have achieved in their currently adopted SCSs. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies, where the MPO recommendation is based on quantification of the existing 2014 RTP/SCS strategies

with the updated MIP2 model only and CARB staff's recommendation includes an estimate of the benefits of additional strategies above and beyond the 2014 RTP/SCS.

6. San Joaquin Council of Governments

The San Joaquin Council of Governments (San Joaquin COG) region is located in the northern region of the San Joaquin Valley inland from the San Francisco Bay area. San Joaquin COG shares the same boundary as San Joaquin County. San Joaquin COG proposes per capita GHG emission reduction targets in the range of 12 to 13 percent in 2020 and 14 to 15 percent in 2035 relative to 2005 emissions. San Joaquin COG's first SCS, adopted in June 2014, would, if implemented, achieve a 24.4 percent per capita GHG emission reduction in 2020 and a 23.7 percent reduction in 2035 compared with 2005 levels. The Valley MPOs used the newest version of the transportation-modeling platform for the target recommendation and based on preliminary model runs, the 2014 SCS achieves a 12 percent reduction in 2020 and a 14 percent reduction in 2035. CARB staff used the latest model estimates for the target update process.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-12%	-14%
San Joaquin COG Proposed Target	-12% to -13%	-14% to -15%
CARB Staff Recommendation	-12%	-16%

San Joaquin COG is a single-county MPO in which low density development has been the trend, travel patterns are greatly influenced by interregional commuting, and whose economy has been significantly impacted by the recession. The land use and transportation strategies in its 2014 SCS attempt to address these issues by offering residents more mobility options and reducing vehicle trip lengths. Key SCS land use strategies include increasing the amount of infill development within existing urbanized areas, leading to denser development and an increase in the proportion of multi-family and small-lot single-family homes as compared to conventional lot sizes. This results in 61 percent of new growth as single-family housing and 39 percent of new growth as multi-family housing, yielding a countywide average density of ten dwelling units per acre. The SCS also dedicates an increased amount of funding for active transportation infrastructure and public transit, with six additional bus rapid transit routes in Stockton as well as some expansion of transit services in other communities. With this emphasis on transit-oriented development, the region anticipates that nearly 50 percent of new jobs and 40 percent of new homes will be located within a half mile of transit service and a substantial amount of prime farmland will be conserved through the plan year of

2040. The SCS includes a greater focus on TDM and TSM strategies than on widening and new roadway construction, and more transit expansion and investments in bike and pedestrian facilities.

San Joaquin COG is currently in the process of developing its second SCS for adoption in 2018, which will be subject to the updated SB 375 targets. San Joaquin COG has been collaborating with local agencies to ensure that the region is working toward the State's 2030 and 2050 climate change goals by encouraging land use and transportation decisions that minimize GHG emissions. In partnership with the MPO, member agencies and regional transit providers have pursued smart growth land use planning, transit system maintenance and upgrades, cap-and-trade and Caltrans' Active Transportation Program funds, and alternative vehicle adoption. San Joaquin COG plans to build upon these ongoing efforts in the upcoming 2018 RTP/SCS in order to continue facilitating the growth of sustainable communities.

CARB staff recommends an SB 375 target of 12 percent in 2020 and 16 percent in 2035. This recommendation is the same as the MPO recommendation for 2020 and 1 percentage point higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by San Joaquin COG, and CARB staff's approach of applying a stepped reduction range of 2 percent to what the four largest Valley MPOs, by population, have achieved in their currently adopted SCSs. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies, where the MPO recommendation is based on quantification of the existing 2014 RTP/SCS strategies with the updated MIP2 model only and CARB staff's recommendation includes an estimate of the benefits of additional strategies above and beyond the 2014 RTP/SCS.

7. Stanislaus Council of Governments

The Stanislaus Council of Governments (Stanislaus COG) region is adjacent to San Joaquin COG located in the northern region of the San Joaquin Valley. Stanislaus COG shares the same boundary as Stanislaus County. Stanislaus COG proposes per capita GHG emission reduction targets in the range of 12 to 13 percent in 2020 and 14 to 15 percent in 2035 relative to 2005 emissions. The region's first SCS, adopted in June 2014, would, if implemented, achieve 24.4 percent per capita GHG emission reduction in 2020 and a 23.7 percent reduction in 2035 compared with 2005 levels. The Valley MPOs used the newest version of the transportation-modeling platform for the target recommendation and based on preliminary model runs, the 2014 SCS achieves a 12 percent reduction in 2020 and a 14 percent reduction in 2035. CARB staff used the latest model estimates for the target update process.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-12%	-14%
Stanislaus COG Proposed Target	-12% to -13%	-14% to -15%
CARB Staff Recommendation	-12%	-16%

The transportation and land use policies identified in the SCS are intended to reduce the distance that residents will need to drive to their jobs and amenities. Calling for a greater proportion of multi-family housing, and more mixed-use and infill development, Stanislaus COG's SCS would result in consumption of less farmland, higher residential densities, and more jobs and houses located near transit. The SCS proposes a greater mix of housing types with 35 percent of new development as multi-family homes and 65 percent as single family homes. The plan allocates more than twice as much funding for transit as compared to previous RTPs. Projects funded in the 2014 RTP/SCS are designed to increase transit service frequencies and provide better connections to transit services, including the extension of commuter rail service to Modesto and Turlock, which would connect the region to the Bay Area. In addition, the region has allocated funds to begin planning a bus rapid transit service between the region's largest cities, Modesto and Ceres. The regional plan also allocates an increased amount of funding for active transportation projects compared to the previous RTP. Roadway investments are shifted from new capacity-expanding projects to complete streets projects, maintenance, rehabilitation, and operational improvements.

Stanislaus COG is currently in the process of developing its second SCS for adoption in 2018, which will be subject to the updated SB 375 targets. This SCS plans mainly to build upon strategies found in the 2014 RTP/SCS such as encouraging local agency efforts to implement policies and programs that support sustainable communities through more compact, transit oriented, mixed-use and infill development and more efficient development patterns that enhance a connection between land use and transportation choices.

CARB staff recommends an SB 375 target of 12 percent in 2020 and 16 percent in 2035. This recommendation is the same as the MPO recommendation for 2020 and 1 percentage point higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by Stanislaus COG, and CARB staff's approach of applying a stepped reduction range of 2 percent to what the four largest Valley MPOs, by population, have achieved in their currently adopted SCSs. Differences between CARB and MPO staff's approaches include quantification of the potential for additional land use and transportation strategies, where the MPO recommendation is based on quantification of the existing 2014 RTP/SCS strategies

with the updated MIP2 model only and CARB staff’s recommendation includes an estimate of the benefits of additional strategies above and beyond the 2014 RTP/SCS.

8. Tulare Association of Governments

The Tulare Association of Governments (Tulare CAG) region is adjacent to Kern COG located in the southern region of the San Joaquin Valley. Tulare CAG shares the same boundary as Tulare County. Tulare CAG proposes per capita GHG emission reduction targets in the range of 13 to 14 percent in 2020 and 15 to 16 percent in 2035 relative to 2005 emissions. The region’s first SCS, adopted in June 2014, would, if implemented, achieve a 17.1 percent per capita GHG emission reduction in 2020 and a 19.4 percent reduction in 2035 compared with 2005 levels. The Valley MPOs used the newest version of the transportation-modeling platform for the target recommendation and based on preliminary model runs, the 2014 SCS achieves a 13 percent reduction in 2020 and a 15 percent reduction in 2035. CARB staff used the latest model estimates for the target update process.

	2020	2035
Existing Target	-5%	-10%
2014 SCS Performance	-13%	-15%
Tulare CAG Proposed Target	-13% to -14%	-15% to -16%
CARB Staff Recommendation	-13%	-16%

Tulare CAG’s 2014 SCS builds upon the Tulare County Regional Blueprint (Blueprint), adopted in 2009, which encourages more compact growth. The SCS plans to increase the average density of new development by 25 percent. With implementation, Tulare CAG projects an increase in the share of multi-family housing region-wide as well as preservation of agricultural resources. It would improve the existing public transportation system by adding additional transit routes, clean fuel (natural gas) buses, and expanding night and weekend service. It increases the amount of investment in active transportation infrastructure such as new bicycle and pedestrian paths. The SCS also improves access to rural employment centers with plans to quadruple the number of vanpool riders in the region. These strategies, together with transportation system management and trip reduction programs, are projected to reduce per capita passenger vehicle GHG emissions in the region.

Tulare CAG is currently in the process of developing its second SCS for adoption in 2018, which will be subject to the updated SB 375 targets. This SCS plans to build on the success of the previous plan that focused increased density of future development within existing communities, as envisioned in the 2009 Tulare County Regional Blueprint, supported by infrastructure improvements. Ongoing implementation

strategies for the RTP/SCS consist of a combination of planning projects, transit incentive programs, and public information campaigns.

CARB staff recommends an SB 375 target of 13 percent in 2020 and 16 percent in 2035, consistent with the targets recommended by Tulare CAG. CARB staff based its recommendation on review of analysis submitted by Tulare CAG and CARB staff's approach of applying a stepped reduction range of 1 percent to what the four smaller Valley MPOs, by population, have achieved in their currently adopted SCSs.

C. The Six Remaining Small MPOs

The six remaining small MPOs include the Association of Monterey Bay Area Governments (AMBAG), the Santa Barbara County Association of Governments (Santa Barbara CAG), San Luis Obispo Council of Governments (San Luis Obispo COG), Butte County Association of Governments (Butte CAG), Shasta Regional Transportation Association (Shasta RTA), and the Tahoe Metropolitan Planning Organization (Tahoe MPO). These MPOs collectively represent less than 5 percent of the State's population and associated GHG emissions from light-duty vehicles.

The development patterns in these MPOs can be characterized as semi-rural towns and small cities. The overall rate of growth is expected to be slow compared to the larger MPO regions. The travel patterns in these regions are also unique, particularly for those that are recreation and vacation destinations.

These MPOs have modest targets, some as low as zero and one whose targets allow an increase in per capita GHG emissions relative to 2005. Their targets were largely based on the GHG emission reductions expected from the RTPs in place at the time of initial target-setting.

All six of these MPOs met or exceeded their targets with SCSs adopted since 2010. All demonstrated that per capita GHG emission reductions were possible in these regions, despite their comparatively small RTP budgets and rural geography. Each of these MPO regions provided CARB with recommendations for higher SB 375 targets than were established in 2010, and will either exceed or maintain the same level of estimated per capita GHG emission reductions from their previous SCSs for 2035, as discussed individually below.

1. Association of Monterey Bay Area Governments

The AMBAG region is located along the central coast of California, and includes the three counties of San Benito, Santa Cruz, and Monterey. AMBAG proposes per capita GHG emission reduction targets of 3 percent in 2020 and a 6 percent in 2035 relative to 2005 emissions. AMBAG's original SB 375 targets were a 0 percent reduction in 2020

and a 5 percent reduction in 2035 relative to 2005. AMBAG’s first SCS, adopted in June 2014, would, if implemented, achieve a 3.5 percent per capita GHG emission reduction in 2020 and a 5.9 percent reduction in 2035 compared with 2005 levels.

	2020	2035
Existing Target	0%	-5%
2014 SCS Performance	-3.5%	-5.9%
AMBAG Proposed Target	-3%	-6%
CARB Staff Recommendation	-3%	-6%

AMBAG’s 2014 SCS encourages new growth in existing communities and near existing commercial corridors, with an emphasis on active transportation, public transit, and safety. With SCS implementation, AMBAG projects a substantial increase in the number of households and jobs within one-half-mile of high quality transit in 2035. The 2014 SCS increases investment in public transit and active transportation by 90 percent compared to the previous plan. These strategies, together with transportation system management, transportation demand management, and trip reduction programs represent AMBAG’s approach to reducing transportation-related GHG emissions in the region.

AMBAG is currently in the process of developing its second SCS for adoption in 2018, and has committed to the same level of aggressiveness as its first SCS, despite shortfalls in State funding needed to maintain existing infrastructure and transit service. Two of the three counties (Monterey and Santa Cruz) in the region successfully pursued transportation sales tax measures in November 2016. San Benito County’s proposed sales tax measure failed to secure enough votes. Nonetheless, AMBAG is committed to maintaining the same level of estimated per capita GHG emission reductions achieved in its first SCS.

The next MTP/SCS adopted by AMBAG that will be subject to the updated SB 375 targets will be adopted in 2022. CARB staff recommends an SB 375 target of 3 percent in 2020 and 6 percent in 2035, consistent with the targets recommended by AMBAG, which maintains the same level of estimated per capita GHG emission reductions achieved in their first SCSs.

2. Butte County Association of Governments

Butte CAG is located in northern California, immediately north of the SACOG region. The Butte County Association of Governments (Butte CAG) region shares the same boundary as Butte County. Butte CAG proposes a per capita GHG emission reduction target of 7 percent in 2035 relative to 2005 emissions. Butte CAG’s original SB 375 targets were a positive one percent in 2020 and 2035 relative to 2005. Butte CAG’s first

SCS, adopted in December 2012, would, if implemented, achieve a 2 percent per capita GHG emission reduction in 2020 and 2035 compared with 2005 levels.

	2020	2035
Existing Target	+1%	+1%
2012 SCS Performance	-2%	-2%
2016 SCS Performance	-6%	-7%
Butte CAG Proposed Target	n/a	-7%
CARB Staff Recommendation	-6%	-7%

Butte CAG recently submitted its 2016 RTP/SCS to CARB for review. The 2016 RTP/SCS expands on the efforts of the 2012 plan by integrating Butte CAG’s new Long-Range Transit and Non-Motorized Plan and incorporating the latest regional growth forecasts. The 2016 RTP/SCS would continue implementation of the “balanced” land use scenario developed for the 2012 RTP/SCS, except the total amount of growth projected would be slightly lower. In addition, Butte CAG implemented some changes to the travel demand model, including updating socioeconomic data, school enrollment data, and made the model sensitive to the auto operating cost variable. Butte CAG’s target recommendation of 7 percent per capita GHG emission reduction in the year 2035 is based on their 2016 RTP/SCS.

The next RTP/SCS adopted by Butte CAG that will be subject to the updated SB 375 targets will be adopted in 2020. CARB staff recommends an SB 375 target of 6 percent in 2020 and 7 percent in 2035, consistent with the targets recommended by Butte CAG, which maintains the same level of estimated per capita GHG emission reductions in their second SCS.

3. San Luis Obispo Council of Governments

San Luis Obispo COG is located along the central coast of California. The San Luis Obispo Council of Governments (San Luis Obispo COG) region shares the same boundary as San Luis Obispo County. San Luis Obispo COG proposes to maintain the current per capita GHG emission reduction targets of 8 percent in both 2020 and 2035 relative to 2005 emissions. San Luis Obispo COG’s first SCS, adopted in April 2015, would, if implemented, achieve a 9.4 percent per capita GHG emission reduction in 2020 and 10.9 percent in 2035 compared with 2005 levels.

	2020	2035
Existing Target	-8%	-8%
2015 SCS Performance	-9.4%	-10.9%
San Luis Obispo COG Proposed Target	-8%	-8%
CARB Staff Recommendation	-8%	-11%

San Luis Obispo COG is on a later RTP planning cycle relative to the SB 375 target update compared to the rest of the MPOs. Thus, San Luis Obispo COG is in the preliminary stages of developing its 2019 RTP/SCS. Unlike the other MPOs, San Luis Obispo COG does not yet have new growth or financial forecasts to develop scenarios on which to base target recommendations. San Luis Obispo COG does not anticipate having new growth or financial forecasts to inform scenario development until late 2017.

Furthermore, San Luis Obispo COG has identified several barriers to implementing their 2015 SCS, including deteriorating or collapsing funding sources needed for key transportation infrastructure investments, and drought conditions that have limited near-term new growth potential due to constrained water supply availability. However, there are some new revenue opportunities since the 2015 RTP/SCS was developed. A general fund sales tax increase was approved by voters in November 2014. However, the region unsuccessfully pursued a transportation sales tax measure in November 2016.

San Luis Obispo COG staff believes it may be optimistic to maintain a per capita GHG emission reduction target of 8 percent in both 2020 and 2035, nor maintain the achievement identified in its first SCS.

The next RTP/SCS adopted by San Luis Obispo COG that will be subject to the updated SB 375 targets will be adopted in 2019. CARB staff recommends an SB 375 target of 8 percent in 2020 and 11 percent in 2035. This recommendation is the same as the MPO recommendation for 2020 and 3 percentage points higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by San Luis Obispo COG and CARB staff's approach for the six remaining MPOs of maintaining, at minimum, the same level of GHG emission reductions estimated from their previous SCSs for 2035.

4. Santa Barbara County Association of Governments

The Santa Barbara County Association of Governments (Santa Barbara CAG) region shares the same boundary as the County of Santa Barbara, located along the central coast of California. Santa Barbara CAG staff conducted preliminary modeling for the draft 2017 RTP/SCS that is currently under development, which is scheduled for adoption in 2017. Santa Barbara CAG staff presented the per capita GHG emission reduction performance of the draft scenarios to their Board in June of 2016. Santa Barbara CAG's preferred land use and transportation scenario was estimated to achieve per capita GHG emission reductions of 13.3 percent in 2020 and 17.7 percent in 2035 relative to 2005 emissions. Santa Barbara CAG's original SB 375 targets were

a 0 percent reduction in 2020 and 2035 relative to 2005. Santa Barbara CAG’s first SCS, adopted in August 2013, would, if implemented, achieve a 10 percent per capita GHG emission reduction in 2020 and a 15 percent reduction in 2035 compared with 2005 levels.

	2020	2035
Existing Target	0%	0%
2014 SCS Performance	-10%	-15%
Draft 2017 SCS Performance	-13%	-17%
CARB Staff Recommendation	-13%	-17%

Santa Barbara CAG’s 2013 SCS selectively increases residential and commercial land use capacity and shifts growth into existing transit corridors. Assumed changes in land use capacity reflect local planning discussions about possible future land use and general plan and community plan updates at the local level. This strategic redistribution of growth directly addresses jobs/housing balance issues by emphasizing job growth in the North County and housing growth in the South County. The preferred scenario (Scenario 3) achieves the highest per capita GHG emission reductions of the seven scenarios under consideration by Santa Barbara CAG. One other scenario (Scenario 7) achieves approximately the same GHG per capita reductions as the preferred scenario.

Santa Barbara CAG is currently in the process of developing its second SCS for adoption in 2017, and is pursuing the same transit-oriented infill strategy as was adopted in its first SCS. Changes from the previous SCS that are being reflected in the preliminary modeling, include: changes to the underlying transit routes and frequencies, changes to the constrained transportation project lists, minor changes to land use assumptions and growth allocation, updated inter-regional trip information from SCAG and San Luis Obispo COG staff, and adjustments to U.S. 101’s functional classification in Santa Barbara CAG’s regional travel demand model. If Santa Barbara CAG continues to implement its preferred scenario with the same level of aggressiveness as in the existing adopted RTP/SCS, the modeling improvements will yield slightly greater per capita GHG emission reductions.

The next RTP/SCS adopted by Santa Barbara CAG that will be subject to the updated SB 375 targets will be adopted in 2021, after the first SB 375 milestone year has passed. CARB staff plans to monitor the performance of the SCS in year 2020 compared to the 2020 target. CARB staff recommends an SB 375 target of 13 percent in 2020 and 17 percent in 2035, consistent with the MPO’s Draft 2017 SCS estimates for 2020 and 2035. CARB staff based its recommendation on review of analysis submitted by Santa Barbara CAG and CARB staff’s approach for the six remaining

MPOs of maintaining, at minimum, the same level of GHG emission reductions estimated from their previous SCSs for 2035.

5. Shasta Regional Transportation Agency

Shasta RTA is located in northern California, and is not bordered by any other MPO. The Shasta Regional Transportation Agency (Shasta RTA) region shares the same boundary as Shasta County. Shasta RTA proposes a per capita GHG emission reduction target of 3.5 percent in 2035 relative to 2005 emissions, which was amended from 6 percent. Shasta RTA did not provide a recommendation for a 2020 target. Shasta RTA’s original SB 375 targets were a 0 percent reduction in 2020 and 2035 relative to 2005. Shasta RTA’s first SCS, adopted in June 2015, would, if implemented, achieve 5 percent per capita GHG emission reduction in 2020 and 0.5 percent reduction in 2035 compared with 2005 levels.

	2020	2035
Existing Target	0%	0%
2015 SCS Performance	-4.7%	-0.5%
Shasta RTA Proposed Target	n/a	-3.5%
CARB Staff Recommendation	-4%	-4%

Shasta RTA’s RTP/SCS plans to increase average residential density on a region-wide basis, improve the existing transportation system by expanding service on existing bus routes, providing more bicycle and pedestrian facilities, and preserving resource areas and farmland. Additional strategies Shasta RTA is pursuing include: deploying local on-demand public transit, inter-city public transit service to Sacramento, technology-enabled mobility and ride sharing services, and expanding public electric vehicle charging infrastructure. Shasta RTA’s target recommendation of 3.5 percent per capita GHG emission reduction in the year 2035 is based on these strategies.

The next RTP/SCS adopted by Shasta RTA that will be subject to the updated SB 375 targets will be adopted in 2018. CARB staff recommends an SB 375 target of 4 percent in 2020 and 4 percent in 2035. This recommendation is 0.5 percentage points higher than the MPO recommendation for 2035. CARB staff based its recommendation on review of analysis submitted by Shasta RTA, and CARB staff’s expectation that MPOs should at minimum maintain the same level of GHG emission reductions between 2020 and 2035, unless under special circumstances.

6. Tahoe Metropolitan Planning Organization

The Tahoe Regional Planning Agency (Tahoe RPA) is a bi-state agency created by congress in 1969 that operates under the bi-state Tahoe Regional Planning Contract

between California and Nevada. Tahoe RPA prepares the regional land use plan for the Lake Tahoe region, and also serves as the MPO for the region, which operates as Tahoe Metropolitan Planning Organization (Tahoe MPO). Tahoe RPA and Tahoe MPO are the same body, and unlike the rest of the MPOs in California, retain authority over both land use and transportation planning decisions for the Lake Tahoe region.

The Lake Tahoe region includes the eastern-most portions of Placer and El Dorado Counties located in California, along with the western portions of Washoe, Carson, and Douglas Counties located in Nevada. Tahoe MPO is the smallest MPO of the 18 in California. SB 375 only applies to the California-portion of the Lake Tahoe region.

The Tahoe MPO is bordered by the SACOG region to the west, and receives heavy recreation and visitor travel from both the bay area (MTC) and the SACOG region.

The Tahoe MPO proposes a per capita GHG emission reduction target of 8.8 percent in 2020 and 5 percent in 2035 relative to 2005 emissions. Tahoe MPO’s original SB 375 targets were a 7 percent reduction in 2020 and a 5 percent reduction in 2035 relative to 2005. Tahoe MPO’s first SCS, adopted in December 2012, would, if implemented, achieve 12 percent per capita GHG emission reduction in 2020 and 7 percent reduction in 2035 compared with 2005 levels.

	2020	2035
Existing Target	-7%	-5%
2012 SCS Performance	-12%	-7%
2017 SCS Performance*	-8.8%	-5%
Tahoe MPO Proposed Target	-8.8%	-5%
CARB Staff Recommendation	-8%	-5%

**Not yet submitted and evaluated by CARB*

Tahoe MPO’s recommended targets are based on their Draft 2017 RTP/SCS. Tahoe MPO expects very low amounts of new growth and new development over the 20-year Regional Plan and RTP/SCS time horizon because the amount of potential developable land in the Lake Tahoe region is restricted due to environmental constraints. The land use strategy of the Regional Plan and the RTP/SCS is highly incentivized urban infill and redevelopment. The transportation strategy includes a variety of bicycle and pedestrian projects, corridor revitalization projects, the Lake Tahoe Waterborne Transit Project, TDM and ITS projects, parking policy changes, and enhanced inter-regional transit operations.

The next RTP/SCS adopted by Tahoe MPO that will be subject to the updated SB 375 targets will be adopted in 2021. CARB staff recommends an SB 375 target of 8 percent in 2020 and 5 percent in 2035, consistent with the targets recommended by Tahoe MPO, which maintains the same level of estimated per capita GHG emission reductions

estimated to be achieved with their second SCS. CARB staff based its recommendation on review of analysis submitted by Tahoe MPO that reflect updates to their socioeconomic database and forecasts and resident versus visitation travel, and CARB staff's approach for the six remaining MPOs of maintaining, at minimum, the same level of GHG emission reductions estimated from their previous SCSs for 2035.