Aligning Metropolitan Transportation Planning and Investments with California's Climate and Equity Goals: An Assessment

A Report for the California Air Resources Board: Final Draft

December 2024

UCLA Institute of Transportation Studies

Aligning Metropolitan Transportation Planning and Investments with California's Climate and Equity Goals: An Assessment

A Report for the California Air Resources Board: Final Report

December 2024

Authors:

tamika l. butler, JD
Phoebe Chiu
Hao Ding, PhD
John Gahbauer
Mark Garrett, JD, PhD
Juan Matute (Project Manager)
Gian-Claudia Sciara, PhD (Co-PI, University of Texas, Austin)
Brian D. Taylor, PhD, FAICP (Principal Investigator

UCLA Institute of Transportation Studies

About the UCLA Institute of Transportation Studies

The UCLA Institute of Transportation Studies supports and advances cutting-edge research, the highest-quality education, and meaningful and influential civic engagement on the many pressing transportation issues facing our cities, state, nation and world today. The institute is part of the University of California Institute of Transportation Studies, a four-campus consortium that includes UC Berkeley, UC Davis and UC Irvine. UCLA ITS is also a proud partner of the Pacific Southwest Region 9 University of Transportation Center, a federally funded research network with seven other universities.

Acknowledgements

The authors thank the many community and transportation advocates, elected officials, and professional staff for taking the time to share their thoughts and ideas on the work of California's metropolitan planning organizations (MPOs). Without their help, this research would not have been possible. We also thank Chaithra Navada for her research assistance on this project. Thanks as well to the California Air Resources Board for funding this research.

The Institute of Transportation Studies at UCLA acknowledges the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (the Los Angeles basin and So. Channel Islands). As a land grant institution, we pay our respects to the Honuukvetam (Ancestors), 'Ahiihirom (Elders) and 'Eyoohiinkem (our relatives/relations) past, present and emerging.

Disclaimer

Any errors or omissions in this report are the responsibility of the authors and not the California Air Resources Board.

Abstract
This report investigates how California's Metropolitan Planning Organizations (MPOs) evaluate transportation projects for inclusion in their Regional Transportation Plans (RTPs) and Transportation Improvement Programming (TIP) documents. The study aims to determine the extent to which MPOs incorporate state climate and equity goals into project selection.

The report examines the transportation planning activities of seven California MPOs and associated County Transportation Commissions and Regional Transportation Planning Agencies (RTPAs). It focuses on MPO planning and programming to meet climate goals mandated by Senate Bill (SB) 375 and advance state equity goals.

The findings reveal that MPOs face challenges in incorporating climate change and equity concerns into their planning and programming processes. Despite state mandates, MPOs often lack the resources and expertise to conduct rigorous project evaluations. Additionally, the influence of local governments and funding constraints can limit MPOs' ability to prioritize climate and equity goals in their decision-making.

The report concludes that MPOs need greater support from the state to effectively address climate change and equity concerns. Recommendations include providing MPOs with additional resources for planning and evaluation, developing more robust climate and equity evaluation criteria, and increasing transparency and accountability in project selection processes.

TABLE OF CONTENTS

ALIGNING METROPOLITAN TRANSPORTATION PLANNING AND INVESTMENTS WITH CALIFORNIA'S CLIMATE AND EQUITY GOALS

Table of Contents

GLOSSARY

AB 805	Assembly Bill 805
APS	Alternative Planning Strategy
ABAG	Association of Bay Area Governments
AMBAG	Association of Monterey Bay Area Governments
ATP	Active Transportation Plan
AWOL	Absent without leave
CalCOG	California Association of Councils of Governments
CalEPA	California Environmental Protection Agency
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CBO	Community Based Organization
CTC	County Transportation Commission
CMAQ	Congestion Management and Air Quality
CTP	California Transportation Plan
DOT	Department of Transportation
EV	Electric Vehicle
FCOG	Fresno Council of Governments
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse Gas
HOV	High-Occupancy Vehicle
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
MTP	Metropolitan Transportation Plan (also known as the RTP)
NGO	Non-governmental Organization
RHNA	Regional Housing Needs Assessment
RTP	Regional Transportation Plan (also known as the MTP)
RTPA	Regional Transportation Planning Agency
RUC	Road User Charge
SACOG	Sacramento Area Council of Governments
SANDAG	San Diego Association of Governments
SB 375	Senate Bill 375
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SJCOG	San Joaquin Council of Governments
STBG	Transportation Block Grant
TDA	Transportation Development Act
TIP	Transportation Improvement Program
USDOT	United States Department of Transportation
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

ALIGNING METROPOLITAN TRANSPORTATION PLANNING AND INVESTMENTS WITH CALIFORNIA'S CLIMATE AND EQUITY GOALS

Executive Summary

This report examines how California's Metropolitan Planning Organizations (MPOs), the primary regional transportation planning entities in the state, evaluate proposed transportation projects for inclusion in their Regional Transportation Plans and Transportation Improvement Programming documents. The California Air Resources Board (CARB) asked the UCLA Institute of Transportation Studies to conduct this investigation to determine whether and to what extent MPOs incorporate state climate and equity goals into selecting transportation projects. To do this, we examined the transportation planning activities of seven (out of the 18) California MPOs and associated County Transportation Commissions and Regional Transportation Planning Agencies (RTPAs).[1] Specifically, we focus on MPO planning and programming to meet state climate goals mandated by Senate Bill (SB) 375, as well as advance state equity goals and principles with respect to both how the benefits and harms of transportation projects are distributed among at-risk communities, groups, and individuals, and with respect to the diversity of voices included in MPO planning processes.

This document summarizes the principal findings detailed in our full report:

- Following an introduction to the report, we begin with an overview of MPOs, their sometimes-ambiguous place in the governmental hierarchy, the federal and state laws and regulations that govern their work, and a review of research on MPOs, with a focus on their planning, evaluation, and programming practices (Chapters 1 and 2).

- We then review recent publicly-documented planning, public participation, and project evaluation work of seven MPOs in California—the four largest (Sacramento Area Council of Governments (SACOG), San Diego Association of Governments (SANDAG), the San Francisco Bay Area Metropolitan Transportation Commission (MTC), and Southern California Association of Governments)—and three of the 14 smaller MPOs in the state: the Association of Monterey Bay Area Governments (AMBAG), the Fresno Council of Governments (FCOG), and the San Joaquin Council of Governments (SJCOG) (Chapters 3 and 4).

- We next report the findings from our interviews and focus groups with MPO board members, staff, and advocates engaged with the work of the various MPOs we studied: We spoke with 32 people in all. Our emphasis in these interviews and focus groups was on the *realpolitik* of planning, project evaluation, and programming processes at the seven MPOs to better understand whether and to what extent project evaluation, particularly with regard to impacts on climate change and equity, influences project programming decisions (Chapter 5).

- Finally, we conclude with an overview of our findings and recommendations from this research (Chapter 6).

[1] Every county in California has a designated RTPA, 18 of which in areas over 200,000 in population are also MPOs. Some multi-county MPOs consist of counties that are designated CTCs, or that retain their RTPA status.

Overview of MPO Planning and Programming in California (Chapter 2)

California MPOs regularly produce two key documents to meet their responsibilities under federal and state law. The first is the long-range (20 year plus) Regional Transportation Plan (RTP). California Senate Bill (SB) 375 requires each MPO to adopt a sustainable communities strategy (SCS) as part of its RTP to achieve certain goals for reducing greenhouse gas (GHG) emissions from automobiles and light trucks in their region. The combined Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) includes many anticipated transportation projects and programs that may be implemented over a multi-decade time horizon. In addition, some individual County Transportation Commissions and county-level Regional Transportation Planning Agencies (RTPAs) also prepare their own RTPs, which are incorporated into their MPO's RTP.

The second document is a nearer-term Federal Transportation Improvement Program (FTIP), which lists projects to be funded over the next four or five years. These plans and programs reflect both the dictates of various federal, state, and county transportation funding programs, and the desires of local governments and their elected officials, transportation providers, business and community leaders, and various advocacy organizations. Again, some local CTCs and RTPAs also prepare short-range programming documents that are consolidated into the FTIP.

In some cases, these planning and programming efforts are subject to rigorous evaluations, including testing alternatives against a series of desired or possible future conditions, a process known as Blueprint planning or Scenario planning. Often, though, particularly at smaller MPOs that lack significant staff and planning resources, these evaluations may be far less elaborate and/or scantly documented. All MPOs are required to evaluate the effects of plans and projects, such as their contributions to reducing congestion or lowering emissions levels. However, how this process of project evaluation and selection unfolds at some MPOs can be opaque to outsiders and non-experts and as such may be fairly characterized as a "black box" process lacking transparency and clearly spelled-out evaluation criteria.

In soliciting this research, CARB staff expressed concerns that current MPO planning lacks sufficient attention to climate change and equity concerns. California is failing to meet its stated goals for reducing GHG emissions from transportation, according to findings in CARB's 2018 and 2022 Progress Reports on California's Sustainable Communities and Climate Protection Act. Transportation projects continue to be proposed and funded that increase road capacity, which is usually associated with an increasing number of vehicle miles of travel (VMT). Such projects often impose disproportionate effects on low-income and minority populations in the form of added noise, vehicle crashes, and vehicle emissions, all of which negatively affect public health and quality of life.

California is also facing a serious housing crisis, whereby housing production has fallen far short of demand causing home prices and rents to spiral upward. Because the supply and location of housing importantly affect travel demand, the transportation decisions by MPOs affect and are affected by land use policy and planning decisions made mostly by local governments. While land use forecasts and planning are central to the transportation evaluations conducted by MPOs, their influence over land use

planning and decision making is far less direct than over transportation planning and investments, which can result in a mismatch between land use and transportation planning and programming.

This lack of regional coordination between housing, land use, and transportation policy is perhaps an inevitable outcome of the politics of transportation finance in the United States. Project sponsors seek transportation project funding from myriad federal, state, and, increasingly, local funding programs. Each of these programs can have varied goals and requirements—for example, to accelerate bridge maintenance and replacement, promote active transportation, expand public transit service, or reduce congestion; sponsors may simply tailor projects to respond to funding opportunities whose objectives do not include housing production, GHG reductions, or increased equity. These funding programs' objectives often do not even align with one another (Taylor, 2000), a situation that has persisted for decades. MPO boards and staff can feel constrained by these realities. The purpose of this report, then, is to provide insight into the obstacles to incorporating climate and equity concerns into MPOs' transportation planning and programming processes.

Federal and State Roles in the Work of MPOs

The U.S. Department of Transportation (USDOT) is responsible for distributing federal transportation funds from the federal fuel excise taxes collected in the Highway Trust Fund (HTF) along with Congressional supplemental appropriations to the states. Federal funds are first apportioned to individual state departments of transportation (DOTs) by formula, as well as other factors, but no state receives less than 95 cents on the dollar it collects in federal fuel taxes sent to the HTF. States then allocate these funds through MPOs in metropolitan areas or directly to local governments and agencies outside of metro areas, along with any state funds derived from state fuel taxes and other revenues.

To receive federal transportation dollars, each urban area over 50,000 in population must have a state-designated MPO that is responsible for preparing a long-term Metropolitan Transportation Plan (MTP) that covers a minimum 20-year planning period, and a short-term Transportation Improvement Program, which lists planned transportation projects over the following four years. In California, these federal requirements are satisfied by the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the FTIP.

The RTP/SCS sets forth policies, programs, and projects to achieve regional transportation goals over the planning horizon. The RTP/SCS must be "fiscally constrained," meaning that full funding is reasonably anticipated to be available within the time period contemplated for completion of the projects in the plan. Additionally, RTP/SCSs must meet federal air quality requirements in the Clean Air Act and its amendments. Regions unable to demonstrate air quality conformity may be sanctioned, including loss of federal transportation funds. The USDOT determines whether MPOs meet these two requirements before authorizing any funding allocations.

The California Air Resources Board (CARB), working in consultation with the MPOs, provides each region with GHG emission reduction targets for 2020 and 2035. If the SCS is unable to demonstrate that the plan will achieve the GHG emission reduction targets, the MPO must prepare an alternative planning strategy (APS) showing how the targets would be achieved through alternative development patterns,

infrastructure, or additional transportation measures or policies. CARB reviews each SCS and APS to determine whether the strategies, if implemented, would achieve the GHG emission reduction targets set by CARB. While the SCS focuses on developing coordinated land use, housing, and transportation policies, the SCS does not regulate the use of land or establish city or county land use policies, including those set out in local general plans, which do not have to be consistent with the RTP/SCS, or an APS.

The SCS must (i) identify the general location of uses, residential densities, and building intensities within the region; (ii) identify areas within the region sufficient to house all the population, including all economic segments of the population over the course of the RTP planning period taking into account net migration, population growth, household formation, and employment growth; (iii) identify areas within the region sufficient to house the state-mandated eight-year Regional Housing Need Allocation (RHNA) housing need projection; and (iv) identify a transportation network to serve the transportation needs of the region. The MPO must also establish in the SCS a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce GHG emissions from automobiles and light trucks sufficiently to achieve CARB's emission reduction targets.

The FTIP incrementally implements the RTP/SCS by directing the expenditure of available funds from all sources. It contains a short list of proposed projects drawn from the RTP/SCS to be funded over a four-year period. Projects must be listed in the FTIP to be eligible to receive federal and state funding. The FTIP must also be fiscally constrained, meaning that each project has sufficient funding commitments to be completed during the four-year period. Accordingly, this study looked specifically at how seven California MPOs evaluate and select projects to be included in the RTP/SCS and how selected projects are then advanced to the FTIP to be implemented.

MPOs must also consider the impact of the RTP/SCS and FTIP on protected populations. Title VI of the Civil Rights Act of 1964 (49 CFR part 21) prohibits transportation agencies from engaging in intentional discrimination on the basis of race, color, or national origin. These rights have been expanded to include sex, age, and disability through newer federal legislation. In addition, federal regulations[2] adopted under Title VI prohibit policies and practices that are discriminatory, regardless of intent (49 CFR § 21.5). In addition to protecting civil rights, MPOs must also seek to advance social equity. Pursuant to presidential Executive Order 12898 (February 1994), the USDOT has adopted regulations directing MPOs to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority and low-income populations. Accordingly, MPOs must coordinate closely with members of disadvantaged and low-income communities on RTP/SCS development. Social equity factors relevant to plan development include housing and transportation affordability, access to transportation, displacement and gentrification, and the jobs/housing fit.

Further, each MPO must adopt a public participation plan for developing the RTP/SCS that includes outreach efforts to encourage the active participation of affordable housing advocates, transportation

[2] 35 FR 10080, June 18, 1970, as amended by Amdt. 72–2, 38 FR 17997, July 5, 1973; 68 FR 51389, Aug. 26, 2003.

advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interests, and homeowner associations. The plans typically incorporate public workshops and public hearings.

The MPO Planning and Programming Process

Federal law and California state laws and policies have required MPO planning to simultaneously address an expanding number of concerns, including defining regional investment needs, safeguarding air quality, measuring transportation system performance, including diverse publics in decision making, attending to fiscal constraints, facilitating GHG reductions, encouraging more sustainable regional development patterns, ensuring transportation system benefits and burdens are shared fairly across the population, and more. Additionally, for some key concerns, MPOs must increasingly account for crucial intersections across planning dimensions; for example, when planning to achieve SB 375's GHG reduction targets, many MPOs must also consider the dynamics and connections between housing supply and affordability, access to jobs and other essential destinations, VMT, and equity; their task a complex one.

The degree to which an MPO can adequately address these myriad demands is reflected in the two central products for which they are responsible: the long-range RTP and the nearer-term FTIP. Key insights from the research literature illuminate how these regional bodies function and how they evaluate, prioritize, and program transportation projects for these two central planning products.

MPOs Are Diverse Organizations with Uneven Capacity

Recent urban planning and transportation research highlights how much MPOs across the nation—and even within a single state, such as California—can vary from one to the next. Planning areas served by MPOs can range from small, isolated urban areas with populations just over 50,000 to large metro areas of five million or more. The economy may be shrinking in one MPO region but rapidly expanding in another. One MPO may need to coordinate with multiple transit operators within its boundaries, while another MPO region may have minimal to no transit service (Sciara, 2017; Sciara et al., 2021). As organizations, MPOs can have different governance structures and organizational capacities. In California, for instance, most MPOs are hosted by a regional council or association of governments, while some are stand-alone entities, like the Bay Area MTC. Elsewhere, MPOs may also be hosted by the state DOT or a city or county government. MPO voting boards are typically composed of elected officials, but some may grant seats to transit operators (Sciara et al., 2021). MPOs also vary in the size and capacities of their technical staff. A small MPO may have two or three generalist employees and rely on state or local agencies for technical assistance, while larger MPOs can have staffs that exceed 100 professionals who are responsible for more specialized technical or substantive competencies ranging from air quality modeling to analyses of the travel patterns and needs of disadvantaged travelers (Kramer et al., 2017).

Their varied and evolving geographic and governance contexts mean that MPOs can have different regional transportation priorities, processes to plan and evaluate projects, and resulting planning products. Smaller MPOs with limited staffing capacity can be challenged to produce the same level of equity analysis as larger organizations, which can lead to equity being vaguely defined (Krapp et al.,

2021). Meanwhile, MPOs with larger staffs may be able to take on much more, including developing their own incentive grant programs (Sciara & Handy, 2013), or preparing applications for additional federal discretionary grants, or aiding member local governments and agencies with their own funding applications (Lowe & Sciara, 2018)

Changing regional contexts also contribute to variation in how MPOs define and address priorities, with implications for equity planning. For example, while public transit remains a core sustainable mobility strategy in urban areas, particularly among low-income travelers, in regions where populations and employment are increasingly ex-urban, MPOs may need to reconsider whether traditional urban core transit investment remains a viable strategy for improving accessibility or mitigating air pollution exposure for low income and marginalized communities in outlying areas. In the California context of extreme housing need, gentrification of urban cores and sub- and ex-urbanization of poverty require some MPOs to address equity in new ways (Heyer et al., 2020).

MPO Project Selection and Prioritization: Rational Technical and Political Dimensions

The criteria MPOs use to select and prioritize transportation projects have expanded over time, reflecting that transportation systems must increasingly serve multiple and often competing objectives. The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) served to shift decision criteria from focusing on roadway performance, automobile levels of service, and congestion relief to more multi-dimensional and multimodal criteria, including health (Deniali et al., 2022) and equity (Krapp et al., 2021). Still, because the transportation funding around which MPOs plan is largely siloed, i.e. usable only for specific modes, cross-modal project selection and prioritization presents particular complexity for MPOs (Gunasekera & Hirshman, 2014).

Best practices discussed in the literature include aligning selection criteria with long-term transportation goals or emphasizing user impacts in scoring (Broniewicz & Ogrodnik, 2020; Meyer, 2016; Sperling & Ross, 2018). Yet, no single approach is ‘best’, as agency goals and operating conditions vary greatly, so the process should be flexible and appropriate to those conditions (Gunasekera & Hirshman, 2014, p. 64).

Moreover, project decision-making within MPOs is inherently political. These regional bodies do not depend exclusively, or even largely, on rational-technical project assessments or model results to select projects; they rely primarily on governing bodies composed primarily of locally elected officials to make decisions following a “process-based approach.” Close study of MPO programming decisions reveals that localism is a significant force, leading decision makers to favor parochial projects popular with constituents, even where those projects provide few regional benefits (Gerber & Gibson, 2009). The pull of projects approved in county-based local-option sales tax measures also tends toward local and often auto-focused interests (Brown et al., 2020).

Technical Shortcomings for Assessing Equity in Prioritization

Just as some researchers have raised concerns with the political dynamics evident in MPO project selection, others point to concerns with MPO reliance on transportation demand models and technical

inputs in decision making. For example, scholars have identified weaknesses in MPO equity assessments to inform regional programming decisions. Methodological shortcomings, including definitional ambiguity and inconsistency as well as the lack of standard analytical guidance, mean that MPO equity analyses often lack rigor and consistency (Karner & Niemeier, 2013). A review of MPO practice in the 40 largest U.S. metropolitan areas found that over half of the MPOs use equity as a criterion for FTIP project selection in some way; however, the equity metrics deployed were often simplistic, such as assessing whether transportation investments were located near vulnerable communities (Krapp et al., 2021). Though existing technical analyses may seek to "capture the needs of marginalized communities…[the] data and information privileged in these techniques may obscure the unique needs of communities" (Nostikasari & Casey, 2020, p. 675).

MPO Experiences with Project Selection and Prioritization

Studies show that planning and programming commitments from MPOs in California, except the San Francisco Bay Area MPO, have tended to favor auto infrastructure. Further, investments programmed for FTIP funding have tended to be less multimodal than those planned for in the RTP. In the largest MPOs, shares of funding for auto infrastructure were larger in the near-term FTIP than in the long-term RTP/SCS, while shares of funding for public transit in the FTIP were smaller than had been envisioned in the RTP (Barbour et al., 2021, pp. 69–70).

Finally, concerns have also been raised in the literature that local option sales tax-funded projects threaten MPO efforts under SB 375 to reduce regional GHG emissions. However, a recent study of 45 local option sales tax (LOST) measures passed from 1976 to 2022 in California's four largest regions suggests local option tax spending overall has grown more favorable to the goals of SB 375; planned LOST expenditures have shifted "away from VMT-inducing project spending over time, and towards VMT-neutral or VMT-negative spending instead" (Barbour & Thoron, 2023, p. 22). Nonetheless, for specific individual regions—the Bay Area and San Diego—local option transportation spending is "substantially…less sustainability-oriented (iii)."

Documented Project Selection Processes and Methods (Chapters 3 and 4)

The seven MPOs we examined varied widely in how they select projects for their regional plans, how they evaluate plan and project performance, how they approach climate and equity concerns, and how they select projects to fund in their upcoming programming cycle.

California MPOs' Project Scoring and Evaluation Processes

While all MPOs evaluate and rank projects for inclusion in their RTP/SCS and/or FTIP, these evaluations vary substantially in extent, consistency, rigor, and transparency. Many use scoring rubrics, which are a set of criteria for grading projects along several dimensions. Overall, we noted a positive relationship between the quality of assessment methodology, the role it plays in the planning and project selection processes, and the extent to which climate and equity are integrated into MPO plans, programs, and

projects. In addition, most MPOs also gather extensive performance monitoring data, which could be deployed more fully for project evaluation purposes.

Project Selection at the Four Largest MPOs

Metropolitan Transportation Commission (MTC)

The San Francisco Bay Area MTC has the most comprehensive and transparent RTP/SCS programming process among the MPOs reviewed in this study. MTC engages in scenario planning as part of its Horizon Initiative in preparing its draft RTP/SCS. Scenario planning allows planners to assess the performance of a project or group of projects against different possible futures with bundles of varied assumptions. In contrast, most California MPOs use the single-forecast predict-and-act planning approach, which assesses a project or plan's performance against a single set of assumptions about the future. Scenario planning is better suited to addressing multiple possible futures each with one or more substantial uncertainties. MPOs use scenario planning to make smart decisions given the inherent uncertainty of forecasts, which allow them to vary assumptions about factors such as the impacts of climate change, shifts in federal policy/funding, and technological advancements.

MTC evaluates its policies and proposed projects against three future scenarios to determine their cost-effectiveness, equity impacts, and alignment with the commission's Guiding Principles (Affordable, Connected, Diverse, Healthy, and Vibrant) using three quantitative measures: Benefit-Cost Ratio, Equity Score (which examines the distribution of benefits and disbenefits by income group), and Guiding Principles score (Metropolitan Transportation Commission, 2019).

The results of MTC's Project Performance Assessment are not used to select projects but are shared with project sponsors, who are invited to submit their board-approved commitment letters detailing specific ways in which the sponsor can address performance deficiencies. The Project Performance Assessment findings and sponsor commitments are used in trade-off discussions over regional funding for a selection of large transportation investments. After being evaluated, projects are placed on the RTP/SCS project list.

MTC's use of scenario planning in project performance assessment stands out; the inclusion of an undesirable transportation, development, and climate scenario as one possible "future" is an especially effective use of scenario planning in their Horizon Initiative to gauge potential impacts in plausible, albeit undesirable, futures. Also notable is their broadly comprehensible and publicly-accessible *Guide to the TIP*, which informs and encourages public participation (Metropolitan Transportation Commission, 2021b). In addition, the agency has a long history with project performance assessment and has dedicated substantial financial resources to it. MTC also engages in performance monitoring through its Vital Signs initiative, which started in 2015. This interactive online portal incorporates a broad range of regional issues, including transportation, land and people, the economy, the environment, and social equity that could provide a rich data source for evaluating future projects. Finally, it is evident from the content of the commission's planning documents that MTC's Equity Platform[3] directly informs the Horizon Initiative, the RTP/SCS, and the FTIP.

[3] Adopted in January 2023, the MTC Equity Platform aims to reverse disparities in access and dismantle systemic exclusion.

MTC's Benefit-Cost Assessment

MTC's Project Performance Assessment Process is a life-cycle benefit-cost assessment tool. A benefit-cost assessment puts both benefits and costs in dollar terms and results in a ratio between the two that allows projects and programs of different types, scales, costs, and time horizons to be compared in an apples-to-apples manner.

The life-cycle cost assessment includes not only the initial cost of capital but also costs for operations and maintenance, rehabilitation or replacement, and a residual value (which may be negative for capital projects that must be removed at end of life), all of which are discounted into common year terms.

Among the seven MPOs we examined, the MTC's benefit-cost assessment is by far the most comprehensive, and includes quality of life, health, economic, and environmental benefits not included in Caltrans' Cal B/C tool (described further in Chapter 4). Additionally, MTC's evaluation includes a more comprehensive and advanced assessment of accessibility than that used by Caltrans.

MTC's methodology assesses travel time reliability with an economic value placed by a driver (wages) or shipper (wages and opportunity costs) on reliable travel times, which often means building in extra time for a trip to assure on-time arrivals or deliveries. Making these valuation assumptions explicit, as well as their source or calculation methodology, illuminates the priorities and tradeoffs that are often hidden in the scoring rubrics.

MTC's Extra Mile: Scenario Assessment and Guiding Principles Alignment

While MTC's benefit-cost assessment is the most advanced and comprehensive we reviewed, two additional features of its project-level assessment make it the most robust as well. The first is the scenario assessment, which is a categorical assessment of a project's benefit-cost ratio and equity score under three future scenarios. The second is an assessment of whether the project aligns with both MTC's Guiding Principles (supports/does not support) and equity values.

Such scenario-based assessments illuminate how projects will perform under varying reasonable assumptions about future conditions outside of the MPO's control, like changes in federal policy, technological advancements, and regional and global market conditions. The alignment assessment can help to identify no-regrets strategies that support plan goals.

Sacramento Area Council of Governments (SACOG)

Like MTC, SACOG also employs scenario planning as part of its metropolitan planning process to identify a preferred land use scenario, but it does not evaluate transportation projects against these scenarios. Instead, SACOG has a committee review projects to be included in the plan based on whether the proposed project is consistent with its 2020 MTP/SCS with respect to financial constraint and air quality conformity.[4]

[4] SACOG refers to its RTP as a Metropolitan Transportation Plan. It also refers to its FTIP as a Metropolitan Transportation Improvement Program.

While SACOG does not subject individual projects to scenario-based assessments that would explore a project's sensitivity to future uncertainties, it is one of two large California MPOs to conduct project performance assessments against an assumed future as part of its planning and programming process. SACOG's performance-based project assessment is new; it is a map-based assessment of projects that can be submitted to SACOG's Metropolitan Transportation Improvement Program (MTIP), which is prepared in cooperation with the Placer County Transportation Planning Agency (PCTPA) and the El Dorado County Transportation Commission (EDCTC), which are the Regional Transportation Planning Agencies (RTPAs) for Placer and El Dorado counties respectively.

SACOG's project performance assessment tool produces evaluations for indicators such as *reduce VMT/capita*, *increase multi-modal travel*, *economic prosperity* (jobs, schools, agriculture) *improve freight movement*, and *socioeconomic equity* that are not typically part of project scoring rubrics. In addition, SACOG uses more advanced methods and data than many other MPOs, CTCs, and RTPAs in producing many of its project outcome indicators. This approach provides greater transparency into a project's forecasted effects with respect to different indicators, which is useful when decision-makers disagree about values or priorities. However, the voluminous disaggregated metrics produced by project-level metrics-based assessments generate so much information that it may be a challenge for staff, stakeholders, and especially time-constrained decision-makers to fully grasp.

Finally, we note that SACOG is the only one of the four large MPOs that includes constituent RTPAs, which produce their own RTPs. Integrating individual RTPs into SACOG's MTP/SCS limits the MPO's authority over project selection processes and may create additional challenges not encountered by other MPOs (AMBAG also includes county RTPAs and may face similar issues).

San Diego Association of Governments (SANDAG)

SANDAG does not routinely conduct scenario planning but does consider project readiness, project connectivity, evaluation criteria, and revenues when selecting projects for its RTP/SCS. The Board of Directors does not appear to engage in project-level assessments or select individual projects. Nor does SANDAG staff conduct project-level climate or equity assessments prior to project selection. However, the agency's Regional Social Equity Planning Framework identifies the need for SANDAG to develop criteria for project prioritization that advances equitable and safe transportation.

Projects funded by federal Congestion Management and Air Quality (CMAQ) and Surface Transportation Block Grant (STBG) programs are screened for eligibility under each program's respective statutory provisions. CMAQ projects are ranked based on a combination of cost-effectiveness and assigned points for emissions reductions, reducing single-occupant vehicle (SOV) travel, reducing delay, social justice, and safety.

SANDAG performs a Social Equity Analysis of specific projects in the FTIP that reviews the geographic location of project expenditures to identify the proportion allotted to Disadvantaged Communities as identified by the California Environmental Protection Agency's (CalEPA's) California Communities Environmental Health Screening Tool: CalEnviroScreen. SANDAG also now solicits project information from sponsors on whether they performed a Title VI analysis and whether the project benefits low-income households, people with disabilities, and people with limited English proficiency.

Compared to MTC and SACOG, SANDAG's incorporation of climate and equity considerations into its planning and project selection processes has both strengths and weaknesses. SANDAG's promising Regional Social Equity Planning Framework includes contracting with local community-based organizations to engage in the RTP/SCS process. While the agency does not assess the equity performance of individual projects, its Regional Social Equity Planning Framework identifies the need for future project-level social equity analyses. Like many other MPOs, SANDAG uses regional performance monitoring indicators and produces regular monitoring reports that are not systematically incorporated into project assessments.

Southern California Association of Governments (SCAG)

The SCAG region is home to nearly one in every two Californians. The region is not only heavily populated, but physically enormous as well. So, perhaps by necessity SCAG almost entirely delegates procedures for project selection to its six constituent County Transportation Commissions. Each commission prepares its own Countywide Transportation Plan.

SCAG conducts scenario planning, but not to the same extent as MTC or SACOG. It has developed a scenario planning model for use in the SCAG RTP/SCS planning process, primarily to compare project and no-project alternatives. Rather than developing various assumptions about future conditions that affect transportation system performance, as other MPOs including MTC and FCOG have done, SCAG instead uses scenario planning to assess three project packages: 1) base year (today's transportation system), 2) baseline (implementation of previous RTP and FTIPs), and 3) plan (implementation of 2020 RTP/SCS).

While these more limited scenario assessments may be useful in communicating the impacts of the plan and for performing required environmental assessments, they do not assess how individual projects, or packages of projects, will likely perform under future conditions that may differ from the project assumptions (such as the cost of transportation, deployment of automated vehicles, climate adaptation, etc.), which could significantly affect travel behavior and transportation outcomes.

SCAG has formal agreements with each of the six CTCs within its region with respect to approving transportation projects utilizing federal, state highway, and transit funds in each county. The commissions are also responsible for transportation programming and short-range planning. The commissions develop their respective Regional Transportation Improvement Programs (RTIPs) based on guidelines (prepared by SCAG in consultation with the CTCs), SCAG's Transportation Conformity Working Group (TCWG), and federal and state agencies staff, which are then approved by SCAG's Regional Council.

SCAG had previously delegated its six CTCs the authority for CMAQ and STBG project selection. The CTCs conducted project performance assessments in advance of submitting a project for the FTIP. The FHWA has directed SCAG to review Caltrans' updated CMAQ and STBG administrative policies and incorporate any changes necessary to comply with federal regulations. This may change the project selection process for future SCAG FTIPs, which will include use of federally required performance measures in project selection and perhaps a competitive regional process for project selection.

SCAG uses an additional set of performance measures for on-going regional monitoring efforts. SCAG intends to assess these measures on an ongoing basis during plan implementation.

The Three Smaller MPOs

Fresno Council of Governments (FCOG)

FCOG employs a novel scenario planning approach to assess its RTP/SCS's performance for various futures with varied climate, technology, and regulatory scenarios. Each scenario is measured against performance indicators related to public health, clean air, access to destinations, access to jobs, services in disadvantaged communities, protecting agricultural land, bike/walk friendliness, roadway quality, climate change, VMT, and achievability.

FCOG uses different scoring and evaluation criteria 1) to rank projects on the RTP/SCS's fiscally-constrained project list; 2) for project funding through the various programs the agency administers (CMAQ, STBG, and Active Transportation Plan (ATP)); and 3) as the primary tools to prioritize projects that align with the RTP/SCS's policy goals and objectives.

Projects are selected for the FTIP based on selection and scoring criteria adopted by FCOG's Policy Board. FCOG also maintains a list of contingency projects ranked in priority order based on the project's evaluation score. However, project scores do not appear in the FTIP project list.

Two FCOG processes introduce equity and inclusion to the RTP/SCS process. The first is a mini-grant program, which funds community organizations to engage their constituencies and collect feedback as part of the planning process. The second is an Environmental Justice & Equity Analysis, which assures conformity to federal environmental justice principles, policies, and regulations, including Title VI.

San Joaquin Council of Governments (SJCOG)

SJCOG's latest scenario planning exercise developed and tested four groups of transportation planning strategies against three future scenarios. SJCOG tested each of these four strategy groups in isolation based on how well they performed in each of the three futures, which produced strategy scores for dozens of indicators for each future. The performance metrics related to climate and equity were *pedestrian and bike network enhancements* and *transit investment in San Joaquin County vis-a-vis neighboring counties*. SJCOG included strategies that scored high in multiple futures in their final proposed list of strategies.

Two notable features of the SJCOG RTP/SCS process are that they now include health equity metrics and that they have engaged with multiple community-based organizations as part of developing their plan. SJCOG contracted with five organizations to assist in reaching a diverse set of regional constituents. Those who participated in the regional planning meetings organized by these community organizations expressed the need for job and economic opportunities, affordable housing, food security, and raised concerns over being left behind by expensive vehicle electrification and automation programs.

Association of Monterey Bay Area Governments (AMBAG)

AMBAG's structure differs from that of other MPOs we studied. It has three constituent RTPAs that each produce separate RTPs and individual FTIPs that roll-up into a single MTIP. As such, project assessment and selection processes are split across separate decision-making bodies. AMBAG and the RTPAs must work together to ensure that submitted projects are consistent with regional land use plans and the requirements of SB 375. While AMBAG claims that the agency is involved at each step of the RTP process, this multi-agency structure can make it difficult for members of the public or stakeholder groups to understand proposed project and program information and effectively comment on them – particularly those that affect inter-county trips.

AMBAG is one of several MPOs that assess the location of expenditures as an equity metric. For the development of the 2045 MTP/SCS, AMBAG assessed the geographic distribution of transportation investments in low income and minority areas compared to other areas of the region. The MTP/SCS states that the MTP's investment plan is equitable because the proportion of expenditures in low-income areas or areas with people of color are no less than investments in other neighborhoods. However, the type of project expenditures is important, transportation projects both convey benefits to and impose costs on communities. For example, AMBAG's logic could indicate that a highway expansion through a low-income area benefits that area because project expenditures are occurring there.

Addressing Equity and Climate Change

MTC and SACOG are the only two MPOs in our sample that use project performance assessment tools to evaluate project proposals. Both agencies address climate and equity concerns differently in their project performance assessment. MTC addresses climate concerns directly in the benefit-cost analysis by estimating the change in greenhouse gas emissions resulting from a project, whereas SACOG addresses climate concerns indirectly by emphasizing performance outcomes such as reducing VMT, increasing multi-modal travel, and promoting compact and mixed-use development. MTC examines the equity impacts of all projects as a secondary component of the overall performance assessment, whereas SACOG includes socioeconomic equity as a cross-cutting performance outcome and allows project sponsors to choose which performance outcomes they wish to be evaluated on, meaning a project's equity impacts may not be evaluated if the sponsor chooses not to include this performance measure. While SCAG does not assess the performance of individual projects, they do use quantitative performance measures to evaluate how well the full package of RTP projects may achieve the regional goals established in the plan, including environmental quality and environmental justice criteria. Individual project selection is delegated to SCAG's constituent County Transportation Commissions that employ varying criteria to score the projects, in some cases incorporating climate and equity concerns.

The other MPOs and RTPAs we surveyed do incorporate climate change and equity considerations in their regional plans, if not directly in project selection. SANDAG performs a social equity assessment of specific projects to determine how the funding is distributed among Disadvantaged Communities and recognizes the need to perform more inclusive project level analyses in the future. FCOG and SACOG both incorporate climate and equity in their scenario planning, while the smallest agency we surveyed, AMBAG, analyzes the social distribution of its transportation expenditures. The MPOs, in particular SANDAG, make efforts to incorporate a wide range of outside voices in their planning processes.

What MPO Staff, Boards, and Advocates Say about Project Selection (Chapter 5)

The research team spoke with 32 different people involved with the seven (4 large and 3 smaller) MPOs examined in this study. These included public officials and senior staff involved in a variety of roles in the RTP/FTIP planning and programming processes through both one-on-one interviews and focus group discussions. We also convened two focus group discussions with community advocates engaged with MPOs as part of their organizational work.

Participant Perspectives on the SB 375 Goal Post

Climate Objectives are Understood more Consistently than Equity Objectives

Many of those with whom we spoke noted that equity is not as well understood or defined as climate objectives. Participants discussed actions to address climate change in similar terms, emphasizing the need to reduce GHG emissions or VMT and suggesting that progress was quantifiable. In contrast, our conversations with MPO planning participants—from staff to board members to advocates—revealed varying understandings and approaches to equity, both across regions and sometimes within them.

State definitions of climate and equity, as revealed in SB 375 and key policy documents, anchor some of the patterns observed in focus groups and interviews. Participants' comments regarding climate goals appear to reflect the more concrete framework for GHG emissions reduction laid out by SB 375 and associated state transportation documents. Conversely, state policies and plans frame transportation equity in comparatively broader terms, which was mirrored somewhat in participants' own wide-ranging framings of equity.

Participant Engagement with Equity Varies

Some participants perceived MPO staff as being more cognizant of and more engaged than board members when it came to equity issues. Meanwhile, we heard from many MPO staff that they looked first to their MPO board to establish general policy direction for equity. For example, staff at a larger MPO described how board policy had been important for emphasizing equity as a foundation-setting principle for the regional planning process, which opened doors to further discussion on what equity means for their region.

MPO board members communicated myriad perspectives on how to define equity, particularly between urban and rural areas. One official noted that a one-size-fits-all planning model tends to be big metro-focused and fails in rural areas, which typically have little transit service and depend heavily on roads. Overall, board members tend to communicate their equity priorities in general terms, leaving considerable room for debate over what equity means for their region.

Representatives of the advocacy community saw a clear nexus between climate and equity goals, perhaps owing at least in part to the focus of their organizations, and then discussed specific transportation actions—like improvements to the pedestrian environment or transit—that could advance both goals. Yet, they often criticized MPOs' typical approach to pursuing equity and climate goals as an either/or proposition rather than as an opportunity to advance both goals concurrently.

Equity Efforts Require Engagement

A common theme among advocates was a desire for MPOs to increase the time and resources allocated to equity work and community engagement. Advocates asserted that effective community engagement would require building on current practices to invest in relationship and trust building with community members. Suggestions included providing language-specific outreach to non-English speakers, compensating community members for their expertise and time, and creating grant opportunities or funding mechanisms for community organizations to facilitate targeted outreach for regional transportation planning. Such approaches could help MPOs to engage community members they typically do not reach but would also require adjustments to the public participation timeline. Advocates suggested that changing goals to include equity requires understanding the time and expertise needed to do that work.

A few MPOs have pursued some of these suggestions. One MPO uses a "Call for Partners" to recruit and pay members of community-based organizations (CBOs) for their involvement in RTP development; community organization members serve on an MPO working group that facilitates outreach with historically underserved communities. Another MPO representative highlighted a new program to fund planning processes in underserved, historically marginalized BIPOC[5] communities. Despite enthusiasm for such initiatives, rules that structure MPO funding and procurement may present a hurdle to their execution. As a result, some MPOs have requested that state agencies and the legislature explore policy changes to make paying nonprofit organizations easier.

Equity is Understood as Context-Dependent and Achieved through Community Processes

Many staff and advocates discussed the need to consider equity both as an approach to the planning process and as a goal to be achieved. An equity approach should be defined specifically for different local contexts through outreach efforts and engagement with community members and should extend beyond the familiar categories of low-income and minority people. Some advocates wanted to see more aggressive action to utilize community feedback in decision making and to elevate community members who center climate and equity in their work to positions of power.

Context-sensitive approaches to equity should also, according to some MPO staff and board members, accommodate highway and infrastructure investments that are important for local economic development, workforce opportunities, and job access in economically disadvantaged communities. Additionally, some called for housing expansion in areas that are rich in social and economic opportunities, even if such areas are more car oriented. Though they acknowledged conflicts with state climate goals, multiple MPO board and staff members noted that projects that appear unfavorable from a GHG perspective may be important for the local economy in struggling areas and for housing production throughout the state.

[5] Black, Indigenous, and People of Color (BIPOC).

Structural Challenges in the MPO Environment

In interviews and focus groups, participants discussed how specific MPO limitations, inherent to the organizations themselves and the planning processes they conduct, dampen regional progress on climate and equity. Observations of MPO board members, staff, and community advocates thus reinforced some of the structural challenges to MPOs documented in the literature.

MPO Board Representation and Voting

The structure of representation and voting power on MPO boards is one such challenge, according to some participants. Some saw rural interests as neglected when boards were dominated by members from urban communities. While others reported that rural interests exerted too much influence when voting power was not proportional to population. Some were keenly aware of the passage of Assembly Bill (AB) 805 in 2017, which enhanced population-weighted voting in San Diego's MPO.

Limits to MPO Authority

Frustration with MPOs' role as advisory bodies that neither exercise land use authority nor implement transportation projects also emerged in our discussions; this limited role constrains MPOs' ability to guide regional growth patterns or influence agency projects in ways that could improve equity or lessen transportation's climate impacts.

Regional-Local Tensions

We also heard that MPOs struggle to balance county-level decisions and priorities on one hand and state and regional expectations for climate and equity on the other. Regional transportation plans often use as significant building blocks the transportation plans and programs developed by county-level agencies, or RTPAs, especially when county programs are backed by voter-approved local-option sales tax measures. Projects in such voter-approved measures' expenditure plans may not match regional priorities, including climate and equity initiatives. Yet, MPOs may still include those projects in the RTP, acknowledging the commitment made to local voters.

MPO board members themselves conveyed their view that tension emerges in their dual role as board members of a regional body and as locally elected officials; these diverging orientations were seen by some as hampering the effectiveness of regional planning processes. Board members expressed the notion that regional priorities around climate and equity often conflicted with the projects desired by the local constituents who elected them to office.

Strengths and Limits of the RTP Development Process

Development of a region's RTP is the key output for MPOs. Through our interviews and focus groups, we gleaned specific insights about RTP development and how state equity and climate goals figure into the plan development process.

Housing Scarcity Casts a Shadow over RTP Planning

The research team heard consistently how housing scarcity and affordability challenges reverberate powerfully from region to region, affecting MPOs' work aimed at state equity and climate goals. Many study informants told us that, despite state goals, housing scarcity and unaffordability—whether in their own or adjacent regions—placed added pressure on their region's transportation system and contributed to rising VMT. Nonetheless, some MPO participants were optimistic that recent attention to siting housing in resource rich areas could open opportunities for addressing equity through combined housing and transportation efforts within the MPO process.

Power of Policies Deserves Attention

Interview and focus group participants attached visible importance to the specific policies set by MPOs for meeting state goals, particularly for reducing GHG emissions. Several of our participants, particularly those affiliated with larger MPOs, told us that such policies were important complements to federal and state requirements. Some participants told us that selecting the "right" *projects* may be less important for achieving GHG reductions than adopting regional *policies* to establish clear parameters to guide regional planning, programming, and project operations.

RTP Development Performs a Gatekeeping Function; FTIP Development is More Procedural

The RTP development process is the key gatekeeper for access to future investment funding. In general, assessment and deliberation happen more through the RTP process than through the FTIP. We observed that participants discussed FTIP programming and adoption in more administrative or procedural terms, as advancing projects for which funding has been assembled and that are ready to go.

The RTP's gatekeeping function—and potential progress toward equity and climate goals—can be diminished when the RTP process too readily accommodates prior commitments and/or local sales tax measure projects, without examining whether removing or altering them would advance climate and equity goals.

Overall Findings and Recommendations (Chapter 6)

All seven MPOs reviewed for this study are incorporating climate and equity considerations into their goals and objectives, planning processes, and assessment methods. However, the extent of this incorporation varies substantially across the MPOs and, for most of them, across their various funding programs. In particular, evaluation rubrics, scoring, and ranking of projects for inclusion in RTP/SCSs and FTIPs vary dramatically across MPOs. These range from comprehensive, formal, rigorous, and transparent benefit/cost, goals achievement, and equity evaluations, to selection processes that are not clearly publicly described or documented. Similarly, some of the MPOs examined perform bottom-up

and top-down evaluation of programs and projects for inclusion in their RTP/SCSs and FTIPs, while others largely delegate project evaluation and scoring to their CTCs or RTPAs.

Project evaluations for emissions and vehicle travel impacts are typically more formal, quantitative, and consistent than are equity evaluations, which is almost certainly due to specific federal and state requirements regarding the former. The MPOs we studied vary considerably more in how they incorporate equity considerations in their work. Several have made notable progress in recent years, particularly with respect to seeking more input from communities and advocacy groups not historically represented in regional planning processes. In addition, some of the MPOs studied are conducting plan-level equity assessments, and a few include equity evaluations in project-level scorecards or assessments.

Focus on the RTP is Instrumental to Climate and Equity Outcomes

Early and rigorous vetting of projects and project amendments using climate and equity criteria during the RTP process is necessary to ensure that future projects eventually programmed in the FTIP for funding and development contribute meaningfully to these goals.

Including a project in the RTP sets the stage for its sponsors to pursue further project development activities (planning, design and redesign, environmental review, identifying funding sources, and so on). Once a project is "ready," including it in the FTIP is often largely procedural. Given this, the FTIP is often just a compilation of projects already analyzed previously for the RTP. Therefore, it is critical that climate and equity considerations be part of the RTP process.

Overall, there is a strong relationship between the quality of assessment methodology, the role it plays in the planning and project selection processes, and the extent to which climate and equity are integrated into MPO plans, programs, and projects. MPOs also gather extensive performance monitoring data from completed projects, which could be much more fully utilized to enhance project evaluations.

Project Scoring

Scoring rubrics are a straightforward and typically a cost-effective means of evaluating projects and useful in cases where MPOs lack data or resources, or where the stakes are low, as for projects that are lower-performing or not expected to significantly affect key climate and equity outcomes. Even for larger, high-impact projects, scoring rubrics can be useful for an initial screening when data availability or analytical resources are more limited.

Most of the MPOs evaluated, as well as their CTCs and RTPAs, employ scoring rubrics to assess and compare projects across a range of possible costs and benefits and they typically transparently report the criteria used and weights applied. AMBAG, FCOG, MTC, SANDAG, and SCAG's CTCs all use scoring rubrics. MTC also uses a supplemental project-level assessment for larger, more consequential projects. The more objective, quantifiable evaluation criteria often draw on commonly available data like traffic volumes, project-specific funding availability, anticipated year of construction, or project components like miles of bike lanes.

These criteria and the weight given to each often vary, sometimes substantially, across funding programs and MPOs. In some cases, objective criteria may include a rudimentary project-level cost-benefit assessment. Subjective criteria are typically assessed by a project's evaluators, who may be composed of MPO staff or committees of community and constituent local government stakeholders, who focus on matters such as whether the project improves accessibility for the disabled, or non-quantitative estimates of impacts to accessibility, GHG emissions, VMT, or criteria air pollutants.

Finally, while there are generally commonalities in the evaluation criteria (which are often dictated by the funding program), the approach to scoring these criteria varies substantially across MPOs, CTCs, and RTPAs. In some cases, the scoring process is clearly defined, such that different reviewers would be likely to produce similar scores. In other cases, while the criteria and weighting might be clearly defined, the scoring of those criteria is largely subjective, or the scoring schema is not clearly described, or both.

The current MPO scoring rubrics have many limitations. Chiefly, they typically rely on a mix of objective and subjective determinations of either weights on individual criteria or limits to the maximum number of points assigned to each criterion. The subjective determinations are often made by a technical working group, sometimes years in advance of RTP project selection and may not include current MPO board members or their priorities. These individual criterion scores are then summed to embed many values and priorities in a single assessment score. Such scoring methods may not adequately capture a project's second-order, longer-term, and cumulative effects, and may be of limited use when decision-makers disagree with one another over the values and priorities at stake (such as perceived tradeoffs between economic development and GHG reductions).

Concluding Recommendations

Based on our research we offer the following observations and recommendations.

For the California Air Resources Board

1. In updating the Sustainable Communities Strategy Evaluation Guidelines:
    a. CARB staff could explore whether CARB has authority to recommend or compel MPOs to use certain best-practice project evaluation methods to guide their transportation investments. This could be the case if an MPO's project selection processes meet the definition of "transportation strategies" so that CARB staff can evaluate their likelihood of reducing VMT or GHG emissions. If so, MPOs that do not implement best practices may fail the "policy analysis" determination component of the SCS evaluation.
    b. If CARB lacks authority to compel the use of best practice project evaluation approaches, CARB could consider requiring MPOs to report on the connection between their project selection processes and their performance monitoring and targets, particularly those pertaining to climate and equity. These reports would include a combination of narrative statements and supporting information from process design and data and would be intended to explain to the public how the MPO considers its performance monitoring and targets as part of its planning and programming processes.
    c. In updating guidance for equity reporting in the SCS evaluation as part of SB 1000 implementation:

i. CARB could consider whether to meaningfully engage communities, direct MPOs to create and publish accessible/educational guidance on RTP/SCS/FTIP processes to help educate community leaders in advance of any required engagement meetings. MTC's Guide to the TIP (Metropolitan Transportation Commission, 2021b) is an outstanding example of a document that elucidates the TIP and educates those unfamiliar with MPO processes. MPOs can report on the effectiveness of this educational approach in working with community-based and advocacy organizations. (Related to MPO Recommendation #4B)

ii. CARB could advise MPOs, in partnering with local community organizations, to educate these organizations on the decision-making and engagement processes relevant to their communities. This may require mini-grants and training programs so that staff of community organizations can take sufficient time to become educated and engaged participants. These trained staff—in understanding both the MPOs processes and objectives and the community needs—could then serve as translators between communities and MPOs to help identify and advance community needs within MPO (or county transportation agency/RTPA) processes.

iii. CARB could consider whether, as part of implementing the California Department of Justice SB 1000's guidance "to promote public facilities" and "promote physical activity," MPOs or project sponsors should be directed to provide priority communities with project-level impact assessments, including changes in access to destinations that may result from a project's completion and operation.

iv. CARB could move its evaluation of equity from a reporting item to a more formal evaluation of MPO equity efforts and progress as part of the state's RTP/SCS determination. CARB could consider having a standard set of equity metrics MPOs should report on to make it clear what equity goals should be consistently considered as part of the development of the RTP/SCS.

2. CARB staff in the Sustainable Transportation and Communities Division could review and follow Caltrans' development and implementation of the Caltrans System Investment Strategy (California Department of Transportation, 2024)—specifically the project-level accessibility assessment tools that use accessibility assessment methods developed by Conveyal.
3. CARB staff could work collaboratively with the California Department of Housing and Community Development to provide MPOs with guidance on the connections among housing and climate, equity, and transportation planning.

For the California Transportation Commission

1. As part of updates to the RTP and STIP Guidelines, the CTC could recommend that Caltrans create data standards so that key project-level performance information that is calculated as part of planning processes (like VMT impact, homes/land taken, etc.) can be shared among governmental agencies. To do this Caltrans could provide for an input standard for internal and

external developers of project-level assessment methodologies. The Commission could then adopt administrative procedures to only accept project-level information that meets the statewide transportation project data standard.

   a. See Appendix B in the full report for possible fields for a statewide transportation project data standard.
   b. A data standard would help to facilitate the development of open-source project-level assessment tools and/or enhance the interoperability of MPOs' internally developed assessment methodologies, so that one MPO can easily adopt methods developed by another so that state, regional, and local agencies, the legislature, NGO stakeholders, and members of the public can better understand proposed projects in their communities. This recommendation would substantially reduce the costs needed to improve the quality of project-level assessment models.
   c. A data standard would also help to limit vendor lock-in that can result from excessive customization of assessment or project tracking tools for non-standard project data schema.

2. In addition to the above data standards, the Commission could recommend that Caltrans create reporting or publishing requirements for project-level characteristics and performance information. Project-level data could be made available through a web-based query tool with file export (e.g., csv or json) or an application programming interface that allows users to query the database directly. This would allow third parties, such as construction firms or advocacy groups, to create views of California's transportation project information. This would likely increase transparency by ensuring that the public and stakeholders have access to high-resolution information on proposed projects.
3. The Commission could consider, as part of the RTP Guidelines, creating guidance for the implementation of scenario planning approaches to assess climate and equity outcomes across varied (both desired and plausible undesired) futures.

   a. Most MPOs examined in this study are doing some form of what they would call scenario planning, but how they perform this work varies widely. Some MPOs consider a scenario to be a certain set of assumptions about the future ("Future Scenarios") and others consider a scenario an array of possible future outcomes, policies, and projects ("Program Scenarios").
   b. Transportation Planning for Uncertain Times: A Practical Guide to Decision Making Under Deep Uncertainty for MPOs (Lempert, Popper, and Hernandez, 2022) provides practical guidance for how MPOs can utilize best practices for scenario planning and could be included in the RTP Guidelines as a Planning Example.

For the California State Legislature

4. When considering future policies that amend the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the Legislature could build in incentives based on empirical evidence rather than the output of forecasting models. Such a policy would positively reinforce an MPO's modeling accuracy by rewarding MPOs that achieve or exceed modeled reductions in the greenhouse gas intensity of travel.

a. One possible policy mechanism would be to allocate Greenhouse Gas Reduction Funds to MPOs based on empirical observations of VMT or GHG emission changes from passenger vehicles and light duty trucks.
b. The Greenhouse Gas Reduction Fund may be a viable source of funds for MPO-administered discretionary funding programs like the Regional Early Action Program, which could have an outsized impact on creating incentives to align MPO actions with state targets – if allocations were based on observed reductions in GHG emissions from transportation.

5. California may need to update Streets and Highways Codes §§ 182.6 and 182.7 based on FHWA Federal Certification Reports that found that the requirements set forth in these sections contradicted federal law and regulations. In doing so, the legislature could consider including the following policies in the law:
    a. Require public reporting of project-level data in a standardized format (Incorporation of Commission Recommendation #1 into law).
    b. Require some projects to be assessed for climate and equity impacts in advance of their inclusion in an RTP or FTIP project list (Incorporation of MPO Recommendation #3 into law).
6. In future amendments to SB 375 or the California Environmental Quality Act, consider specifying that environmental assessments that utilize scenario planning or forecasting of multiple futures will meet the statutory requirements of CEQA.
7. Create a legal framework for compensating organizations or individuals involved in certain community engagement activities when a public agency makes a determination that it is unlikely to receive representative community input through uncompensated outreach processes. Such a framework would allow community members, particularly those from disadvantaged communities, to be compensated to participate in workshops or focus groups.
8. Where MPO board membership and voting structures impede regional progress on climate and equity goals, examine the potential for other remedies and approaches, as was done with the passage of AB 805 in the San Diego region.
9. Consider legislation to give MPOs additional authority to review and set conditions for local option sales tax projects that are likely to increase VMT. Potential conditions could include requiring a VMT mitigation program within the measure or specify a minimum threshold on the percentage of expenditures that are directed at projects that improve accessibility via transit, biking, and walking, and including provisions for regional land use coordination (through housing element certification) as a condition of accepting any city-dedicated funding streams (local return funds) specified within the measures.
10. Authorize the Department of Transportation to collect data and track a small set of key performance measures on California's environment, transportation, and equity goals for all MPOs. This would allow the state to better track performance in its metropolitan areas toward meeting state goals and would permit a common base of comparison across metro areas.

For Metropolitan Planning Organizations

1. For those MPOs without the current capacity to do so, develop capacity to conduct project-level performance assessments.
    a. Devote resources in future Overall Work Programs to adequately fund development of data and tools for conducting project-level performance assessments.
    b. For some MPOs, this would require an increase in project-level data fidelity (see Commission recommendation #1 on project-level data).
    c. MPOs may initially focus performance assessments on big-budget projects or otherwise high-impact projects that, without mitigations, could be expected to have significant effects on air quality or VMT. By focusing project-level assessment on a few projects, MPOs could assess representative multimodal projects with lower budgets to provide comparative information for decision-makers.
2. Develop a capacity for and culture permissive of scenario planning in order to more meaningfully incorporate different assumptions about the future into the planning process.
    a. MTC, SJCOG, FCOG are all doing scenario planning that includes multiple futures, which increases the robustness of planning forecasts. These can be looked at as examples for other regions.
    b. With scenario planning, an MPO can focus less on a specific future (as any single projected future is unlikely to occur) and can instead consider a range of assumptions on technology, extra-regional policy, climate change, and economy that characterize a range of possible futures. One approach could be to engage stakeholders and board members on a range of possible futures over the time horizons they are considering, which could help lead to the selection of projects and land use scenarios that perform well over an array of possible futures. Doing so can steer away from any tendency to project past patterns of sprawl and auto-focused transportation into future plans.
    c. Scenario planning requires MPO staff and consultants to express uncertainty about the future, which can conflict with attempts to represent model outputs as accurate or precise, which is often inherent to environmental mitigation planning. However, acknowledging inevitable uncertainty can enrich discussions and debates about the effects of projects and policies in the RTP/SCS.
3. MPOs should assess all projects for each RTP cycle, not just those that are being amended or newly considered for inclusion in project lists. This assessment may initially focus on high-budget or consequential projects (see MPO recommendation #1C).
    a. Re-justifying any projects carried over from prior plans can be an informative, though admittedly resource-intensive, practice that can serve to align the new RTP with current policies and state and regional goals.
    b. Re-assessing projects against contemporary goals and priorities can also help steward the use of scarce project planning and engineering funds, as projects that are not aligned with contemporary policies and state and regional goals may be later canceled and removed through political processes during planning or right-of-way acquisition.
4. Work within CALCOG or across multiple MPOs to learn from one another and establish best practices for:

a. Engagement with/sustained funding to support community engagement in and facilitation of RTP/SCS public input processes.
b. Public documents that guide and encourage community members to meaningfully participate in the RTP and FTIP project selection processes. MTC's Guide to the TIP provides an example.

5. Develop assessment methods that include extra points for project readiness (ability to bid quickly, deliverability, construction-readiness, etc.) may bias legacy projects that were envisioned long ago over newer projects that are more responsive to contemporary objectives on climate and equity. MPOs should consider systematically including/weighting project congruence with current MPO goals and objectives to counterbalance this potential bias toward legacy projects.
6. MPOs could include key measures from a project's EIR, such as anticipated VMT effects, in developing project lists for their RTP or FTIP. Currently, projects that increase VMT are difficult for the public to assess because MPOs are not required to provide project-related VMT impacts in an RTP or RTIP/FTIP process. Instead, MPOs in California have referred RTP/SCS commenters concerned with project-level impacts to the project-level EIRs, which would contain the requested data within hundreds or even thousands of pages of additional information.
7. The data needed for project-level assessment is not consistently or comprehensively collected by most MPOs. To address this, consider the specific data needs for more universal and comparable evaluations, such as:
    a. Project location information.
    b. Project descriptive characteristics submitted in a standardized format (see Appendix B).
    c. A methodology to assess the project's benefits and costs, including direct and indirect determinants of climate and equity outcomes.
        i. Those developing accessibility metrics can look to MTC or SACOG's methods or the Caltrans System Investment Strategy methodology.
        ii. If cost-benefit assessment is used (as is done by the MTC), values or range of values for some parameters can be set statewide.
        iii. If benefits are assessed through indicators (as with SACOG), then develop approaches and methods that merge scenario planning with indicator assessment.
        iv. Data that may be needed to incorporate impact assessments based on the evolving research on the health effects of ultra-fine particulate matter and transportation noise in evaluating the costs and benefits of transportation programs and projects.

For Community Based Organizations

Given the findings of this research, members of community-based organizations (CBOs) may wish to consider:

1. Working with other CBOs and interested parties to build and maintain relationships to address climate and equity concerns on an ongoing basis to enable sustained MPO engagement across multiple planning rounds.
2. Advocating for language interpretation services to encourage participation among limited English proficiency (LEP) populations.
3. Partnering with other CBOs and interested parties to collaborate with MPOs in advocating for more flexible state and federal funding to advance climate and equity goals, particularly in isolated parts of the MPO region.
4. Working to educate the next generation of MPO board members on community perspectives on climate, equity, and access issues in order to uplift lived experiences in their planning processes.

For future research and development

1. While there are no universal definitions of transportation, regional, or planning process equity, these can be described systematically so that participants in MPO planning and project evaluation processes can be clear with one another about what definitions are being employed and why. Practice and research in this area is evolving quickly, and research on it can help inform and guide meaningful planning for equity and participation.
2. MPOs sit at an unusual and, for most members of the public, largely opaque place in the governmental hierarchy. This relative transparency can both discourage public and community participation, and lead to idiosyncratic and arguably inequitable governance structures.
    a. More research is needed on how MPO structure and composition affects regional planning and policy outcomes.
    b. For example, SANDAG had a 6-year RTP cycle as a result of AB 805 (2017), which led to governance changes that modified the organization's governance structure, including taxing authority and the weighting of governing board members' voting.
        i. Future research could assess whether these governance changes materially affected the project list between the 2015 and 2021 RTPs, compared to those of SANDAG's peer MPOs.
3. The focus of this research was the role of state climate and equity goals in regional transportation planning in California. Yet, the staff, board members, and community representatives we interviewed repeatedly noted how increasing levels of housing insecurity across the state reverberated through regional transportation systems, affecting both climate and equity. Accordingly, future research should delve deeper into the intersections of housing on the issues of climate, equity, and transportation planning.

REPORT

ALIGNING METROPOLITAN TRANSPORTATION PLANNING AND INVESTMENTS WITH CALIFORNIA'S CLIMATE AND EQUITY GOALS

Chapter 1: Introduction and Overview

Overview of this Report

This report examines how and to what extent California's Metropolitan Planning Organizations (MPOs) incorporate state climate and equity goals in their plans, evaluations, and expenditure programs. Both federal and California state legislation and administrative codes require that transportation planning and investment take the environmental and equity effects of transportation policies, plans, and projects into account to mitigate their potential harm and to achieve targeted future outcomes. Much of that planning and investment is overseen by California's MPOs, which are regional organizations that sit sometimes awkwardly in the governmental hierarchy between the federal and state governments above, and county, municipal, and special purpose agencies below.

The California Air Resources Board (CARB) asked the UCLA Institute of Transportation Studies to conduct this investigation. To do this, we examined the transportation planning activities of seven (out of the 18) California MPOs and their associated County Transportation Commissions (CTCs) and Regional Transportation Planning Agencies (RTPAs). Specifically, we focused on MPO planning, project evaluation, and programming activities to meet state climate goals mandated by Senate Bill (SB) 375, as well as federal and state equity goals and principles concerning how the benefits and harms of transportation investments are distributed among at-risk communities, groups, and individuals, and to the diversity of voices included in MPO planning processes.

MPOs are designated by individual states for each urbanized area in the U.S. with a population of at least 50,000 to carry out a continuing, cooperative, and comprehensive performance-based multimodal transportation planning process as required by federal law. MPOs are typically governed by municipal and county elected officials who sit on MPO governing boards as a supplementary activity to their primary roles as locally elected officials. Because MPO leaders are not normally directly elected, and none are in California, to their role as MPO officials they generally have a lower public profile than as elected officials in their cities and counties, or (in some cases) as leaders of transportation service providers or representatives of state or federal agencies. Given their varied backgrounds and responsibilities, MPO board members can differ significantly in their viewpoints and priorities in ways that are not always congruent with federal and state priorities and regulations. But while relatively few residents may know about them and their work, MPO plans and programs are critically important to regional activities and travel in their cities, towns, and rural areas.

MPOs are responsible for preparing long-range transportation plans and nearer-term lists of individual projects to be funded and constructed to implement those plans. How California MPOs evaluate projects for inclusion in their plans and, eventually, for funding and implementation is the primary focus of this report. As we detail in Chapter 2, federal and state laws dictate how and when MPO planning and programming documents are prepared. MPOs are mandated by federal statute to work with a wide array of public and private actors to support continued development and improvement of metropolitan transportation planning processes guided by the planning factors set forth in federal law (23 U.S.C. 134(h) and 49 U.S.C. 5303(h)). To do this, MPOs across the U.S. develop and regularly update federally-

required Metropolitan Transportation Plans, which are generally termed Regional Transportation Plans, or RTPs, in California. RTPs guide the safe and efficient development, management, and operation of multi-modal surface transportation systems to serve the mobility needs of people and firms to foster economic growth, development, and resiliency, while minimizing transportation-related fuel consumption and air pollution (23 CFR §450.300).

In 2008, California Senate Bill (SB) 375, the Sustainable Communities Strategy and Climate Protection Act (Chapter 728, Stats. 2008), was signed into law, adding state requirements to the federally mandated MPO plans. This law requires MPOs in California to develop Sustainable Communities Strategies (SCSs) as part of their multimodal long-range transportation plans, which aim to align transportation, housing, and land use decisions to achieve greenhouse gas (GHG) emissions reduction targets set by CARB. Most California MPOs have completed or will soon complete the third round of SCSs under these requirements and some MPOs were (at the time of our research) in the midst of their fourth round. These mandated RTP/SCS planning documents are implemented through short-range Federal Transportation Improvement Programs (FTIPs), which are programming documents that contain a list of projects to be carried out and the funding commitments to accomplish them.

Federal and state laws and guidelines (detailed in Chapter 2) also require MPOs to address the social equity impacts of these transportation plans and programs. Transportation projects have a well-documented history of subjecting low-income and minority communities to disproportionate levels of noise, air pollution, and physical and social disruption. Even the relatively limited freeway capacity expansions and interchange rebuilds today, as well as new surface and elevated rail lines, can negatively affect those who live near them. In addition, low-income and minority households are less likely to own and drive cars. While encouraging progress has been made in addressing environmental and social impacts of road building, critics of highway expansions argue that much more could be done.

CARB's 2022 Progress Report on SB 375, which was mandated by Senate Bill 150, found that "California is still not reducing GHG emissions from personal vehicle travel as needed to meet climate commitments and as targeted under SB 375." The report concluded that the state needed to shift transportation investments toward more sustainable transportation choices, which would mean selecting, funding, and constructing transportation infrastructure projects that support low-GHG transportation (California Air Resources Board, 2022). While each of the MPOs we examined incorporate climate and equity principles in their planning goals, objectives, and programs, some more than others, it is less clear that these lead to the implementation of specific transportation policies and projects that advance these principles. Accordingly, this report examines this link between climate and equity goals and programming and project outcomes.

To better understand the extent to which MPOs are complying with SB 375 and incorporating social equity principles (detailed in Chapter 2) into their planning and programming, this report examines the extent to which the surveyed MPOs consider these issues in selecting and evaluating transportation projects before they are approved and funded.

This study

Given the foregoing, this report examines the following questions regarding California's MPOs:

- What are the federal and state laws and regulations that guide the work of MPOs broadly, and with respect to environmental and equity goals in particular? What does past research tell us about program and project evaluation and decision making at MPOs?
    - This is covered primarily in Chapter 2.
- How do MPOs presently screen, evaluate, negotiate, and select projects in fiscally constrained regional transportation plans?
    - This is covered primarily in Chapters 3 and 4.
- How do MPOs select projects from their RTPs to implement in the near term?
    - This is covered primarily in Chapter 3.
- Why do MPO plans and project selection at times deviate from federal and state climate and equity goals?
    - This is covered primarily in Chapter 5.
- To what degree are MPO staff and board members committed to achieving SB 375 targets and other state goals and objectives?
    - This is covered primarily in Chapter 5.
- To what degree do equity and climate considerations figure into MPO decision making?
    - This is covered in Chapters 3, 4, and 5.
- How might the state and/or MPOs develop preferred project evaluation and selection methods to enable MPOs and sub-regional governments to select projects that best advance the state's climate and equity goals and objectives? Toward that end, what data, criteria, and methods would be needed to do this?
    - This is covered primarily in Chapter 6.

Research Plan

To examine the project evaluation and programming practices of California MPOs with respect to climate and equity considerations, we focus on the four largest MPOs and a sample of three among the 14 smaller MPOs in the state. The four largest MPOs are the Sacramento Area Council of Governments (SACOG), San Diego Association of Governments (SANDAG), San Francisco Bay Area Metropolitan Transportation Commission (MTC), and Southern California Association of Governments (SCAG). They are collectively home to about four out of five Californians. In fact, SCAG and MTC are the 1st and 4th most populated MPOs, respectively, in the country. Given their size, these four MPOs control far bigger budgets and have larger staff and capabilities than the other 14 MPOs in California. In this report, we occasionally refer to MTC, SACOG, SANDAG, and SCAG collectively as the "Big 4." The three other MPOs in our sample were chosen to broadly represent the 14 smaller California MPOs; they are the Association of Monterey Bay Area Governments (AMBAG), the Fresno Council of Governments (FCOG), and the San Joaquin Council of Governments (SJCOG) (see Table 1-1).

Table 1-1. Metropolitan Planning Organizations (MPOs) examined in this study.

MPO	***Rationale for Inclusion in Sample***	***Studied RTP/SCS Date of Adoption***
Association of Monterey Bay Area Governments	A small MPO in coastal California	June 2022
Fresno Council of Governments	A growing region in the Central Valley with Transformative Climate Community and High-Speed Rail investment	July 2022
Metropolitan Transportation Commission	One of the Big 4 California MPOs	July 2021
Sacramento Area Council of Governments	One of the Big 4 California MPOs	February 2020
San Diego Association of Governments	One of the Big 4 California MPOs	October 2019
San Joaquin Council of Governments	A fast-growing region in the Central Valley near two of the Big 4 MPO regions	August 2022
Southern California Association of Governments	One of the Big 4 California MPOs	September 2020

Four of the MPOs in our study cover more than one county:

- MTC covers the nine counties of the San Francisco Bay Area: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.[6] The Association of Bay Area Governments (ABAG) is the regional Council of Governments (COG). The two agencies share staff and cooperate in preparing the regional transportation plan. As part of our study, we interviewed personnel affiliated with both the MTC and ABAG.
- SACOG is the MPO for the federally designated ozone nonattainment area in Sacramento, Sutter, Yolo, Yuba, El Dorado and Placer counties outside the Tahoe region.
- SCAG includes Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties.[7]
- AMBAG represents Monterey, San Benito, and Santa Cruz counties. Each of these counties has a state designated Regional Transportation Planning Agency (TRPA): the Council of San Benito

[6] The MTC is the only MPO established by California law. It was created by Government Code Section 66500 et al. The others were established through local decisions creating either a state-required county transportation commission to serve as a regional transportation planning agency under state law or was a previously existing COG established decades ago to review federal grant applications by local governments.

[7] Each county in the SCAG region is a designated County Transportation Commission and is responsible for preparing an RTP and RTIP (Public Utilities Code §§ 130000 et seq.).

County Governments (SBCOG), the Santa Cruz County Regional Transportation Commission (SCCRTC) and the Transportation Agency for Monterey County (TAMC). These three agencies are also included in our study. RTPAs are required to adopt a Long-Range Transportation Plan (LRTP) that is incorporated into the AMBAG RTP.

The remainder of the MPOs in our study cover a single county (see Figure 1-1). In general, MPO boundaries aim to encompass the home-to-work patterns of people commuting to the central city or cities within the region, metropolitan transportation market areas, and other similar economic regional indicators. However, as the population in California has grown, some home-to-work commuting sheds have become interregional or encompass rural areas not within an MPO, which are now considered at least partially linked to the metropolitan regions near them. This may pose additional issues in relying on MPOs to represent regional needs.

Figure 1-1: Map of Metropolitan Planning Organizations and Regional Transportation Planning Agencies in California

Our research of these seven MPOs involved five interrelated tasks:

1. We gathered, reviewed, and synthesized relevant federal and state administrative rules and regulations governing (i) the establishment and function of MPOs and their relationships with other governmental entities, (ii) relevant federal and state environmental and equity law and regulations, and (iii) how the work of MPOs has evolved over time. We summarize the results of this review in **Chapter 2** of this report. Finally, we conclude the chapter with a review of research on the structure and function of MPOs, with a focus on their funding and programming role.

2. We reviewed public documents specific to each of the seven MPO's project solicitation, evaluation, commentary, ranking, programming, and funding processes, with a focus on the development of their federally-mandated Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs), and their state-mandated Sustainable Communities Strategies (SCS). The results of this review are presented in **Chapter 3**.

3. We reviewed public documents containing information on the project evaluation tools and scoring rubrics used by each of the MPOs and nine relevant county transportation agencies used to select projects for inclusion in the RTP/SCS and FTIP documents. We also reviewed the project evaluation tool developed by Caltrans and its use by MPOs. And we gathered information on which MPOs use what kinds of project and ongoing system performance metrics in the course of their work. The results of these investigations are summarized in **Chapter 4**.

4. We conducted a series of interviews and focus groups on MPO project solicitation, evaluation, and programming processes. These interviews were drawn from our sample of MPO staff members, MPO board members, and external stakeholders involved in advocating for climate and equity considerations in regional planning processes. The results of these interviews are summarized in **Chapter 5**, and the interview and focus group guide we used for this part of the research is presented in **Appendix A**.

5. Finally, based on the findings from these five research tasks, **Chapter 6** summarizes our most important findings and offers recommendations on ways to increase climate and equity considerations in MPO project evaluation and programming processes. Additional information on what our proposed statewide data standard might include is in **Appendix B**.

Chapter 2: Putting Metropolitan Transportation Planning and Programming in Context

This chapter provides a starting point and basis of reference for considering the performance of California MPOs in the context of SB 375. Part I of this chapter comprehensively describes the organization and functions of Metropolitan Planning Organizations (MPOs) and then synthesizes the federal and state requirements and guidelines governing their work pertinent to project and program evaluation and programming processes, with a focus on those relevant to California's climate and equity goals. Part II of the Chapter provides a focused review of the recent research on MPOs with respect to project evaluation, selection, and programming.

Part I: The Organization, Functions and Legal Framework for MPOs

What is an MPO?

Continuing, Comprehensive, and Cooperative Planning

Key provisions of the Federal-Aid Highway Act of 1962 set the early foundation for metropolitan transportation planning in response to the construction of the Interstate Highway System and concerns raised over state highway departments planning and constructing routes around and through urban areas.[8] The law required, as a condition for receiving federal transportation financial assistance, that transportation projects in urbanized areas of 50,000 or more in population be based on a "continuing, comprehensive and cooperative" planning process undertaken by the states and local governments—which became known as 3C Planning. This 3C framework sought to broaden decision making, shifting some power from state highway departments to urban officials. The Bureau of Public Roads, the predecessor to the Federal Highway Administration (FHWA), required states and regions to create planning agencies, usually known then as Councils of Governments (COGs) and Regional Planning Commissions, to carry out the required long-range 3C planning process. Early on federal officials permitted nonspecific "working arrangements" between state highway departments and "local communities" that left decisions primarily in the hands of state highway engineers and planners, which tended to foster more highway construction (Solof, 1998).

The Federal-Aid Highway Act of 1973[9] discontinued these informal arrangements and specifically required states and local governments to form a Metropolitan Planning Organization (MPO) in any urbanized area with a population greater than 50,000 to meet the 3C planning requirement (23 USC §134(d)).[10] Without MPOs, states could not spend federal transportation dollars in urban areas.

---

[8] Public Law 87-866, Oct. 23, 1962, 76 Stat. 1145.

[9] Public Law 93-87, Aug. 13, 1973, 87 Stat. 250.

[10] All urbanized areas with populations greater than 200,000 are designated as Transportation Management Areas (TMAs). TMAs must address congestion management as part of the MPO's planning and programming through a process that provides for safe and effective integrated management and operation of a multimodal

Congress's intent was to transform what had proven to be largely ineffective regional bodies across the country into more effective, multimodal planning agencies to balance the influence of state transportation departments in pushing highway projects. MPOs were now required to prepare a short-range component (the transportation improvement program, or TIP) to the previously formulated long-range plans, that included highway and transit projects that had to be approved by the MPO for sponsors to receive federal funding (Solof, 1998).

MPO Formation and Relationship to Other Planning Organizations

Today, MPOs are designated by agreement between the state and local governments that together represent at least 75 percent of the affected population (including the largest incorporated city, based on population) or in accordance with procedures established by applicable state or local law (23 CFR §450.310). The governing bodies of MPOs are typically composed of local elected officials and other regional and state representatives who in turn develop and guide the area's transportation policies and investment priorities. Many MPOs are also regional planning organizations such as Councils of Governments, or COGs, some dating back to the original 1962 Highway Act.

In California, this federal organizational framework for MPOs exists alongside separate state requirements for county-level regional transportation planning agencies (RTPA) responsible for the planning and financial programming of transportation projects in one or multiple adjacent counties.[11] There are currently 44 RTPAs across California's 58 counties, 18 of which are also MPOs. Both MPOs and RTPAs are required to develop an Overall Work Program (OWP) and a regional transportation plan (RTP).

Key Federal Agencies Overseeing MPOs

The FHWA, created in 1966, is the federal agency that oversees the construction, maintenance and preservation of the U.S. highway system. The Urban Mass Transportation Administration, now known as the Federal Transit Administration (FTA), was created in 1964 and was charged with providing federal assistance for mass transit projects. Both agencies are operating administrations of the U.S, Department of Transportation (USDOT) and are responsible for overseeing the planning and programming activities of MPOs.

---

transportation system,through the use of travel demand reduction (including intercity bus operators, employer-based commuting programs such as a carpool program, vanpool program, transit benefit program, parking cash-out program, shuttle program, or telework program), job access projects, and operational management strategies. 23 CFR § 450.322

[11] RTPAs were created by state statute in 1972. RTPAs are known locally as local transportation commissions, county transportation commissions, councils of government, and associations of government. RTPAs are responsible for preparing a regional Long-Range Transportation Plan (LRTP) and a Regional Transportation Improvement Program (RTIP).

Key Federal Laws Delineating the MPO Role

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA)[12] increased federal funding for MPOs and required the agencies to consider multimodal solutions to transportation problems, to broaden public participation in the planning process, and contribute to meeting the air quality standards of the 1990 amendments to the Clean Air Act.[13] They were also required to consider a wide range of economic, environmental and social goals and many responded by establishing standardized procedures to compare and evaluate proposed projects. MPOs were permitted to allocate federal funds directly through the Surface Transportation Program (now Surface Transportation Block Grant program (STBG)) and the Congestion Mitigation Air Quality program (CMAQ). Finally, MPOs had to certify that all long-range and short-range plans could be carried out with available funds (Solof, 1998). ISTEA shifted transportation policy away from a single focus on transportation efficiency and road building and supported greater emphasis on environmental and social goals and formalized participation processes for involving diverse stakeholders (Sciara 2017).

Since then, the federal regulations governing the metropolitan transportation planning process have significantly changed. One critical change resulting from the 2012 Moving Ahead for Progress in the 21st Century (MAP-21) Act[14] is the requirement for performance-based planning and programming.

The FHWA and the FTA jointly issued administrative rules in response to MAP-21 and the 2015 Fixing America's Surface Transportation (FAST) Act[15] authorizing every MPO serving an area designated as a transportation management area (TMA)[16] to use scenario planning during the development of their plans. Scenario planning is an analytical framework to inform decision makers about the implications of various investment and policy bundles on transportation system condition and performance.[17]

In cooperation with the state and public transportation operators, as well as a wide array of local governments, public agencies, stakeholders, and members of the public, MPOs play a significant role in transportation planning and project decision making in urban areas (23 CFR §450.306(a)). The 3C planning process supports projects, strategies, and services that address the following factors:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
- Increase the safety of the transportation system for motorized and non-motorized users

[12] Pub. L. 102–240, December 18, 1991, 105 Stat. 1914.

[13] Pub. L. 101-549, Nov 15, 1990, 104 Stat. 2468.

[14] Public Law 112–141, July 6, 2012,126 Stat. 405.

[15] Pub. L. No. 114-94, December 4, 2015, 129 Stat. 1312.

[16] The Secretary of the U.S. Department of Transportation (US DOT), designates each urbanized area with a population over 200,000 as a Transportation Management Area (TMA). 49 U.S.C. 5303(k). A TMA has a stronger voice in setting priorities for implementing projects listed in the transportation improvement program and are responsible for preparing a congestion management plan to reduce travel demand through new and existing transportation facilities (including carpool programs, vanpool programs, transit benefit programs, parking cash-out programs, shuttle programs, or telework programs), job access projects, and operational management strategies.

[17] Pub. L. 103–272, § 1(d), July 5, 1994, 108 Stat. 785; Pub. L. 109–59, title III, §§ 3002(b)(4), 3003, Aug. 10, 2005, 119 Stat. 1545; Pub. L. 112–141, div. B, § 20003, July 6, 2012, 126 Stat. 622.

- Increase the security of the transportation system for motorized and non-motorized users
- Increase accessibility and mobility of people and freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system across and between modes for both people and freight
- Promote efficient system management and operation
- Emphasize the preservation of the existing transportation system
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
- Enhance travel and tourism

23 CFR 450.306(b).

Key State Agencies Overseeing MPOs

The California State Transportation Agency (CalSTA) and its divisions, the California Transportation Commission and the Department of Transportation (Caltrans), are together responsible for achieving the state's transportation goals and priorities. Each is committed to advancing social equity in transportation and achieving the state's climate goals and has expressed those commitments in its planning and policy documents

California State Transportation Agency (CalSTA)

CalSTA develops and coordinates the policies and programs of the state's transportation entities to achieve the state's mobility, safety, and air quality objectives from its transportation system. CalSTA's stated vision is to transform the lives of all Californians through a safe, accessible, low carbon, 21st century multimodal transportation system.

CalSTA developed the Climate Action Plan for Transportation Infrastructure (CAPTI) to better align state transportation discretionary funds with climate goals. CAPTI builds on executive orders EO N-19-19 and EO N-79-20 signed by Governor Gavin Newsom in 2019 and 2020 that targeted reducing GHG emissions in transportation. It details an investment framework with strategies and actions on how the state should invest billions of dollars of transportation funding for infrastructure projects that advance sustainable, equitable, and healthy modes of transportation such as walking, biking, and transit, as well as accelerate the transition to zero-emission vehicle technology.

Department of Transportation (Caltrans)

Caltrans is the owner and operator of more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, and issues permits for more than 400 public-use airports and special-use hospital heliports. Many of its facilities comprise critical components of regional transportation systems in the state's metropolitan areas. Caltrans is also responsible for carrying out federal requirements for the state to receive transportation funds from the USDOT, specifically, by preparing a State Transportation Plan (STP) and a state transportation improvement program (STIP) that provides funding for the STP.

Caltrans seeks to provide leadership to reduce the environmental impact of the state's transportation system by not only reducing GHG emissions from the state transportation system and its operations, but also by strengthening the resilience of the transportation system to withstand and recover from the worsening effects of climate change. It does this by accelerating the implementation of actions identified in CalSTA's CAPTI, while also engaging with communities most affected by the climate crisis to collectively create a healthier and safer California for all.

Caltrans has also committed to addressing the systemic inequities and disparities created by the transportation system. The agency has pledged to prioritize transportation projects that avoid harm and provide meaningful benefits to underserved communities in an effort to ultimately improve accessibility and quality of life for people in the state through targeted investment in those communities.

California Transportation Commission

The 13-member California Transportation Commission is a cabinet-level independent government transportation commission responsible for programming and allocating funds for the construction of highway, passenger rail, transit, and active transportation improvements throughout California. The Commission also advises and assists the Secretary of CalSTA and the state legislature in formulating and evaluating state policies and plans for California's transportation programs. The Commission prepares the *Regional Transportation Plan Guidelines for Metropolitan Planning Organizations* to assist MPOs in preparing their RTP.

The Commission recognizes that Californians who live in historically underserved communities are more likely to be negatively affected by increased exposure to air pollution and noise from cars, trucks, ships, trains, and aircraft, and struck or killed by drivers when walking and biking. These vulnerable communities may have limited access to safe and affordable transportation options to connect residents to jobs, education, healthcare, and recreation. The Commission works to create mobility opportunities for all Californians, especially those from underserved communities.

What Do MPOs Do?

MPOs engage in both transportation planning and programming. The primary responsibility of an MPO is to prepare a federally-required Metropolitan Transportation Plan, often known as Regional Transportation Plans (RTPs) in California, though some MPOs do call it a Metropolitan Transportation Plan (MTP), that sets the policy and investment framework for achieving transportation goals and priorities for the region over a minimum 20-year horizon (23 U.S.C. §134 et seq.). RTPs identify present and future needs, deficiencies and constraints, analyze potential solutions, estimate available funding, and propose investments. The RTP also contains a list of fundable highway, transit, bicycle, and pedestrian improvements that are eligible for federal funding. The USDOT and the California Department of Transportation (Caltrans) will not fund projects that are not identified in the regional plan. RTPs must conform to numerous federal and state requirements, which are briefly described below.

In addition to requiring MPOs to prepare a long-range regional plan, ISTEA required each MPO to prepare a fiscally constrained, short-range federal Transportation Improvement Program (TIP) covering a

minimum of four years. In California these are referred to as a Federal Transportation Investment Program (FTIP). Projects must be in the approved RTP to be included in the FTIP. The recent Infrastructure Investments and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), continues that requirement. As with the RTP, federal law requires enhanced public and public agency participation in the FTIP process. FTIPs and their requirements are discussed later in this chapter.

Federal Requirements for Regional Transportation Plans (RTPs)

RTPs are developed by MPOs in cooperation with the FHWA and the FTA. It is the primary transportation planning tool developed as part of the 3C transportation planning process to direct regional transportation investments. The RTP addresses both current and future transportation demand and contains both long-range and short-range strategies and actions that provide for the development of an integrated multimodal transportation system including accessible pedestrian walkways and bicycle transportation facilities. The MPO may prepare multiple future scenarios in developing the plan (23 CFR § 450.324(a)&(b)). The plan must be updated at least every four years (23 CFR § 450.324(c)).

The RTP must identify transportation facilities such as major roadways, transit, and intermodal facilities and connectors that will collectively function as an integrated metropolitan system over at least the 20-year forecast period. It must also contain strategies to improve existing facilities, relieve vehicular congestion, maximize the safety and mobility of people and goods, and include environmental mitigation activities (23 U.S.C. §134(i)(2)).

MPOs typically issue a Call for Projects to identify investments that have a project sponsor and some sources of funding to complete a project. These may be evaluated to determine how well they conform to the RTP and policies of the regions.

The RTP must also include a description of the national performance measures and performance targets used in assessing the performance of the transportation system, including progress achieved in meeting the performance targets and, for MPOs that elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets (23 CFR 450.324(f)(3)&(4)).

The RTP must be fiscally constrained and conform to standards in the Clean Air Act.
A description of other key federal requirements for RTPs are contained in the accompanying text box.

Key Federal Regulatory Requirements For RTPs

All RTPs must:

- Be "**fiscally constrained**"—meaning that full funding is reasonably anticipated to be available within the time period contemplated for completion of each of the projects in the transportation plan (23 CFR Part 450).

- Meet all applicable **federal air quality requirements** (Clean Air Act, 1990). In addition, California specifically requires the plan to meet state requirements for per-capita greenhouse gas emissions (GHG) reductions established for the region by the California Resources Board (CARB) (SB 375, 2008). This requirement is to a significant extent met through strategies, policies, programs, and projects designed to reduce the number of vehicle miles of travel (VMT) on local streets and highways.

- Include a discussion of types of **potential environmental mitigation** activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan (23 CFR 450.324(b)). The discussion may focus on policies, programs, or strategies, rather than at the project level. The MPO must develop the discussion in consultation with applicable federal, state, and tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation (23 CFR 450.324(f)(10)).

- In conjunction with the state and public transportation operators, must **validate data** used in preparing other existing modal plans that provide input to the RTP. In updating the transportation plan, the MPO must base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO must approve the transportation plan contents and supporting analyses produced by a transportation plan update (23 CFR 450.324(e)).

- Include the **current and projected transportation demand** of people and goods in the metropolitan planning area over the period of the transportation plan (23 CFR 450.324(f)(1)).

- Include existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities (e.g., pedestrian walkways and bicycle facilities), and intermodal connectors) that should function as an **integrated metropolitan transportation system**, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan (23 CFR 450.324(f)(2)).

- Include a description of the **performance measures and performance targets** used in assessing the performance of the transportation system (23 CFR 450.324(f)(3)).

- Include a system performance report and subsequent updates evaluating the **condition and performance of the transportation system** with respect to the performance targets, including progress achieved by the MPO in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data; and for MPOs that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets (23 CFR 450.324(f)(4)).

- Include **operational and management strategies** to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods (23 CFR 450.324(f)(5)).

- Include consideration of the results of the **congestion management process** in Transportation Management Areas (TMAs) that meet federal requirements, including identifying single-occupant vehicle (SOV) projects that result from a congestion management process in TMAs that are nonattainment for ozone or carbon monoxide (23 CFR 450.324(f)(6)).

- Include an **assessment of capital investment and other strategies** to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters. The metropolitan transportation plan may consider projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the metropolitan area's transportation system (23 CFR 450.324(f)(7)).

- Include **transportation and transit enhancement activities**, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated, and including transportation alternatives, and associated transit improvements (23 CFR 450.324(f)(8)).

- Include design concept and design scope **descriptions of all existing and proposed transportation facilities** in sufficient detail, regardless of funding source, in nonattainment and maintenance areas for conformity determinations under the U.S. Environmental Protection Agency (EPA)'s transportation conformity regulations. In all areas (regardless of air quality designation), all proposed improvements must be described in sufficient detail to develop cost estimates (23 CFR 450.324(f)(9)).

- Include a **financial plan** that demonstrates how the adopted transportation plan can be implemented (23 CFR 450.324(f)(11)).

- Include pedestrian **walkway and bicycle transportation** facilities (23 CFR 450.324(f)(12)).

Public Participation in MPO Planning

Community engagement is a central part of modern transportation planning. MPOs are required to develop and use a documented Public Participation Plan (PPP) that defines a process for providing interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process (23 CFR §450.316(a)). These parties include individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs such as a carpool program, vanpool program, transit benefit program, parking cash-out program, shuttle program, or telework program), representatives of public transportation users, representatives of users of pedestrian walkways and bicycle transportation facilities, and representatives of the disabled community. Further requirements for public notice and involvement are stipulated in federal laws including the National Environmental Policy Act (NEPA). Many MPOs have gone far beyond basic federal requirements for public involvement to reach a larger and more diverse set of regional stakeholders and involve them in MPO decision-making processes. We discuss these efforts in chapters 3 and 5.

The public participation process must include consultation and coordination with all interested parties and the RTP must, at a minimum, describe explicit procedures, strategies, and desired outcomes (Title 23 CFR §450.316).

Fiscal Constraint

RTPs must contain a list of "fiscally constrained" projects that identify projects with funding commitments in place. They may also contain an "unconstrained" project list, which is a "wish list" of desired projects should additional funding become available. Fiscally constrained means that the proposed list of projects can be accomplished given projected committed,[18] available,[19] or reasonably available revenue sources, while providing for the operation and maintenance of the existing highway and transit systems. These projects are intended to accomplish the objectives outlined by the MPO, the state, and the public transportation providers with respect to developing the metropolitan area's transportation network.

The RTP must have a financial plan that: (i) demonstrates how the adopted transportation plan can be implemented with "reasonably available" resources and financing approaches; (ii) indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan; and (iii) recommends any additional financing strategies for needed projects and programs (23 USC §134(i)(2)(E)). In developing the financial plan, the MPO must take into account all projects and strategies proposed for funding from the FHWA, the FTA, or with other federal funds; state assistance; local sources; and private participation (23 CFR §450.324(f)(11)(iv)).

Air Quality Conformity

The RTP must comply with the Clean Air Act conformity requirements, including regional emissions analysis, financial constraint,[20] timely implementation of transportation control measures, and interagency consultation and public involvement (42 U.S.C. §7401 et seq.). Projects that may affect air quality conformity must be environmentally reviewed as part of an RTP or amendment prior to being added to the FTIP. Both the RTP and FTIP must be amended to reflect project scope, design, schedule, or funding changes. Otherwise, the FHWA will not issue a conformity determination.

---

[18] Committed funds means funds that have been dedicated or obligated for transportation purposes. For state funds that are not dedicated to transportation purposes, only those funds over which the governor has control may be considered "committed." Approval of an FTIP by the governor is considered a commitment of those funds over which the governor has control. For local or private sources of funds not dedicated to or historically used for transportation purposes (including donations of property), a commitment in writing (e.g., letter of intent) by the responsible official or body having control of the funds may be considered a commitment (23 CFR §450.104).

[19] "Available funds" refers to funds derived from an existing source dedicated to or historically used for transportation purposes. For Federal funds, authorized and/or appropriated funds and the extrapolation of formula and discretionary funds at historic rates of increase are considered "available." A similar approach may be used for State and local funds that are dedicated to or historically used for transportation purposes (23 CFR §450.104).

[20] Transportation plans and FTIPs must be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450 in order to be found in conformity (40 CFR § 93.108).

The Clean Air Act and its amendments (CAAA) authorized the U.S. Environmental Protection Agency (EPA) to set standards for National Ambient Air Quality Standards (NAAQS) for six criteria pollutants that have been linked to public health: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM2.5 and PM10), lead (Pb), and sulfur dioxide (SO2). When the levels of these pollutants in a region exceed the standards, a State Implementation Plan (SIP) for achieving the goals of the Clean Air Act must be developed to describe how the NAAQS will be met. Each state must develop the transportation portion of the SIP as required by the Act. Transportation conformity to a SIP means that on-road transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. The RTP and subsequent spending programs, if financed even partially with federal funds, must conform to the SIP. Under the EPA regulations, the RTP's regional transportation conformity analysis must include all regionally significant transportation (road and transit) activities regardless of funding source. Additionally, under the CAAA (1990), regions that are unable to demonstrate air quality conformity could be subject to sanctions, including withholding federal transportation funds.

Performance-based Planning Process (PBPP)

The regulations implementing MAP-21 and the FAST Act require MPOs to implement Performance-Based Planning and Programming (PBPP) as part of the metropolitan planning process. Other federally required performance-based activities that inform the 3C process are the Congestion Management Process (CMP) and the Congestion Mitigation and Air Quality (CMAQ) Improvement Performance Plan.

The general purposes of the performance-based planning approach are to:

(1) Provide funding to support public transportation;
(2) Improve the development and delivery of capital projects;
(3) Establish standards for the state of good repair of public transportation infrastructure and vehicles;
(4) Promote continuing, cooperative, and comprehensive planning that improves the performance of the transportation network;
(5) Establish a technical assistance program to assist recipients under this chapter to more effectively and efficiently provide public transportation service;
(6) Continue federal support for public transportation providers to deliver high quality service to all users, including individuals with disabilities, seniors, and individuals who depend on public transportation;
(7) Support research, development, demonstration, and deployment projects dedicated to assisting in the delivery of efficient and effective public transportation service; and
(8) Promote the development of the public transportation workforce.

(49 U.S.C. §5301(b)).

MPOs are also required (23 CFR 450.306(d)) to establish quantifiable performance measures and quantifiable targets to support the national goals regarding:

(1) **Safety**: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
(2) **Infrastructure condition**: To maintain the highway infrastructure asset system in a state of good repair.

(3) **Congestion reduction**: To achieve a significant reduction in congestion on the National Highway System.
(4) **System reliability**: To improve the efficiency of the surface transportation system.
(5) **Freight movement and economic vitality**: To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
(6) **Environmental sustainability**: To enhance the performance of the transportation system while protecting and enhancing the natural environment.
(7) **Reduced project delivery delays**: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

23 USC §150(b).[21]

Connection to State-Level Transportation Planning

To guide MPOs in preparing their individual RTPs, each state must develop a statewide transportation plan (STP) and a statewide transportation improvement program (STIP) for all areas of the state (23 U.S. Code §135). It is delivered to the governor to submit to the state legislature and the Secretary of the USDOT (Cal. Gov't Code §9795). Caltrans prepared the California Transportation Plan 2050 required by 23 CFR 450.21; 23 U.S. Code §135; 49 U.S.Code §5304 (Cal.Gov't Code, Title 7, Div. 1, Ch.23). RTPs must conform to the STP.

California Regional Planning Requirements

In addition to federal planning regulations, California MPOs must adhere to California statutes and the California Transportation Commission's *RTP Guidelines* in preparing their RTPs. Since the mid-1970s, California state law has required MPOs and RTPAs to prepare RTPs to address transportation issues and assist local and state decisionmakers.[22] The RTP covers a minimum 20-year planning horizon; it is updated every four years and presented to the Commission for approval. Following the passage of California's Sustainable Communities and Climate Protection Act, Senate Bill (SB) 375 (Steinberg, 2008) in 2008 (hereafter SB 375), MPOs also need to work closely with CARB and the California Department of Housing and Community Development (HCD) in preparing a Sustainable Communities Strategy (SCS) as part of the RTP (Government Code Section 65080(b)(2)(B)).

California statutes and the *RTP Guidelines* identify the RTP requirements for MPOs. MPOs must also follow the planning requirements specified in SB 375. Each RTP must present a coordinated and balanced regional transportation system including, but not limited to, public transportation, highways, railroads, maritime transport, bicycling, pedestrian travel, goods movement, and aviation. In addition, the RTP must be action-oriented and pragmatic, considering both short-term (0-10 years) and long-term (10-20 years) periods.

---

[21] Pub. L. 112–141, div. A, title I, § 1203(a), July 6, 2012, 126 Stat. 524, amended Pub. L. 114–94, div. A, title I, § 1446(a)(4)–(6), (d)(2)(A), Dec. 4, 2015, 129 Stat. 1437, 1438.
[22] The California Department of Transportation was created in 1972 by Assembly Bill (AB) 69 (Deddeh), Statutes of 1972, Chapter 1253.

The RTP must be an internally consistent document (Government Code Section 65080(b)) that includes the following:

- Policy Element
- Sustainable Communities Strategy (SCS)
- Action Element
- Financial Element

Policy Element

The Policy Element identifies legislative, planning, financial, and institutional issues, as well as statutory requirements, and it establishes regional policies and strategies to guide plan implementation. The Policy Element is supposed to clearly identify and describe the land use, transportation, and other strategies intended to reduce per capita GHG emissions from passenger vehicles. Importantly for this study, the RTP should identify the criteria that the MPO used to select the transportation projects on both its constrained and unconstrained project lists.

Sustainable Communities Strategy (SCS)

Assembly Bill (AB) 32 (Nuñez 2006), the Global Warming Solutions Act of 2006, required California to reduce its GHG emissions to 1990 levels by 2020—a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. CARB set regional targets, indexed to the years 2020 and 2035, to help achieve significant additional GHG emission reductions from changed land use patterns and improved transportation in support of the state's climate goals. The SCS identifies the steps the MPO will take that will reduce GHG emissions to achieve these regional targets, if it is feasible to do so.

MPO	**Targets Beginning October 1, 2018**	
	2020	**2035**
MTC/ABAG	-10%	-19%
SACOG	-7%	-19%
SANDAG	-15%	-19%
SCAG	-8%	-19%
Fresno COG	-6%	-13%
San Joaquin COG	-12%	-16%
AMBAG	-3%	-6%

Note: Targets are expressed as a percent change in per capita passenger vehicle greenhouse gas emissions relative to 2005.

SB 375 encourages coordinated transportation and land-use planning to reduce GHG emissions and requires each MPO to prepare the SCS as an integrated element of the RTP that specifies how the GHG

emissions reduction targets set by CARB for 2020 and 2035 can be achieved for the region. The SCS should identify integrated land-use and transportation strategies that lower per capita GHG emissions from cars and light duty trucks, and foster communities that are more equitable, healthy, and sustainable. Under SB 375, an SCS must:

- Identify the general location of uses, residential densities, and building intensities within the region;
- 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;
- Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region;
- Identify a transportation network to service the transportation needs of the region;
- Gather and consider the best practically available scientific information regarding resource areas and farmland in the region;
- Consider the state housing goals;
- Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the GHG emission reduction targets approved by the state board.
- allow the RTP to comply with the federal Clean Air Act (42 U.S.C. §7506).

Government Code 65080(b)(2)(B).

MPOs are required to work with local land use authorities and other appropriate entities to address regional land uses, regional housing needs, regional resource areas and farmland, as well as regional transportation needs. If the CARB targets cannot be met, the MPO must either revise their SCS or prepare a separate Alternative Planning Strategy (APS) that describes why the development pattern, measures, and policies in the APS are the most practicable choices for achieving the GHG emissions reduction targets (Government Code § 65080(b)(2)(I)(iii)). The SCS may also include transportation policies designed to reduce GHG emissions such as strategies for Transportation Demand Management (TDM) and Transportation System Management (TSM).

The RTP/SCS development process must assess the social equity effects of various planning scenarios. These can include air quality, access to transit, access to electric vehicle charging, household transportation costs, housing costs, and overall housing supply. Some MPOs may include disadvantaged groups that are not defined as low income or minority, such as those disadvantaged due to environmental impacts as identified by CalEnviroScreen. CalEnviroScreen is an interactive online environmental justice mapping tool developed by the California Environmental Protection Agency (CalEPA)'s Office of Environmental Health Hazard Assessment, which is used to identify Disadvantaged Communities (DACs) in California that are disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution.

The MPO submits the SCS, or an APS, to CARB and Caltrans for review and comment, including the quantified GHG emission reductions of each strategy in the RTP/SCS that is projected to achieve reductions and a description of the technical methodology used to obtain those results and other documentation that is included the CARB's SCS Evaluation Guidelines. CARB staff review these materials and determine whether the SCS will achieve the GHG emission reduction targets established by CARB.

CARB's 2022 Progress Report monitors SCS implementation and it identifies two overarching themes for why MPOs' on the ground performance have not been meeting their assigned targets for GHG reductions:

> **Fulfilling SB 375 requires a stronger focus on implementation.** SB 375 has been an important tool to coordinate regional land use and transportation planning. However, it is incomplete; no matter how robust, regional plans alone cannot reduce emissions. Fulfilling SB 375 requires authorizing and funding the strategies in the most recently adopted SCSs and using SCS planning assumptions to shape future growth. They must be coupled with resources and measures to implement their recommended strategies.
>
> **SCS implementation requires better alignment across state, regional, and local actions.** SCS implementation relies on local and regional agency decisions about where to allow development, what types of development to allow, and which transportation improvements to fund. However, in many regions, there is not enough coordination between local plans and project implementation, and the SCSs. For example, local land use decisions do not always align with the SCS assumptions in regional plans, and state investments do not always align with SCS assumptions. The state, in partnership with regional and local agencies, needs to revisit and reprioritize investments away from projects that will increase driving.

Action Element

The Action Element of the RTP must describe the programs and actions necessary to implement the RTP/SCS, including transportation projects proposed to be completed during the plan horizon and must consider congestion management activities within the region. All transportation modes (highways, local streets and roads, mass transportation, rail, maritime, bicycle, pedestrian and aviation facilities and services) must be addressed. Additionally, the action element should highlight programs, policies, technical assistance, investments, or other actions to support strategies and goals in the plan.

Financial Element

The Financial Element identifies current and anticipated revenue sources and financing techniques available to fund the planned transportation investments described in the Action Element. The transportation revenue forecast estimates the revenues that are reasonably expected to be available to the region in the future for transportation. This information is used to determine which projects can reasonably be funded. The Financial Element also contains recommendations for the allocation of funds to projects consistent with the RTP.

The contents of the Policy, Action, Financial Elements, and SCS must be consistent with one another. Typically, the Policy element of the RTP includes goals and objectives, and the Action element provides the results of the performance measures used to evaluate the projects in the plan.

Project List

RTPs contain a List of Projects that identifies proposed investments in the operation, maintenance, expansion, and optimization of the region's network of highways, bridges, local streets, transit routes, and active transportation infrastructure. As noted above, federal guidelines require the Transportation Project List to be *fiscally constrained*, meaning that only projects for which the agency anticipates having sufficient funding from reasonably expected public and private revenues identified in the Financial Element. In addition, as noted above, the list must also *conform* to the Air Quality SIP for nonattainment and maintenance areas. At present the only California counties that are in attainment with federal standards are Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, and Shasta. Fiscal constraint and conformity rules enable MPOs to assert regional priorities more firmly when selecting projects than if they had to include all projects proposed by local governments. For example, some MPOs have leveraged fiscal constraint and conformity requirements to counter congressional earmarks for parochial projects that would disrupt regional transportation priorities (Sciara, 2012).

Implementing Performance-Based Planning Program

As noted above, federal law now requires a performance driven, outcome-based transportation process that provides for a greater level of transparency and accountability, improves project decision-making, and more efficient investments of federal transportation funds. The regulations implementing MAP-21 and the FAST Act require MPOs to employ Performance-Based Planning and Programming (PBPP) as part of the metropolitan planning process and RTP development and to report on regional transportation system performance across several dimensions of federal interest, including highway safety, infrastructure condition, and travel time reliability, among others. The 2021 Infrastructure Investment Act (IIJA) further integrated performance-based planning into many federal transportation programs.

The MPOs' PBPP relies on data to inform decisions, and stakeholder and interagency collaboration. The process involves visioning through public and stakeholder outreach, establishing a baseline (existing conditions, revenue forecasting, future needs and challenges), goal and objective setting, performance measures (national, state, and regional), target setting, developing a system performance report and comparing it to targets, analyzing investment scenarios, establishing an investment and financial plan, and monitoring progress toward transportation planning goals through the collection of performance information.

The new federal emphasis on planning performance measurement in MAP-21 and the FAST Act has led *some* MPOs to incorporate project performance assessments into their selection of regional transportation projects. Broadly, these assessments include three steps:

1. Calculating key metrics in the absence of the project (baseline).
2. Calculating key metrics with addition of the project (comparison case).
3. Attributing difference in metrics to the project as project performance.

The introduction of regional *system-based* performance metrics and, in some places, *project-based* performance metrics presents new opportunities to align MPO project selection and plan development with state goals and objectives for GHG emissions, equity, and quality of life. As regional bodies evaluate projects for inclusion in RTPs (and FTIPs), they can implement project performance assessments to illuminate the consequences of decisions to:

- Select projects that do not perform as well as alternatives in forecasts for vehicle miles traveled, GHGs, and other measures, and/or
- Include legacy projects from prior RTP cycles in the baseline RTP project selection list without additional evaluation or consideration.

Innovative Planning and Travel Modeling

MPOs use travel demand models to comply with federal and state requirements for understanding and forecasting travel patterns and evaluating alternative strategies and performance measures as part of developing regional transportation plans. Many of the travel demand models in California have shifted or will be shifting to activity-based models or hybrid tour-based models that can better analyze and forecast vehicle miles of travel (VMT), impacts on disadvantaged communities, GHG emissions reductions, and the effects of policy changes (like congestion pricing). CARB developed the EMission FACtor model (EMFAC) to assess and forecast emissions from on-road vehicles, including cars, trucks, and buses, to support CARB's regulatory and air quality planning. MPOs use it to meet the federal Clean Air Act requirements and for preparing their SCS under SB 375. The most recent EPA-approved version is EMFAC 2021. The mobile source emissions inventory is CARB's tool for assessing both the vehicle inventory and emissions from on-road vehicles. These inventories are constantly being updated to support the latest air quality plans and regulations.

Transportation Programming to Connect Projects to Funding

With an approved RTP in hand, MPOs can begin the process of financing their selected projects by applying for federal and state funds. The mechanisms to do that involve selecting a set of projects to be implemented in the near term from among those in the long-range RTP. At the federal level, this list is known as the Transportation Improvement Program (TIP) and at the state level it is the Regional Transportation Improvement Program (RTIP).

Transportation Programming under Federal Law

Obtaining federal funding for transportation investments involves the preparation of two key documents, one at the regional level and one at the state level.

Federal Transportation Improvement Program (FTIP) - for Regions

In California the federal TIP is known as the Federal Transportation Program or FTIP.[23] The FTIP is prepared as part of the federal financial programming process, and lists upcoming surface transportation projects and strategies consistent with the RTP that are proposed to receive federal funding or are subject to a federally required action (49 U.S.C. §5303(j)). MPOs typically evaluate projects for inclusion in the RTP and/or for inclusion in the FTIP. The FTIP reflects the investment priorities established in the current RTP and implements the long-range plan over a shorter planning horizon. It must be consistent with the RTP.

The FTIP is composed of two parts. The first part is a priority list of projects and project segments developed through its member agencies and in cooperation with state and federal agencies. The FTIP includes new investments, maintenance and system operations and other finance or regulatory tools. Proposed projects must be included in the FTIP to be eligible to receive federal funding. The FTIP should include capital and non-capital surface transportation projects, bicycle and pedestrian facilities and other transportation enhancements, Federal Lands Highway projects, and safety projects included in the state's Strategic Highway Safety Plan. The FTIP should include all regionally significant projects receiving FHWA or FTA funds, or for which FHWA or FTA approval is required, in addition to non-federally funded projects that are consistent with the RTP.

The second part is a financial plan that demonstrates how the FTIP can be implemented. The financial plan is also required to indicate all public and private resources and financing techniques that are expected to be used to carry out the program. As with the RTP, fiscal constraint requirements ensure that proposed projects can be reasonably completed in the timeframe with available funding. The fiscal constraint applies to each program year of the FTIP.

The FTIP must be updated at least every four years;[24] and be approved by the MPO and the governor (23 CFR §450.326(a)). The FTIP must be designed so that once implemented, it makes progress toward achieving the national performance targets (23 CFR §450.326(c)), and it must contain a description of the anticipated effect of the FTIP on achieving the performance targets identified in the RTP, linking investment priorities to those performance targets (23 CFR §450.326(d)).

Federal State Transportation Improvement Program (FSTIP) - Statewide

The California Federal Statewide Transportation Improvement Program (FSTIP) is the four-year statewide intermodal program of transportation projects required by federal regulations. Caltrans prepares the FSTIP in cooperation with the MPOs from the individual FTIPs along with projects in non-MPO areas. It contains all federally funded projects and regionally significant highway and transit projects, regardless of the funding source. The MPOs submit their individual FTIPs to the California Transportation Commission, which then compiles them together into the FSTIP document to send to the FHWA and FTA for review and approval. The FSTIP must be fiscally constrained and consistent with the MPOs'

[23] SANDAG refers to its FTIP as the RTIP, but they also prepare a separate RTIP for Caltrans and the California Transportation Commission.

[24] California requires the FTIP to be updated every two years. 2024 RTP Guidelines for MPOs, p.15.

RTPs. At least every four years, California must submit an updated FSTIP concurrently to the FHWA and the FTA for joint approval in order to continue to receive federal transportation funds.

All projects must be included in the approved FSTIP in order to receive federal funding. Once approved, projects become eligible to receive federal transportation funds from the Highway Trust Fund through a number of different federal highway and transit programs. Under current federal law most of the federal transportation funding goes directly to Caltrans for operation, maintenance, and repair of state highways. Caltrans allocates a portion of the Surface Transportation Block Grant Program (STBG) and all Congestion Mitigation and Air Quality (CMAQ) funds by formula to the MPOs.

Transportation Programming under California Law

Similar to the federal requirements around transportation programming, California MPOs and RTPAs must also submit a short-range list of projects to the state to become eligible for state transportation funding. These are known as the Regional Transportation Improvement Program (RTIP), which make up part of the State Transportation Improvement Program (STIP). Projects must be accepted and incorporated into the STIP to receive funding. Another source of funding is the State Highway Operation and Protection Program (SHOPP) program, which provides funds for pavement rehabilitation, operation, and safety improvements on state highways and bridges.

STIP

The 2022 State Transportation Improvement Program (STIP), adopted by the California Transportation Commission in March 2022, is the state's transportation spending plan and contains a list of projects to be funded.[25] Funding for the STIP consists of monies from the Transportation Investment Fund as well as from the Public Transportation Account (PTA) and State Highway Account (SHA) that receives monies from the federal Highway Trust Fund and state gasoline excise taxes. The program covers a five-year period and is updated every two years. Each new STIP includes projects carried forward from the previous STIP plus new projects and reserves from among those proposed by regional agencies and by Caltrans.

The STIP is composed of two elements: a Regional Transportation Improvement Program (RTIP) and an Interregional Transportation Improvement Program (ITIP). The RTIP receives 75 percent of available STIP funds and the ITIP receives 25 percent.[26] Regional agencies (County Transportation Commissions and RTPAs) are responsible for proposing projects with RTIP funds and Caltrans is responsible for proposing projects with ITIP funds that will improve the interregional movement of people and goods.[27] The state RTIP is compiled from the RTIPs submitted by regional agencies. Both RTIP and ITIP funded projects are transmitted to the California Transportation Commission for consideration and approval in the STIP.

---

[25] The draft 2024 STIP covers the period from FY 2024-25 through FY2028-29.

[26] Of these funds, 60 percent are allocated to 13 southern counties, while 40 percent is allocated to the remaining 45 northern counties.

[27] These consist of all the following:
(1) Projects to improve State highways, pursuant to subdivision (b) of Section 164 of the Streets and Highways Code.
(2) Projects to improve the intercity passenger rail system.
(3) Projects to improve interregional movement of peoples, vehicles, and goods.

RTIP

Regional agencies (MPOs and RTPAs) prepare a Regional Transportation Improvement Program (RTIP), which is submitted to the California Transportation Commission and Caltrans. RTIPs are generally adopted by the same MPO that prepares the RTP with two exceptions. In the SCAG region, transportation programming and project selection are done by the County Transportation Commissions.[28] For the Association of Monterey Bay Area Governments (AMBAG), consisting of Santa Cruz and Monterey Counties with some functions for San Benito County, state funds are programmed by the individual County Transportation Commissions set forth in state law and the federal funds are programmed by the multi-county MPO.

How Do Federal and State Laws Addressing Environment and Social Justice Concerns Affect MPO Activities?

Federal and State Environmental Requirements

MPOs are required to comply with several federal and state environmental laws including the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), the federal Clean Air Act and amendments (CAAA), and the California Clean Air Act (CCAA).

The National Environmental Policy Act (NEPA)

The 1969 National Environmental Policy Act (NEPA) requires federal agencies to consider the environmental impacts of their actions. Federal actions may include new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies, including the FHWA and the FTA. If the lead agency determines that a proposed major federal action may significantly affect the quality of the human environment the agency must prepare an Environmental Impact Statement (EIS) which explains the agency's decision, describes the alternatives the agency considered, and discusses the agency's plans for mitigation and monitoring, if necessary. Federal agencies, including the USDOT, together with state, tribal or local agencies, may act as joint lead agencies. The EPA reviews all draft EIS documents prepared by other federal agencies, as well as certain other federal actions, as required by Section 309 of the Clean Air Act.

NEPA does not apply to the preparation of the RTP, however, NEPA review does apply to the individual projects identified in the RTP that are federally funded and/or for which federal approval is required. The USDOT, FHWA, and FTA have adopted policies and procedures for implementing NEPA (83 FR 54493, Oct. 29, 2018).

The California Environmental Quality Act (CEQA)

California's version of NEPA is the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.). Passed in 1970, the law requires state and local government agencies to inform

[28] With the exception that the Imperial Valley Association of Governments, rather than a County Transportation Commission, does the programming and project selection in Imperial County.

decision makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible. An Environmental Impact Report, commonly called an EIR, must be prepared for any project with potentially significant environmental impacts that cannot be mitigated to a level of “less than significant.” The EIR identifies project alternatives and feasible mitigation measures. The RTP as well as the projects listed in it are considered projects for the purposes of CEQA as are subsequent RTP amendments or updates. The CEQA Guidelines (California Code of Regulations Title 14, § 15000 et seq.) require MPOs to analyze the potential direct, indirect, and cumulative greenhouse (GHG) emissions impacts from the plan and mitigate any significant impacts.

Federal Clean Air Act

MPO transportation plans must show that they can meet the National Ambient Air Quality Standards (NAAQS) standards established by the EPA under the federal Clean Air Act (42 U.S.C. Ch. 85 (§§ 7401-7671q)) for the allowable concentrations of six criteria pollutants in the atmosphere: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM2.5 and PM10), lead (Pb), and sulfur dioxide (SO2). Areas that do not meet the federal air quality standards are designated "nonattainment" areas while areas that formerly violated, but currently meet, the federal air quality standards are termed “maintenance” areas. MPOs in nonattainment and maintenance areas are required to show compliance with the federal Clean Air Act through the transportation conformity process (described below). Penalties for regions failing to meet the NAAQS include withholding federal transportation funding.

State Implementation Plan (SIP)

The State Implementation Plan (SIP) is a federally mandated statewide plan for achieving the goals of the Clean Air Act and describes how the NAAQS will be met. The SIP has both statewide and regional components. The California Air Resources Board (CARB) is responsible for submitting the SIP to the EPA, and for developing and implementing statewide control measures such as vehicle emission controls related to on-road mobile sources. Local air pollution control and air quality management districts (an APCD or AQMD) are responsible for regional control measures, which may also include measures that affect mobile sources. If an area does not meet the NAAQS, it is designated as a nonattainment area and the MPO must then submit an attainment plan showing the actions it will take to meet the NAAQS.

For MPO nonattainment regions, the MPO, FHWA, and FTA are responsible for making the conformity determination. Transportation conformity is required by the Clean Air Act section 176(c) (42 U.S.C. 7506(c)) to ensure that federal funding and approval are given to highway and transit projects that are consistent with ("conform to") the air quality goals established by the SIP. The EPA’s Transportation Conformity Rule (Title 40 CFR Part 93) sets forth the policy, criteria, and procedures for demonstrating and assuring conformity of transportation activities. The RTP needs to meet four requirements:

1) Regional emissions analysis
2) Timely implementation of Transportation Control Measures (TCMs)
3) Financial constraints analysis, and
4) Interagency consultation and public involvement.

Transportation plans must conform to the state-approved SIP, which means that on-road transportation activities will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of any relevant NAAQS. In nonattainment and maintenance areas, federal regulations require that RTPs, FTIPs, and federally funded or approved highway and transit activities demonstrate transportation conformity. The USDOT cannot fund, authorize, approve or support programs or projects that do not conform to the SIP (42 U.S.C. 7506(c)).

California Clean Air Act (CCAA)

The Federal Air Quality Act of 1967 permitted California to set its own air quality rules due to California's unique geography, climate, and expanding number of people and vehicles. CARB sets and updates state air quality standards. These standards, known as the California Ambient Air Quality Standards (CAAQS), are usually more stringent than the federal NAAQS. However, California law only requires incremental progress toward attainment and does not require that CAAQS be met by specified dates as is the case with NAAQS. Although NEPA does require RTPs to demonstrate conformity for projects in nonattainment and maintenance areas (per 23 CFR 450.322(d)), California does not.

Other State Climate Legislation

MPOs must also consider state law and executive orders in the preparation of the RTP relating to the impacts of climate change. These include:

- Assembly Bill (AB) 32 (Nuñez 2006), the Global Warming Solutions Act of 2006
- California Senate Bill 375 (Steinberg 2008), the Sustainable Communities and Climate Protection Act of 2008 and CARB's SCS Program and Evaluation Guidelines
- California Senate Bill 32 (Pavley, 2016): Reduce GHG emissions 40% below 1990 levels by 2030.
- California Assembly Bill 805 (Gonzalez Fletcher, 2017): Identification of disadvantaged communities, inclusion of strategies to reduce pollution exposure in those communities, and use of a skilled and trained workforce.
- California Assembly Bill 617 (Garcia, 2017): Requires CARB and air districts to develop and implement additional emissions reporting, monitoring, reduction plans and measures in an effort to reduce air pollution exposure in disadvantaged communities.
- California Climate Crisis Act (Muratsuchi, 2022): Declares the policy of the state both to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85 percent below 1990 levels.
- 2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations
- California Transportation Plan 2050
- EO S-3-05: Reduce GHG emissions 80 percent below 1990 levels by 2050
- EO B-55-18: Carbon Neutrality by 2045
- EO N-19-19: Leveraging the state's investment portfolio to advance climate leadership and create a climate investment framework.
- EO N-79-20: 100 percent zero-emission vehicle sales by 2035.
- EO N-82-20: Conserve at least 30% of California's land and coastal waters by 2030.

Requirements Regarding Civil Rights and Environmental and Social Justice

Civil Rights

At the time the entire proposed STIP or STIP amendments (which include the FTIPs prepared by MPOs) are submitted to the FHWA and the FTA for approval, the state must also certify that the transportation planning process is being carried out in accordance with all applicable requirements of federal law:

- Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21
- 23 U.S.C. 134 and 135, 49 U.S.C. 5303 and 5304
- Section 1101(b) of the FAST Act (Pub. L. 114–357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects
- 23 CFR part 230 regarding implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts
- The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38
- The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance
- 23 U.S.C. 324, regarding the prohibition of discrimination based on gender, and
- Section 504 of the Rehabilitation Act of 1973 (regarding discrimination against individuals with disabilities.

23 CFR §450.220.

Title VI of the Federal Civil Rights Act

Title VI of the Civil Rights Act of 1964 (49 CFR part 21) prohibits intentional discrimination by recipients of federal funds on the basis of race, color, or national origin. These rights were expanded to include sex, age, and disability through the Federal-Aid Highway Act of 1973, Age Discrimination Act of 1975, the Rehabilitation Act of 1973, and Americans with Disability Act of 1990. Title VI was further amended in 1987 to extend non-discrimination requirements for federal aid recipients to all of their programs and activities, not just those supported with federal funds.

In addition, federal regulations adopted under Title VI prohibit policies and practices that are not intentionally discriminatory but have the “effect of subjecting protected groups to discrimination because of their race, color, or national origin” (49 CFR § 21.5). The USDOT has adopted a program to implement Title VI. Each Operating Administration (OA) must, in administering its Title VI program, identify and examine the programs and activities to which it provides federal financial assistance, while also assessing its recipients’ other activities and structures, to establish guidance, procedures, and requirements that ensure an affirmative and comprehensive Title VI program, including conducting a Title VI Assessment of each applicant for federal financial assistance and conducting compliance reviews. Each OA must also develop comprehensive community participation requirements (Community Participation Plan) that applicants and recipients must satisfy as a condition of receiving an award of federal financial assistance.

FHWA Policies

The FHWA's Title VI policy (Title 23 CFR, Chapter I, Subchapter C, Part 200) is meant to ensure compliance with Title VI of the Civil Rights Act of 1964 that requires assurances from states that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the recipient receives federal assistance from the USDOT, including the FHWA. The policy also covers procedures for processing Title VI reviews.

FTA Policies

Applicants for financial assistance from FTA must provide an assurance that the applicant will carry out the program in compliance with the USDOT's Title VI regulations (49 CFR Section 21.7(a)). MPOs must submit a Title VI Program report certifying compliance every three years (FTA Circular 4702.1B). The report must contain:

1. A demographic profile of the metropolitan area that includes identification of the locations of minority populations in the aggregate.
2. A description of the procedures by which the mobility needs of minority populations are identified and considered within the planning process.
3. Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data, at the census tract or block group level, and charts that analyze the impacts of the distribution of state and federal funds in the aggregate for public transportation purposes, including federal funds managed by the MPO as a designated recipient.
4. An analysis of any identified disparate impacts on the basis of race, color, or national origin, and, if so, a determination whether there is a substantial legitimate justification for the policy that resulted in the disparate impacts, and if there are alternatives that could be employed that would have a less discriminatory impact.

This information is submitted to the state and also to the FTA separately from the RTP.

California Civil Rights Legislation

California Constitution Article 1, Sections 31 declares that the state shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting.

California Government Code Section 1135 states that recipients of state funds may not discriminate against any person on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation.

Environmental Justice

The goal of environmental justice (EJ) is to protect underrepresented and low-income communities from incurring disproportionate negative environmental impacts. EJ in transportation planning stems from

Title VI of the Civil Rights Act of 1964 (Title VI) which prohibits governmental discrimination on the basis of race, color, or national origin under any program receiving federal funds, but expands protection for various groups that are subject to disproportionate effects from governmental policies and programs.

Transportation projects can contribute to smog and air pollution, greenhouse gases, noise and vibration, as well as safety and security that can adversely affect disadvantaged groups due to their age, disability, economic inequity, gender identity, population density, and race (Faghri et al., 2022)).

Federal EJ Requirements

Although Title VI only covers racial or ethnic discrimination, EJ also encompasses concern for low-income and disadvantaged communities. In 1994, President Clinton issued Executive Order 12898 (February 1994) which required each federal agency to make achieving environmental justice part of its mission "by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

Pursuant to Presidential Executive Order 12898, the USDOT has adopted regulations directing MPOs to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and low-income populations.

FTA EJ Circular 4703.1 describes a "disproportionately high and adverse effect on minority and low-income populations," as "an adverse effect that: (1) is predominately borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population."

California Environmental and Social Justice Requirements

Under state law, environmental justice means "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code, § 65040.12(e)). MPOs should coordinate closely with members of disadvantaged and low-income communities on plan development and ensure that social equity factors relevant to transportation include housing and transportation affordability, access to transportation, displacement and gentrification, and the jobs/housing fit to conform to both federal law and the California Constitution.

Transportation-related environmental impacts remain substantial and fall disproportionately on the most vulnerable populations. According to the UC Davis Center for Regional Change, the challenge is to "reduce these impacts while meeting the mobility needs of society, fostering healthy and equitable communities, and supporting economic growth. An equitable transportation system is one that offers all users affordable, convenient, and reliable access to destinations in a manner that does not create disproportionate environmental, social, or economic impacts for people on the basis of race, color, national origin, income, or other factors" (UC Davis Center for Regional Change, 2019).

Senate Bill (SB) 535 (De León, 2012) established initial requirements for minimum funding levels to "Disadvantaged Communities" (DACs) from the state's Cap-and-Trade Program. The legislation also gave CalEPA the responsibility for identifying those communities, based on "geographic, socioeconomic, public health, and environmental hazard criteria" (California Office of Environmental Health Hazard Assessment, 2024). Disadvantaged communities refers to the areas throughout California that most suffer from a combination of economic, health, and environmental burdens, which include poverty, high unemployment, air and water pollution, presence of hazardous wastes as well as high incidence of asthma and heart disease. One way that the state identifies these areas is by collecting and analyzing information from communities all over the state. As noted above, CalEPA developed CalEnviroScreen, an analytical mapping tool that combines different types of census tract-specific information into a score to determine which communities are the most burdened or "disadvantaged" (California Public Utilities Commission, n.d.). MPOs can use this tool to identify communities that may be disproportionately affected by proposed transportation projects and policies.

Part II: What does research tell us about MPO Planning and Programming?

Part 1 of this chapter reviews the legislative and policy history that has given rise to metropolitan transportation planning carried out by MPOs and it details the multi-level legal and regulatory framework in which MPOs operate. This framework of federal law and California state laws and policies has required MPO planning to simultaneously address an expanding number of issues, including defining regional investment needs, safeguarding air quality, measuring transportation system performance, including diverse publics in decision-making, attending to fiscal constraints, reducing GHGs, encouraging more sustainable regional development patterns, ensuring transportation system benefits and burdens are shared fairly across the population, and more. Additionally, for some key concerns, MPOs must increasingly account for crucial intersections across planning dimensions; for example, when planning to achieve SB 375's GHG reduction targets, many MPOs must also consider the dynamics and connections between housing supply and affordability, access to jobs and other essential destinations, VMT, and equity. Their task is a complex one.

The degree to which an MPOs can adequately address these demands is reflected in the two central products for which they are responsible: the RTP and the FTIP. The selection of projects for long term regional plans (RTP) and the programming of projects in near term expenditure plans (the FTIP) are the decisive products by which one can measure how well MPOs address these multifaceted concerns and requirements in the planning processes they shepherd, and the products that result.

Accordingly, Part 2 of this chapter discusses insights from the research literature on how these regional bodies function and how they evaluate, prioritize, and program transportation projects. The sections that follow report on recent contributions to the urban planning, policy, and transportation literature that highlight salient lessons about how MPOs work more generally and how they make decisions, particularly about long term investment priorities and projects for approved investment plans, with a particular focus on equity and climate concerns.

MPOs Are Diverse Organizations with Uneven Capacities

While MPOs must deliver on standard federal (and, in California, state) mandates regarding their responsibilities for planning and programming projects, MPOs across the nation—and even within a single state, such as California—vary considerably from one to the next. Heterogeneity among MPOs is visible in both the external environments in which they operate as well as MPO's own internal organization, governance, and staff capacity. Externally, the size and context of planning areas served by MPOs can range from small, more isolated urban areas with populations just over 50,000 to large metro areas of five million or more. The economy may be contracting in one MPO region but rapidly expanding in another. One MPO may need to coordinate with multiple transit operators within its boundaries, while in another MPO region minimal to no transit service may exist (Sciara, 2017; Sciara et al., 2021). As organizations, MPOs can have different governance structures and organizational capacity. In California, for instance, most MPOs are organizational units hosted by a regional council or association of governments, while some are stand-alone entities, like the Bay Area MTC. Elsewhere, MPOs may also be hosted by the state department of transportation (DOT) or a city or county government. MPO voting boards are composed on average of 16 officials, most of whom are municipal elected officials, but some MPO boards may be much larger, and some grant voting board seats to transit operators and some not (Sciara & Rahman, 2021). MPOs also vary in the size and capacities of their technical staff. A small MPO may have two or three generalist employees and rely on state or local agencies for technical assistance, while larger MPOs can have staffs that range from 30 to over 100, responsible for more specialized technical or substantive competencies ranging from air quality to travel modeling to transportation disadvantage (Kramer et al., 2017).

Their varied and evolving geographic and governance contexts means that MPOs can have different regional transportation priorities, processes to plan and evaluate projects, and resulting planning products. For example, differences in MPO size, budgets, staff resources, and governing boards affect an MPO's ability to attend to various issues in project planning and selection. Smaller MPOs with limited staff capacity can be challenged to produce the same level of equity analysis as other organizations, leaving notions of equity vaguely defined as a result (Krapp et al., 2021). Meanwhile, MPOs with larger staffs have more bandwidth for initiatives beyond RTP and FTIP preparation, including developing their own incentive grant programs (Sciara & Handy, 2013) or preparing applications for additional federal discretionary grants or aiding member local governments and agencies in their own applications (Lowe & Sciara, 2018).

Changing regional contexts also contribute to variation in how MPOs define and address priorities, with implications for equity planning. In regions with pronounced atmospheric thermal inversion which traps pollution, for example, MPOs may need to reconsider whether traditional urban core transit investment remains a viable strategy for improving accessibility or mitigating air pollution exposure for low income and marginalized communities. In the California context of extreme housing need, gentrification of urban cores and sub- and ex-urbanization of poverty require some MPOs to address equity in new ways (Heyer et al., 2020).

MPO Project Selection and Prioritization: Rational Technical and Political Dimensions

The planning and transportation literature directs much attention to methods that MPOs, state DOTs, and other transportation agencies use to evaluate, select, and prioritize projects for funding. By far the bulk of the literature, including key texts(Meyer, 2016; Sinha & Labi, 2011),describes technical prioritization techniques, cataloging the transportation performance criteria traditionally employed, including mobility, accessibility, safety, air quality, and cost (Noyce et al., 2021), and grouping prioritization methods into largely quantitative and data-driven approaches (cost-benefit, cost-effectiveness, and multiple-criteria assessments) and softer so-called process-based approaches (Kramer et al., 2023).

The criteria used to select and prioritize transportation projects have expanded over time, reflecting that transportation systems must increasingly serve multiple and often competing objectives. In particular, the 1991 passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) shifted decision criteria from a more singular focus on roadway performance, automobile levels of service, and congestion relief to more multi-dimensional and multi-modal criteria. Recent literature, for example, emphasizes incorporating multiple broader criteria in project decision-making, including health (Deniali et al., 2022) and equity (Krapp et al., 2021), and prioritizing projects across modes. Still, because the transportation funding around which MPOs plan is largely siloed (i.e. usable only for specific modes or purposes (as illustrated in Figure 2-1), cross-modal project selection and prioritization presents particular complexity for MPOs (Gunasekera & Hirshman, 2014).

Figure 2-1. Modal Siloes in Project Prioritization (source: Gunasekera et al., 2014)

The prioritization scholarship recommends general best practices like aligning selection criteria with long-term transportation goals and emphasizing user impacts in scoring (Broniewicz & Ogrodnik, 2020; Meyer, 2016; Sperling & Ross, 2018). Yet, the literature also acknowledges that “no single [prioritization] approach is ‘best’; as agency goals and operating conditions vary greatly, it is essential that the process be flexible and appropriate to those conditions” (Gunasekera & Hirshman, 2014, p. 64).
While transportation scholarship highlights technical aspects of project assessment, project decision-making within MPOs has an inherently political dimension as well. These regional bodies do not depend exclusively on rational-technical project assessments or model results to select projects for RTPs and FTIPs; they rely on governing bodies mostly composed of elected officials to make decisions, following a “process-based approach.”

> MPO governing boards, which have the final vote on what makes it into the [RTP]…and TIP, are composed of individuals motivated to consider public and political ramifications of projects; therefore, it is expected that the process-based method is present to some degree in all MPO project prioritization (Kramer et al., 2023, p. 15).

Existing scholarship points to some key lessons about these public and political dimensions of MPO decision-making, discussed in the next section.

Structural Factors in the Politics of MPO Project Selection and Prioritization

Federal and state laws require MPOs to craft regional visions for their metropolitan transportation systems and to identify which near-term projects will best serve that future vision as well as current needs. Yet, structural factors can allow the interests of individual local governments and single transportation agencies on the MPO board to prevail in RTP and FTIP selection processes over what may be more region-serving projects in technical terms.

Close study of MPO programming decisions reveals that localism is a significant force, leading decision makers to favor parochial projects popular with constituents, even where those projects provide few regional benefits. As the share of city and county elected officials (as opposed to nonpolitical or planning staff board appointees) on MPO boards increases, smaller shares of FTIP transportation dollars are allocated to regional (as opposed to local-serving) projects (Gerber & Gibson, 2009). Additionally, local governments where residents have approved local option transportation sales tax measures typically exercise more control over this significant funding source; in California, from 1976 to 2016, such tax measures attracted more county support when they returned funds to local jurisdictions and dedicated money to transit (Brown et al., 2020).

The literature also points to the limited direct authority that MPOs have over funding allocation in their region, though this is less true in California. While federal policy suballocates modest pots of federal CMAQ and STP monies directly to some MPOs, the bulk of federal and state transportation funds for regional expenditure flow to and are allocated by state DOTs. This fact can advantage state-led priorities in RTP and FTIP project selection, even though MPOs must sign off on those state DOT choices (Sciara & Handy, 2017). State-level action has been influential in metro area transit investment decisions (Lowe, 2014) as well in the choice of projects an MPO advances for federal discretionary grant applications (Lowe & Sciara, 2018). The state DOT role in regional project selection is smaller in California than elsewhere, however; a state law passed in the late 1990s set aside three-quarters of the state transportation fund for urban areas, though it empowered county agencies, not MPOs, to direct their use (Sciara & Wachs, 2007).

Technical Shortcomings for Assessing Equity in Prioritization

Just as some point to political dynamics evident in MPO project selection as a cause for concern, others point to challenges with MPO reliance in decision-making on transportation demand models and technical inputs. Scholars have called attention to the failings of standard MPO equity assessments, in particular, for informing regional programming decisions. Methodological shortcomings, including definitional ambiguity and inconsistency and the absence of standard analytical guidance, mean such

analyses often lack rigor (Karner & Niemeier, 2013). A review of MPO practice in the 40 largest metro regions found that over half of the MPOs use equity as a criterion for FTIP project selection in some way; however, the equity metrics deployed were relatively basic, assessing for example whether transportation investments are located close to areas where vulnerable communities are concentrated (Krapp et al., 2021). Recommended improvements include more comprehensive definitions of equity and of target groups; more comprehensive equity evaluation methods; and increased weight for equity in project prioritization. Others have called for reducing MPOs' reliance on traditional models, data, and technical analyses for project prioritization, and instead for including experiential knowledge and data from transportation system users and regional residents (Nostikasari & Colleen, 2020). Though existing technical analyses may in fact seek to "capture the needs of marginalized communities…[the] data and information privileged in these techniques may obscure the unique needs of communities" (675).

MPO Experiences with Project Selection and Prioritization

Several recent studies bring MPO project prioritization practices into the spotlight. One study examines project prioritization in Florida specifically at the juncture between an MPO's long-range RTP and the state DOT's development of its (5-year) state improvement program (STIP). Florida state law uniquely requires MPOs to annually develop a "list of project priorities" for the state DOT district office; the list should inform DOT programming of projects in the state TIP. The MPO's list communicates local priorities and forms an important bridge from the RTP to the state TIP. Though all Florida MPOs face this state requirement, each develops their priority list in very different ways, some ranking priorities in a siloed fashion by mode and others by funding source (Kramer et al., 2023).

Other research provides insight into regional project selection patterns in California under SB 375. One lesson—drawn from a study of five MPOs—is that California MPOs may make more climate-friendly project commitments for long-term time planning horizons than for near term FTIP funding and implementation (Barbour et al., 2021). For five California MPOs in a diversity of regions by size, geography, and urban development patterns, projects included in each region's most recently adopted long-range plan (RTP) were compared with those projects slated for actual investment in two subsequent near-term transportation improvement programs (FTIPs). Across all regions except the San Francisco Bay Area, the majority share of both planning and programming commitments favored auto infrastructure. Further, investments programmed for FTIP funding tended to be less multimodal than those planned for in the RTP. At the largest MPOs, shares of funding for auto infrastructure were larger in the near-term FTIP than in the long-term plan, while shares of funding for transit in the FTIP were smaller than had been envisioned in the RTP (Barbour et al., 2021, pp. 69–70).

Further work in California explores whether patterns in the selection of local option sales tax-funded (LOST-funded) projects threaten MPO efforts to reduce regional GHG emissions under SB 375. For California's four largest regions, this study inventories projects linked to 45 local option tax measures passed from 1976 to 2022 and asks how these locally-approved projects compare in mode and purpose to regional spending priorities captured in the MPO's RTP (Barbour & Thoron, 2023). Patterns across the MPOs suggest local option tax spending overall has grown more favorable for SB 375 purposes; planned LOST expenditures have shifted "away from VMT-inducing project spending over time, and towards VMT-neutral or VMT-negative spending instead" (Barbour & Thoron, 2023, p. iii)). Nonetheless,

for specific individual regions—the Bay Area and San Diego—local option transportation spending is "substantially…less sustainability-oriented…than RTP/SCSs (Barbour & Thoron, 2023, p. iii)."

Conclusion

This chapter has detailed the wide array of federal and state laws, regulations, and guidelines governing MPOs in developing their RTPs/SCSs and FTIPs for approval. It also reviews research on MPO planning and programming practice. In concert, the two elements of this chapter provide a framework for interpreting much of the material presented and discussed in Chapter 3 (the processes followed in RTP/SCS and FTIP development), Chapter 4 (the evaluation metrics and rubrics used to evaluate proposed projects), and Chapter 5 (interviews and focus group discussions with MPO board members, staff, and climate and equity stakeholders on the perceptions of the evaluation and programming processes).

Chapter 3: The Widely Varying Processes of MPO Transportation Planning and Programing in California

This chapter describes the process by which each of seven California Metropolitan Planning Organizations (MPO) develops and selects project proposals for inclusion in Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCSs) and Federal Transportation Improvement Programs (FTIPs). Chapter 4 complements this one with an in-depth exploration of the qualitative and quantitative project-level assessment methods that each of the studied MPOs, County Transportation Commissions (CTCs), or Regional Transportation Planning Agencies (RTPAs) use to understand and compare projects.

To understand how MPOs publicly represent their project selection processes, the research team collected, reviewed, and analyzed documents published by the seven sampled MPOs pertaining to the planning processes. These documents included:

1. The MPO's **Overall Work Program (OWP)** for the three years leading up to the adoption of the studied RTP. MPOs produce an OWP, which is a managerial document that links programmed expenditures with goals and desired outcomes. These OWP documents were used to answer two questions: (1) how does the MPO present project-level assessment in the OWP, and (2) what resources does the MPO dedicate to project-level assessment?

2. The **Regional Transportation Plan/Sustainable Communities Strategy** (RTP/SCS). We examined the seven sampled MPOs' RTP/SCS documents for evidence on how equity and climate considerations were presented in terms of both goals and links to performance measures.

3. The required **Public Participation Plans** for RTP/SCS. These were used to address two questions: (1) What are the timeline and procedures for engaging members of the public about the RTP and FTIP, and (2) what are the protocols for addressing disagreements about projects?

4. **Federal Transportation Improvement Programs** (FTIPs), where agencies allocate funding to specified projects. We examined the FTIPs and MPOs' discussion of them for information on whether and how projects in the FTIP were evaluated, scored, and ranked.

5. MPO **Meeting Agendas, Reports, Presentations** and **Minutes**. The research team used these to determine how project lists and individual project information were presented to MPO board and committee members and to identify conflicts that arose in public deliberations over project selection.

6. **Environmental review documents**. These were selectively examined for comments on potentially controversial projects included in RTP and FTIP project lists.

California's Large Regions ("Big 4" MPOs)

California's four largest MPOs are home to more than four of every five Californians. As such, their planning practices and funding decisions have outsized impacts on the state's transportation system. Accordingly, we review all four of them below, beginning with the Bay Area's Metropolitan Transportation Commission.

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the MPO for a nine county Bay Area region consisting of San Francisco, Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara, and San Mateo counties. The Association of Bay Area Governments (ABAG) is the regional planning agency that engages in regional land use planning, environmental stewardship, energy efficiency and water resource protection. MTC and ABAG share staff and responsibility for the Plan Bay Area 2050, which is the 2021 Regional Transportation Plan/Sustainable Communities Strategy assessed for this study (Metropolitan Transportation Commission, 2021a).

In 2018, MTC inaugurated its Horizon Initiative, a strategic scenario planning process conducted prior to the RTP process. Beginning in the spring of 2018, MTC solicited projects for consideration in Plan Bay Area 2050. Out of this process 97 projects were assessed by MTC in advance of Plan Bay Area 2050.

MTC and ABAG's Equity Platform (Metropolitan Transportation Commission, 2023) was launched in 2019 and helped to inform both Plan Bay Area 2050 and equity assessments of the 97 projects. The Platform informs how MTC approaches complex systems and environments surrounding social equity and infrastructure systems.

Project Performance Assessment

History of Project Performance Assessment at MTC

As discussed in Chapter 2, performance measurement and monitoring are a central component of the two recent federal surface transportation acts, Moving Ahead for Progress in the 21st Century (MAP-21) and Fixing America's Surface Transportation Act (FAST). While MTC used performance-based planning and programming before federal requirements were implemented, MAP-21 and the subsequent FAST Act continue to enhance and evolve the agency's performance work plan.

MTC began to incorporate project performance assessments beginning with its 2005 RTP, when it created goals-based assessments for 400 projects. In subsequent RTPs, MTC expanded the assessment methods to include quantitative cost-benefit analysis (Heminger, 2014). However, these assessments were limited to primarily economic issues in a single future scenario.

MTC rebooted its work in the field of performance monitoring through the Vital Signs initiative starting in 2015. This interactive online portal for performance tracking incorporates a broad range of regional issues, including metrics around transportation, land and people, the economy, the environment, and social equity.

Resources in the Overall Work Program

Project Performance assessment is listed in MTC's 2017-18, 2018-19, 2019-20 OWPs as Work Element 1212: Performance Measurement and Monitoring (Metropolitan Transportation Commission, 2018).

MTC lists the purposes of this work element as to:

- Work with Bay Area partners and other stakeholders to identify performance measures related to transportation, land use, the environment, the economy, social equity, and related issue areas for use in long-range planning and performance monitoring
- Conduct long-range performance planning for the RTP/SCS, including for scenarios/futures, policies, and projects
- Conduct performance assessments to support programming decisions, including the Federal Transportation Improvement Program (FTIP) and State Transportation Improvement Program (STIP)
- Deploy national performance measures per the requirements of the FAST Act
- Track regional performance with respect to identified RTP/SCS targets through performance monitoring data portals and reports
- Prepare the regional Congestion Management Process (CMP)

As shown in Table 3-1, MTC spent about $2.2 million on Work Element 1212 in the four years leading to adoption of the 2021 RTP/SCS, known as the Plan Bay Area 2050 .

Table 3-1: MTC Allocations to Work Element 1212 for Performance Measurement and Monitoring:

Fiscal Year	Internal Costs Allocation	Consultant Costs Allocation	Total
2017-18	$404,905	$300,000	$704,905
2018-19	$265,706	$411,000	$626,706
2019-20	$263,024	$250,000	$513,024
2020-21	$106,891	$225,000	$331,891
Total	$1,040,526	$1,186,000	$2,176,526

Source: Various MTC Overall Work Programs (Metropolitan Transportation Commission, 2018)

Activities in the Horizon Initiative

MTC's planners performed project assessments as part of the Horizon Initiative, a strategic, scenario planning exercise conducted prior to the release of the draft RTP/SCS. Scenario planning allows

planners to assess the performance of a project or group of projects against different possible futures with bundles of varied assumptions. This is in contrast with the single-forecast predict-and-act planning approach utilized by most California MPOs in which a project or plan's performance is assessed against a single set of assumptions about the future.

County transportation agencies, public transit operators, the MTC Operations Section, cities, nongovernmental organizations, and members of the public were all invited to submit project ideas as part of the Call for Transformative Projects, which closed in fall 2018.

As part of the Horizon effort, projects were assessed against the three futures identified in the Horizon Initiative:

- ***Rising tides, falling fortunes****:* this scenario is characterized by a relative dearth of federal infrastructure funding, unsuccessful deployment of automated vehicles, and a lack of effective global climate regulation resulting in sea level rise.
- ***Clean and green***: this scenario reflects many of California's policy ambitions: more effective environmental regulations, higher density development, and lower levels of automobile travel and associated emissions.
- ***Back to the future***: this scenario extends much of the 1950s-2010s period in the Bay Area, with sustained economic and population growth and continued suburbanization supported by automated vehicles.

Between the summer of 2018 and the winter of 2019 MTC developed a project performance assessment evaluation methodology with input from the Regional Advisory Working Group (RAWG). Between spring and fall of 2019, 97 major transportation investments each with a combined capital and operations cost of $250 million or more were required to undergo the assessment to shed light on how each project would perform given uncertain future conditions. These projects were identified by MTC staff, County Transportation Commissions, and a process for the public to submit and vote on project ideas.

Climate and Equity Concerns in the Bay Area Plan 2050

Vision and Goals

Climate and equity-related goals and objectives are deeply integrated throughout the MTC RTP/SCS, rather than compartmentalized as separate, discrete goals. For example, Implementation Goal #1 is to maximize the viability of the plan's strategies with a focus on equity, effectiveness, and efficiency.

Guiding Principles

MTC adopted five guiding principles for Plan Bay Area 2050 that describe desired qualities for the future of the Bay Area that are reflected in the plan's strategies and projects. These are *affordable, connected, diverse, healthy, and vibrant*. The Plan (RTP pg. 8) defines these as:

- **Affordable**: All Bay Area residents and workers have sufficient access to housing options they can afford—households are economically secure.

- **Connected**: An expanded, well-functioning, safe and multimodal transportation system connects the Bay Area—fast, frequent and efficient intercity trips are complemented by a suite of local transportation options, connecting communities and creating a cohesive region.
- **Diverse**: The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place with access to the region's assets and resources.
- **Healthy**: The region's natural resources, open space, clean water and clean air are conserved—the region actively reduces its environmental footprint and protects residents from environmental impacts.
- **Vibrant**: The Bay Area region is an innovation leader, creating job opportunities for all and ample fiscal resources for communities.

Projects were assessed using three quantitative measures: Benefit-Cost Ratio, Equity Score (which examined the distribution of benefits and disbenefits by income group), and Guiding Principles score (which evaluated the project's alignment with the draft Plan Bay Area 2050's five guiding principles.

The results of the Project Performance Assessment were shared with project sponsors, who were invited to submit board-approved commitment letters detailing specific ways in which the sponsor could address performance deficiencies.

An example of project performance information available to decision-makers appears below in Table 3-2 for project #3200, the State Route 37 Long Term Project, which links Sonoma, Marin, Napa, and Solano counties around the top of San Pablo Bay. This $8.0-11.2 billion project would widen and elevate State Route 37, a coastal route already subject to flooding that would increase in frequency as a result of sea level rise. The project would also add express bus service and new interchanges and would be funded in part by a toll on its use.

The State Route 37 project has a benefit-cost ratio of 2, meaning that benefits are estimated to be double the costs. However, the assessment found that the project would "challenge" equity outcomes in each of three future scenarios. The assessment also found that the project did not support the guiding principles *affordable* and *healthy* but did support the guiding principles *connected*, *diverse*, and *vibrant*.

Table 3-2: State Route 37 Scores in Horizon Initiative Assessment

Benefit-Cost Ratio			***Equity Score***			***Guiding Principles***				
Rising Tides Falling Fortunes	Clean And Green	Back To the Future	Rising Tides Falling Fortunes	Clean And Green	Back To The Future	Affordable	Connected	Diverse	Healthy	Vibrant
2	2	2	Challenges	Challenges	Challenges	Does Not Support	Supports	Supports	Does Not Support	Supports

Detailed descriptions of MTC's project assessment methodologies and project scoring employed for each scenario are described in more detail in Chapter 4.

Table 3-3 below shows the sequencing of Horizon Initiative Activities prior to Plan Bay Area 2050. MTC presented final project performance assessments in advance of the environmental review process for the Plan Bay Area 2050 RTP/SCS.

Table 3-3: Timeline for MTC's Preparation of 2021 Plan Bay Area 2050 RTP/SCS

Date	***Milestone or Work Element***
2018	Horizon Initiative - strategic scenario planning prior to RTP process
Spring 2018 - Spring 2019	Solicited projects for consideration in Plan Bay Area 2050. Up to ten of these projects were solicited through a "transformative projects process" where cities, organizations, or individuals could submit projects directly to be considered by an MTC jury.
Summer 2018 - Winter 2019	Developed a project performance assessment evaluation methodology with input from the Regional Advisory Working Group (RAWG) and Regional Model Working Group (RMWG) (Tapase, 2019)
Spring 2019 - Fall 2019	Completed project performance assessments to evaluate the benefits and costs of 93 projects against the three futures identified in the Horizon Initiative.
November 8, 2019	Presented draft project performance assessment results to Joint MTC Planning Committee/ABAG Administrative Committee. For this meeting, MTC received comments from three members of the public and representatives of three government agencies.
November 13, 2019	Presented draft project performance assessment results to MTC Policy Advisory Council
January 2020	Release of Project Performance Assessment Final Findings (Tapase, 2022). The list of projects evaluated grows from 93 to 97.
September 28, 2020	Notice of Preparation of Draft Environmental Impact Report (EIR) for RTP/SCS
June 4, 2021 - July 20, 2021	Draft EIR Comment Period
October 21, 2021	MTC Board Adopts the RTP/SCS and CEQA Notice of Determination

In November 2019, MTC staff presented the draft project performance assessment results to both the Joint MTC Planning Committee/ABAG Administrative Committee and the MTC Policy Advisory Council.

The joint meeting of the MTC Planning Committee and the ABAG Administrative Committee received a presentation on the draft results from the Project Performance Assessment on November 8, 2019, which

evaluated 93 projects against the three futures to determine their cost-effectiveness, equity impacts, and alignment with Guiding Principles (Metropolitan Transportation Commission, 2019).

As noted in Table 3-3, at the November 8, 2019, meeting, the Joint MTC Planning Committee/ABAG Administrative Council received comments on project selection and performance assessments from three individuals and representatives from three government agencies. Overall, these comments indicated that commenters relied on the assessment information provided by the Horizon methodology to make their case for or against the project, indicating the value of this information to the public:

- Emily Loper of Bay Planning Coalition supported the Bay Area Ferries (WETA)'s expansion strategy and the State Route 37 project linking Sonoma, Marin, Napa, Solano counties. Ms. Loper noted that State Route 37 did not score well on equity, possibly due to tolling.
- Morgan Browning of Accelerated Ecological Governance discussed modeling, watershed, and integrated planning.
- Stuart Cohen of FASTER Bay Area noted that MTC was breaking new ground through project-level scenario analysis for its Horizon Initiative. Mr. Cohen noted that a lot of projects scored well on equity measures and argued for the importance of reforming Bay Area public transit fare policy.
- Derek McGill of Transportation Authority of Marin spoke on behalf of the North Bay County Transportation Agencies regarding the Highway 37 project, stating that MTC has worked closely with the county transportation agencies on the project performance assessment.
    - Robert Guerrero of Solano Transportation Authority echoed this comment.
- The San Francisco County Transportation Agency also submitted an extensive comment..

At its November 13, 2019, meeting, the MTC Policy Advisory Council received a presentation on the draft results from the Project Performance Assessment, which evaluated the 93 projects against the three futures. There were no board or public comments on this item.

Outside of public meetings held by the MTC, the results of performance assessments were shared with project submitters.

The results were also made available to the public on the Internet. In January 2020 the MTC released the Project Performance Assessment Final Findings.

The Project Performance Assessment findings and sponsor commitments were later used in trade-off discussions that took place before the MTC Planning and ABAG Administrative Committee in June, July, and September 2020, which ultimately culminated in commission action approving regional funding support for a selection of large transportation investments.

In spring and summer of 2020, concurrent with the trade-off discussions over major transportation investments, county transportation agencies and multicounty transit operators sought board approval of their individual transportation project lists and then submitted those documents to MTC for inclusion in the Plan Bay Area 2050 Transportation Project List. These documents identified local priorities, including major transportation investments, capacity-increasing transportation projects, and programmatic

categories of investments that are exempt from transportation air quality conformity analysis. The Plan and Transportation Project List of 133 projects were formally adopted on October 21, 2021. Some projects assessed for the Horizon Initiative were not funded. Other projects not assessed were included in the final project list, such as transportation system management and transportation demand management projects.

As is the case for all MPOs, including MTC, following adoption of a regional transportation plan projects may be added to the Transportation Project List, the anticipated completion date of projects on the list may be moved earlier or delayed, or their funding amount may be altered through an administrative modification or amendment to the proposed Plan.

Given the fiscal constraint requirement, adding a new project or increasing the cost of a project already included on the Transportation Project List requires either (1) a commensurate reduction in proposed expenditures elsewhere on the list, or (2) an increase in funding. Those proposing new projects to be included in the proposed Plan that exceed a capital and operating cost threshold of $250 million are in addition required to undergo the Project Performance Assessment described above, which is used to determine their inclusion in the Plan Bay Area 2050 Transportation Project List.

RTP/SCS Public Participation

MTC's guiding principles for public participation in its Public Participation Plan include five strategies. These principles keep disagreements visible: Strategy #4 is to "inform commissions and the public of areas of agreement and disagreement. MTC staff summarizes comments heard from various parties on items going before the Commission for action so that the Commissioners and the public have a clear understanding of the depth and breadth of opinion on a given issue."

MTC and ABAG staff gave 161 presentations on Plan Bay Area 2050 and the Horizon initiative at public advisory committee and board meetings. According to the Plan Bay Area Public Engagement Report executive summary:

> For the public engagement process, MTC and ABAG used a variety of new and innovative techniques to reach more residents than ever before. The Horizon initiative yielded participation from nearly 4,000 Bay Area residents who provided over 17,000 comments, including key input that helped create the plan's five guiding principles as well as identifying the plan's high performing strategies.
>
> Since that time, Plan Bay Area 2050 added nearly 15,000 additional participants and over 216,000 additional comments, for a total of over 234,000 comments from nearly 19,000 Bay Area residents. This marks an unprecedented level of engagement that offered insights and feedback that improved the plan through its four-year development. These statistics are for the period from early 2018 to September 2021.
>
> Metropolitan Transportation Commission & Association of Bay Area Governments, 2021.

Federal Transportation Improvement Program

The MTC released the Draft 2021 FTIP and Draft Transportation-Air Quality Conformity Analysis for review and comment on November 9, 2020 (Metropolitan Transportation Commission & Association of Bay Area Governments, 2020). The comment period ended December 14, 2020. The agency received two comments about redirecting FTIP funding to pandemic needs and air quality. MTC circulated the Draft 2021 FTIP and Conformity Analysis for public review from November 9, 2020 to December 14, 2020.

Table 3-4 below shows a timeline of FTIP activities.

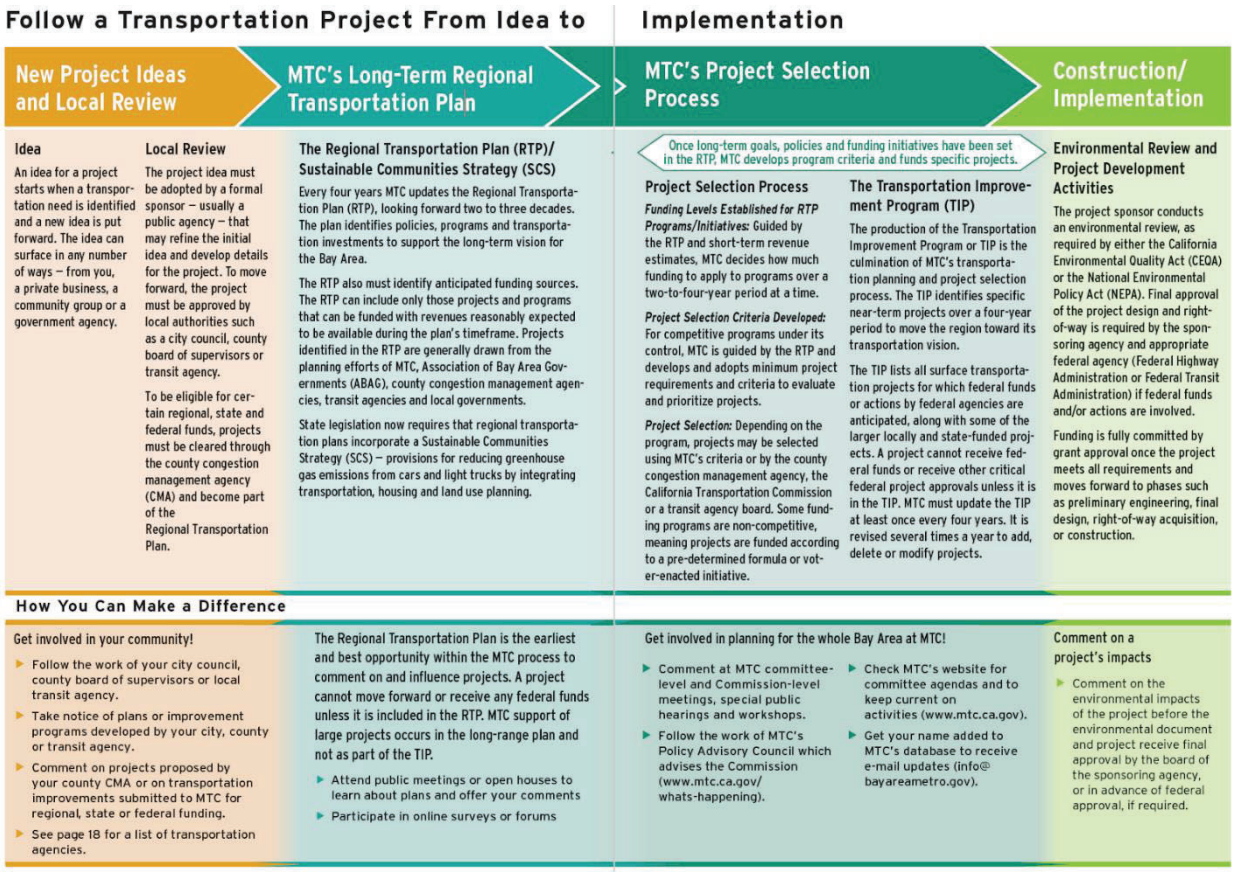
Table 3-4: Timeline for Preparation and Approval of 2021 FTIP

November 9, 2020	Draft 2021 TIP and Draft Transportation-Air Quality Conformity Analysis released for review and comment
December 14, 2020	The comment period ended. MTC received two comments about redirecting TIP funding to pandemic needs and air quality, but no comments specific to a project (Metropolitan Transportation Commission, n.d.)
February 1, 2021	MTC approved 2021 TIP and updated its regular Guide to TIP to make it more accessible (Metropolitan Transportation Commission, 2021b)
April 1, 2021	FTIP approved by California Transportation Commission as part of 2021 FSTIP
April 16, 2021	FHWA and FTA approve 2021 FSTIP

FTIP Public Participation Guide

MTC has produced a *Guide to the San Francisco Bay Area's TIP* for each of the past five TIP cycles. This guide "explains how the public and interested stakeholders can get involved in the San Francisco Bay Area's transportation project development process" in a clear manner that is accessible to elected officials and the public alike. Figure 3-1 below is an excerpt from this guide.

Figure 3-1: Except from A Guide to the TIP



Source: (Metropolitan Transportation Commission, 2021b)

While MTC has guidance on how the public can participate in the FTIP process, during the 2021 FTIP cycle, MTC received only two public comments:

> One commenter did not support the adoption of the 2021 FTIP at that time and advised that investments should be re-prioritized. The commenter supported expanded funding for public transit and reduced funding for roadway projects.
>
> One commenter suggested that the Conformity Analysis be updated to include more discussion of the health impacts of transportation-related emissions.

Highlights

MTC has the most comprehensive and transparent RTP/SCS planning and TIP programming process among the MPOs reviewed in this study. Their use of scenario planning in project performance assessment stands out; the inclusion of less desirable, though plausible, transportation, development, and climate futures is an especially effective use of scenario planning in their Horizon Initiative. Also notable is their accessible *Guide to the TIP*, which both informs and encourages participation in their work among non-experts.

In addition, the agency has a long history with project performance assessment and has dedicated substantial financial resources to perform this work. Finally, it is evident from the content of these documents that MTC's Equity Platform informs the agency's decision-making regarding projects and programs in the Horizon Initiative, the RTP/SCS, and the FTIP.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is the MPO for the federally designated ozone nonattainment area in Sacramento, Yolo, Yuba, Sutter, Placer and El Dorado Counties. El Dorado and Placer Counties retain Regional Transportation Planning Agency (RTPA) status up to the crest of the Sierras and are responsible for developing their own transportation plans. By agreement, the long-range transportation plans in El Dorado and Placer Counties are also incorporated into the 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (Sacramento Area Council of Governments, 2019a).

Project Performance Assessment

Performance-based assessment and programming appears as Project #100-006-11 or #SAC129 in SACOG's Overall Work Program. This work item in part responds to reporting requirements of the FAST Act but also includes work on SACOG's Project Performance Assessment Tool. This work item was introduced in the 2018-19 OWP and was allocated funding of $64,916 in 2018-19, $296,342 in 2019-20, and $415,018 in $2020-21, amounting to $775,556 total or $0.301 per capita.

MTP/SCS

Development of the MTP/SCS began in 2017 and was divided into three planning phases, each of which included public and private sector stakeholder participation, jurisdiction and partner agency coordination and consultation, and regular direction from the SACOG board: 1) issue exploration and policy framework; 2) policy research and analysis using discussion scenario; and 3) preferred scenario development.

The SACOG Transportation Committee and Board of Directors meetings examined the overall MTP, its scenarios, and other specifications. They did not, however, engage in project level discussions.
The 2020 MTP/SCS was adopted November 18, 2019. The MTP/SCS explicitly acknowledges that the Sacramento region is one of the most diverse in the nation in terms of race and ethnicity. About 45 percent of the population consists of people of color, and these communities of color disproportionately account for the households in the region whose members do not earn enough to cover their basic household expenses, including housing, transportation, and childcare. The Plan foresees better air quality by 2040, due to cleaner vehicles, a more productive public transit system, less reliance on single-occupancy vehicle trips, and more opportunities to walk and bike.

Goals

The four goals listed in the SACOG 2020 MTP are:

1) Build vibrant places for today's and tomorrow's residents;

2) Foster the next generation of mobility solutions;

3) Modernize the way we pay for transportation infrastructure; and

4) Build and maintain a safe, reliable, and multimodal transportation system.

Together these goals constitute an implicit focus on equity. Where the plan focuses on both creating vibrant spaces for the future and improving public transit, equity is addressed in the discussion of the risks of not taking action. These risks explicitly include equity concerns—with respect to both vulnerable populations left behind and a regional divide in the proliferation of electric vehicles. Supporting policies for these goals focus on implementing SCS strategies including building mixed-use, mixed-type housing, and promoting new employment opportunities.

The goals do not contain a specific reference to climate change; however, the goal of creating vibrant spaces for the future, awareness of the consequences of sprawl, and focus on the next generation of mobility solutions implicitly support climate goals. The section of the MTP/SCS on SB375 makes these links clear.

Policies

The Plan identifies five primary factors related to policies and actions of the MTP/SCS to achieve compliance with CARB's 19 percent reduction target:

1. ***Shortened Vehicle Trips***: Reducing the average vehicle trip lengths that residents make on a daily basis. This is accomplished largely through more compact development with a greater mix and density of uses.

2. ***Increased Transit, Bike, Walk Trips***: Shifting trips from motor vehicle travel (which generate passenger vehicle greenhouse gases) to more sustainable modes such as transit, biking, and walking.

3. ***Express Lanes and Pay-As-You-Go Fees***: Price signals are an important factor in predicting how people travel. Transitioning away from the California fuel tax, which will diminish on a per vehicle mile-traveled basis over time due to the rise of electric and hydrogen fuel cell vehicles, and toward tolling and pay-as-you-go or road user charges, will not only help generate revenue to build and maintain the system, but help to better manage demand on that system.

4. ***ITS/TSM***: Implementing both intelligent transportation systems (ITS) and transportation system management (TSM) will smooth traffic flows. This will make the transportation system more reliable, better utilize existing travel lanes, and reduce emissions from vehicles.

5. ***Electric Vehicles***: Locally funded and implemented programs that incentivize the use of electric vehicles and accelerate the penetration of these vehicles into the regional market.

Scenario Planning

SACOG employed scenario planning within its MTP process. To identify a preferred land use scenario that would be constrained by regulatory, policy, and market factors, the agency explored three land use scenarios with varying shares of new homes in the urban core and corridors, suburban areas, and in rural areas (Sacramento Area Council of Governments, 2018b). The scenarios also varied housing types, from large lot to small lot and attached homes. Ultimately, only the scenario with a greater share of attached developments and in the urban core and corridors was forecast to meet the region's SB 375 targets.

Public Participation

SACOG incorporated its 2013 public participation plan into its 2019 MTP cycle (Sacramento Area Council of Governments, 2013). The primary audience for this plan appears to be staff and consultants working on the plan: it reads like a manual that describes how to post public notices and conduct public hearings, using visualization techniques to improve public access to information, making relevant documents publicly available, and responding to public comments. It also contains a list of optional engagement activities including public surveys and workshops, and SACOG's 2020 MTP/SCS Communications and Outreach Appendix details the considerable outreach activities conducted for the 2020 cycle (Sacramento Area Council of Governments, 2019b).

The Public Comment period for the draft MTP/SCS Environmental Impact Report (EIR) was from September 2019 to November 2019. SACOG held three public hearings for the MTP/SCS-EIR and one for amendments to the MetropolitanTransportation Improvement Program (MTIP) that were necessary for air quality conformity requirements.

During the planning process, various stakeholders commented on the MTIP. California Clean Energy Committee (CCEC) staff objected to the plan's rejection of suggested project alternatives on the grounds that they did not meet the project's goals (California Clean Energy Committee, 2019). They urged SACOG to revise their alternatives analysis to reflect "a flexible and good faith effort to utilize the full spectrum of transportation options available to meet demand."

The CCEC also commented that the Draft EIR did not identify any criteria for concluding that a proposed project would be consistent with the MTP/SCS. Also, according to the CCEC, there was no cumulative analysis of the impact of climate change in the Sacramento region. Finally, the CCEC noted that basing GHG reductions on adopting changes in land use policies was flawed, as these policies had not been effective in the past; they had, according to the CCEC, caused vehicle miles of travel (VMT) to increase.

The Environmental Council of Sacramento (ECS) staff criticized some alternate mobility projects, such as increasing HOV lanes and adding auxiliary lanes as actually being capacity-increasing projects. They also noted this had become a "state-wide" trend to classify road capacity increasing projects (e.g., adding auxiliary lanes, adding restricted HOV lanes, etc.) as maintenance projects.

ECS staff also objected that, despite SACOG's intent, it would be difficult to achieve GHG reductions as local jurisdictions do not comply with policies laid out by SACOG. Moreover, the methodology used to estimate GHG reductions was not transparent. The ECS staff called for more compact development than

was proposed by the plan, which did not discuss the risk of displacement faced by members of disadvantaged communities.

In response to these comments, SACOG, among other things, added details of its climate mitigation work with local agencies in the final EIR.

Federal Transportation Improvement Program

SACOG develops its Metropolitan Transportation Improvement Plan (MTIP) in cooperation with the Placer County Transportation Planning Agency (PCTPA) and the El Dorado County Transportation Commission (EDCTC), which, as noted above, are each RTPAs that are outside of SACOG's boundaries. SACOG developed a Memoranda of Understanding with PCTPA, EDCTC, and the State of California to allow these jurisdictions to jointly prepare the MTIP.

The MTIP is prepared by, and any subsequent amendments are made in coordination with, the Regional Planning Partnership (Partnership) and the Transit Coordinating Committee (TCC). Local cities and countries, transit operators, the PCTPA, EDCTC, Native American tribes, Caltrans, five local air districts, transportation advocates, federal agencies, and other state agencies were involved in the FTIP process. There were also opportunities for the region's transportation industry to contribute.

MTIP Project Selection

SACOG formed a subcommittee to undertake project level conformity analysis.

Most projects in the current MTIP have been carried forward from the previous MTIP. The decision about which projects to carry forward is based on:

(1) identifying the status of the previous MTIP projects as reported by the sponsors (e.g., completed, deleted, or delayed);
(2) sponsor updating projects to be carried forward; and
(3) whether the project has some work scheduled during the MTIP period.

Project assessment is based on whether the proposed project is consistent with the 2020 MTP/SCS as to financial constraint, accuracy, and air quality conformity. Emissions must not exceed the Motor Vehicle Emissions Budget (MVEB) identified in the State Implementation Plan (SIP) and approved by the U.S. Environmental Protection Agency (EPA). In instances where the EPA has not approved a budget, emissions outputs are evaluated using an interim test. Projects in the MTIP and 2020 MTP/SCS are analyzed using a prescribed computer model and process, which are used to make a determination on whether those projects, if completed, would contribute, or not, to emissions that exceed the amount specified in the region's clean air plan.

SACOG also takes into consideration the transportation revenues expected to be available during the four years of the MTIP (FFY 2021 through 2024) and determines whether the 2021-2024 MTIP is financially constrained by program and by year. The list of projects is then circulated for interagency review, following which the MTIP is circulated for 30 days of public review and comment as per SACOG's Public Participation Plan. The document is made available online and the agency conducts a

public hearing. At the close of the public review and comment period, comments are compiled, and responses are recorded.

Project List Evaluation

SACOG developed a Project Performance Assessment tool in 2017-18 (Sacramento Area Council of Governments, n.d.). This includes a benefit-cost assessment (BCA) and an outcome analysis. The BCA is quantitative, while the outcome analysis more qualitatively addresses how the MTP/SCS goals achieve broader mobility/quality of life outcomes. The assessment report can be generated by local agencies and submitted with the proposed project. Details regarding the assessment tool are discussed in more detail in Chapter 4.

The MTIP is presented at both a public hearing and to the SACOG Transportation Committee for review. Once it is approved it is forwarded to the SACOG Board of Directors for adoption. As with all MPOs, the MTIP is then delivered to the Caltrans Office of Federal Programs for inclusion in the California Federal Statewide Transportation Investment Program (FSTIP). Finally, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) approve both the MTIP and the Air Quality Conformity determination.

Projects in the MTIP may be funded in any of the four years it covers. At the beginning of each federal fiscal year SACOG adopts a Delivery Plan Process that lays out the process for deciding which projects will be funded during the upcoming year.

Highlights

SACOG is one of two large MPOs to conduct project performance assessment as part of the planning and programming process. SACOG's performance-based project assessment was new for the 2020 MTP. It takes the form of a map-based assessment for projects that can be submitted to the MTIP and is further described in Chapter 4.

SACOG's public engagement materials that would give non-expert public stakeholders more insights in order to influence the process of project selection are limited compared with materials available from several of the other MPOs studied. The Public Participation Plan was updated in 2021 and is still largely focused on directing staff activities (Sacramento Area Council of Governments, 2021). A translational document intended for a general audience, such as MTC's *Guide to the TIP*, is lacking.

SACOG is the only one of the four large MPOs that includes constituent RTPAs, which produce their own RTPs. Integration of RTPs into the MTP, in a manner similar to AMBAG (described below), limits the MPO's authority over project selection processes and may create additional challenges not encountered by others in the "Big 4."

San Diego Association of Governments

The San Diego Association of Governments (SANDAG) is the MPO for San Diego County.

Project Performance Assessment

SANDAG dedicates funds to modeling and research in its Overall Work Program. However, there is no specific fund allocation for project level assessment and we could find no public documentation that SANDAG performs comprehensive project-level assessments for its RTP/SCS or FTIP. However, like other MPOs, it uses regional performance monitoring indicators and produces regular monitoring reports.

RTP/SCS

On December 10, 2021, SANDAG's Board of Directors adopted San Diego Forward: The 2021 Regional Plan (San Diego Association of Governments, 2021d). San Diego Forward's vision is "A fast, fair, and clean transportation system and a resilient region." The three goals are:

- Fast: The efficient movement of people and goods
- Fair: Access to affordable, reliable, and safe mobility options for everyone
- Clean: Healthier air and reduced GHG emissions regionwide

Fair implicitly includes equity themes and *Clean* explicitly includes climate change mitigation.

Project List Selection

SANDAG considered project readiness, project connectivity, evaluation criteria (discussed further in Chapter 4), project support of plan goals and mandates, revenue use restrictions, and anticipated revenue availability when selecting projects for the 2021 Regional Plan. However, a review of minutes from SANDAG's Regional Planning Committee, Transportation Committee, and Board of Directors from 2017-2021 did not yield evidence of any discussions of project-level assessment methodologies or the selection of individual projects.

Table 2.1 in Appendix 2 of the plan identifies specific active transportation and transit projects in CalEnviroScreen disadvantaged communities (San Diego Association of Governments, 2021d). But with respect to climate and equity goals, SANDAG did not conduct project-level climate or equity assessments prior to project selection. Indeed, the Regional Social Equity Planning Framework identifies the need to develop criteria for project prioritization that advances equitable and safe transportation, but the assessment method has not been developed yet.

Public Participation

Public Participation Plan

While SANDAG's Public Participation Plan is mandated by SB 375, SANDAG has also developed an extensive Public Involvement Plan (PIP) that goes above and beyond SB 375's statutory requirements in order to "engage a broad and diverse cross-section of the San Diego Region" (San Diego Association of Governments, 2021a). According to SANDAG, "the PIP was informed by input from the Board, Policy Advisory Committees (PACs), Working Groups, tribal governments, surveys, a wide variety of

communications experts, and regional stakeholders and partners, including a network of Community-Based Organizations (CBOs)."

To reach tribal communities, SANDAG developed a Tribal Consultation Plan and developed a policy paper to discuss at a regional tribal summit and meeting between the SANDAG Board of Directors and the Southern California Tribal Chairmen's Association (SCTCA) Board of Directors.

As part of the Public Involvement Plan, SANDAG developed strategies to ensure meaningful input opportunities for people with limited English proficiency.

Social Equity Engagement and Planning

For the 2021 Regional Plan, SANDAG contracted with 13 community-based organizations (CBOs) representing underserved and marginalized communities to assist with public engagement for the 2021 Regional Plan. Representatives from each of these CBOs participated in SANDAG's Regional Plan Social Equity Working Group. A review of this working group's minutes showed that there were repeated discussions about transit fare reductions (San Diego Association of Governments 2023).

The Regional Plan addresses how each of its 11 policy and program areas and their implementation strategies affect social equity, primarily as they relate to reducing pollution exposure in disadvantaged communities.

For the 2021 Regional Plan, SANDAG established a Regional Social Equity Planning Framework that detailed how the agency approaches, incorporates, and prioritizes social equity in all of its plans, programs, and projects (San Diego Association of Governments, 2021d). The Framework includes five components: engagement, data accountability, measuring impact, prioritizing investments, and monitoring, reporting and evolving.

In the near term, the Framework calls for:

- developing criteria for project prioritization that advances equitable and safe transportation planning, spending, and implementation
- partnering with and providing funding for community-based organizations through the SANDAG Social Equity Working Group
- completing studies, plans, and strategies, including:
    - Regionwide Displacement Study
    - Digital Equity Strategy and Digital Equity Action Plan
    - Adaptation Equity Guidance Document
    - Regional Equity Baseline Conditions Study

Longer term actions include applying, evaluating, and monitoring implementation of the Social Equity Planning Framework.

San Diego Forward's Appendix H: Social Equity: Engagement and Analysis includes extensive documentation of the public outreach process and how each of the plan's 11 policy and program areas

and their implementation strategies address social equity, particularly pollution exposure in disadvantaged communities (San Diego Association of Governments, 2021c).

Appendix H includes the results of a social equity analysis SANDAG conducted for plan-wide implementation, using performance measures for people of color, people with low incomes, and seniors. SANDAG's social equity analysis did not find statistically significant differences between the no-build scenario and implementation of the 2021 Regional Plan network for any of these three groups.

Federal Transportation Improvement Program

The SANDAG Board adopted the 2023 Regional Transportation Improvement Program (RTIP) on September 23, 2022. The 2023 RTIP covers FY 2023 through FY 2027 and implements the SANDAG 2021 Regional Plan.

SANDAG does not conduct a call for projects for federal formula funds. Rather, SANDAG programs these funds using a process described in the 2023 RTIP's Appendix I: "SANDAG Funding and Project Selection Process" (San Diego Association of Governments, 2022a):

1) Projects appearing in the 2004 TransNet sales tax extension project list,
2) Projects appearing in the latest adopted regional transportation plan (in this case the 2021 San Diego Forward plan), and
3) Projects appearing in the SANDAG Capital Improvement Program.

CMAQ and STBG projects are screened for eligibility under the authorizing statute and regulations. CMAQ projects are ranked based on a combination of cost-effectiveness and up to six points assigned from among board priorities, emissions reductions, reducing SOV travel, reducing delay, social justice, and safety. Each criterion is a binary and equally weighted. STBG projects are prioritized based on their inclusion in the Capital Improvement Program, timing in the regional plan, match funding considerations, and the board's priorities.

SANDAG performed a Social Equity Analysis of the approximately 38 percent of projects which could be assigned to a specific location included in the 2023 RTIP Appendix G (San Diego Association of Governments, 2021c). This analysis reviewed the geographic location of project expenditures to identify the proportion of a project's expenditures in Disadvantaged Communities as identified by CalEnviroScreen. SANDAG also added two questions to the database program they use to solicit project information: 1) was a Title VI analysis performed? and 2) will this project benefit low-income households, people with disabilities, people with limited English proficiency?

SANDAG received 28 comments on its 2023 RTIP (San Diego Association of Governments, 2022a). Just two of these comments were from members of the public. One member of the public suggested more investment in active transportation including greening and public infrastructure to support active transportation. Another member of the public suggested that SANDAG include notes on project-level impacts on VMT and greenhouse gas emissions. SANDAG responded:

> The RTIP is required to provide conformity information on the entire program and does not do project level conformity. That information can be obtained from the project's EIR. Also, at this time, the RTIP is not required to provide greenhouse gas conformity information. Projects which may increase VMT are indicated in the tables as CI or Capacity Increasing projects under Capacity Status. Again, further analysis of VMT increase will be available in an EIR prepared for an individual project.

SANDAG acknowledged the limitations of this analytical approach and established future goals for project-level social equity analysis as part of its Regional Social Equity Planning Framework (San Diego Association of Governments, 2021c):

1. Identify factors to measure positive and negative impacts of projects which cannot be assigned to a specific location,
2. Provide local agencies assistance and incentive to provide better location information,
3. Establish criteria for qualifying social equity-focused projects—meaning a project's benefits are expected to benefit vulnerable communities proportionately more than their counterparts,
4. Measure positive and negative impacts of projects in terms of social, economic, and environmental outcomes,
5. Delineate project locations and investments by vulnerable populations/demographics both regionally and sub-regionally, and
6. Secure funding and resources to improve methodology, automate, and improve data collection in future cycles of analyses.

SANDAG's 2024 Overall Work Program Element includes ongoing funding for these initiatives. Future work to implement the Social Equity Framework is funded by 20 percent of the $1,782,519 allocated to Work Element 3100400: Regional Plan Implementation. Work Element 7300600: Social Equity Program includes $751,532 in funding for other activities related to Title VI and ADA compliance.

Highlights

SANDAG's incorporation of climate and equity considerations into its planning and project selection processes is mixed in its approach and results. SANDAG has a promising Social Equity Framework that includes contracting with local community-based organizations to engage in the RTP process. While the agency does not assess the performance of individual projects, its Social Equity Framework identifies the need for future project-level social equity analysis.

However, like most of the MPOs reviewed here, projects that increase VMT are hard for the public to assess because, as SANDAG staff noted in response to a public comment (above), they were not required to provide this information; staff referred the commenter to the project-level EIR, which would contain the requested data within hundreds or even thousands of pages of additional information. This highlights both the public's desire for such information as part of the project evaluation process in transportation planning and the fact that providing this information is not currently required.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the MPO for a six county (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) region home to nearly 19 million residents, or nearly half of California's population.

Like other MPOs, almost the entire SCAG region fails to meet federal air quality standards for one or more transportation-related air pollutants. This has serious implications for the RTP/SCS, the FTIP, and transportation projects in the SCAG region. A major challenge is meeting the 2023 statutory deadline for attaining the 1997 ozone standard. Pursuant to the federal Clean Air Act (CAA), a Contingency Measure Plan was recently developed jointly by the South Coast Air Quality Management District (SCAQMD) and CARB, which was submitted to the EPA. If the EPA disapproves the air plan, it could lead to sanctions such as restricting federal funding for transportation projects that expand highway capacity, nonexempt project development activities, and any other projects that do not explicitly meet exemption criteria. If imposed, such sanctions have the potential to affect billions of dollars of federal funding and tens of billions of dollars of important transportation projects in the SCAG region (Southern California Association of Governments, 2020d, p. 42).

Project Performance Assessment

Our reviews of the 2017-19 through 2021-22 Overall Work Programs yielded no mention of project-level or project performance assessment, which suggests that, for the 2020 RTP/SCS, SCAG did not assess the performance of individual projects.

RTP/SCS

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Southern California Association of Governments, 2020d). For the SCAG region, CARB set greenhouse gas reduction targets at eight percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The plan lays out a strategy for the region to meet the latter of these two targets.

Vision and Goals

The goals of Connect SoCal fall into four core categories: economy, mobility, environment, and healthy/complete communities. The plan explicitly lays out goals related to housing, transportation technologies, equity, and resilience in order to adequately reflect the increasing importance of these topics in the region; where possible the goals have been developed to link to potential performance measures and targets. The Connect SoCal 2020 guiding principles place a high priority on transportation funding in the region for projects and programs that improve mobility, accessibility, reliability, and safety, and that preserve the existing transportation system.

Three of Connect SoCal's 10 goals explicitly relate to climate and equity:

- Reduce greenhouse gas emissions and improve air quality.

Support healthy and equitable communities.

Adapt to a changing climate and support an integrated regional development pattern and transportation network.

SCAG prepared an Environmental Justice Technical Report to determine whether minority and low-income communities in the region share equitably in the benefits of the RTP/SCS without bearing a disproportionate share of the burdens (Southern California Association of Governments, 2020a). This report did not include assessment of individual projects.

Project List Selection

SCAG works closely with, and defers much planning and programming authority to, the six CTCs in its jurisdiction: Imperial County Transportation Commission (ICTC), Los Angeles Metropolitan Transportation Authority (LAMTA), Orange County Transportation Authority (OCTA), Riverside County Transportation Commission (RCTC), San Bernardino Council of Governments (SANBAG), and Ventura County Transportation Commission (VCTC). As noted above, Connect SoCal 2020 is the RTP/SCS for the region. Each CTC prepares its own Countywide Transportation Plan.

Chapter 4 details how SCAG's constituent County Transportation Commissions assess the projects they submit to SCAG for inclusion in the RTP or FTIP.

Scenario Planning

SCAG has developed a scenario planning model for use in its RTP/SCS planning process.
Rather than employing varying assumptions about future conditions that affect transportation system performance, as other MPOs including MTC and FCOG have done, SCAG uses scenario planning to assess three project packages: 1) base year (today's transportation system), 2) baseline (implementation of previous RTP and FTIPs), and 3) plan (implementation of 2020 RTP/SCS).

Public Participation

SCAG documents public participation in the Connect SoCal process in a technical report appendix (Southern California Association of Governments, 2020b). For the 2020 RTP, SCAG partnered with 18 community-based organizations (CBOs) in order to broaden the agency's outreach to children and youth, individuals with access and functional needs, low-income communities of color, older adults or retired people, populations with limited English proficiency, and women and female-headed households.

SCAG conducted 28 public workshops formatted as two-hour open houses where participants could arrive and leave at their discretion. The workshops were attended by "over 600 participants." SCAG also conducted a telephone-based town hall which involved dialing out to 30,000 SCAG region residents with 600 staying on the call for SCAG's presentation and 100 remaining on the line for further discussion. SCAG engaged in an online survey in which "almost 4,000" individuals participated.

Finally, SCAG received 1,200 comments on Connect SoCal (Southern California Association of Governments, 2020c). Two of these comments addressed climate and equity concerns with specific projects. The Sierra Club Moreno Valley Group raised concerns about wildlife connectivity and induced demand from a proposed project on State Route 79 in Riverside County, which would widen the road from two to four through lanes, as well as another project. The RTP anticipated that this $1.5 billion project would be completed by 2035.

The Center for Biological Diversity raised concerns about additional vehicle miles traveled, resultant greenhouse gas emissions, and impacts to wildlife for the State Route 138 Corridor Improvement Project, a four to six lane facility conversion between I-5 and SR 14, and three projects to add express lanes to I-15 in Riverside and San Bernardino counties.

SCAG's response to critiques of specific projects noted the deference to its constituent County Transportation Commissions:

> SCAG worked closely with the six county transportation commissions to identify the projects included in the Final Connect SoCal, and each commission likewise coordinated their countywide projects with local transportation agencies. SCAG worked collaboratively with stakeholders to identify additional key projects that address challenges that are regional in nature. Decisions to delete, replace or modify a project should similarly undergo a coordinated process involving the affected county transportation commission and lead agency. Substantive changes to projects may be addressed in the next update or amendment to the plan. (Southern California Association of Governments, 2020a)

Performance Monitoring

While SCAG does not assess the performance of individual projects, they do use quantitative performance measures to evaluate how well the full package of RTP projects may achieve the regional goals established in the plan. Connect SoCal designates eight outcome categories each representing a primary performance focus area for the Plan, most of which explicitly or implicitly relate to either equity or the environment:

1. Location Efficiency
2. Mobility and Accessibility
3. Safety and Public Health
4. Environmental Quality
5. Economic Opportunity
6. Investment Effectiveness
7. Transportation System Sustainability
8. Environmental Justice

An additional set of performance measures are used for SCAG's on-going regional monitoring effort which are described and discussed in the Connect SoCal Performance Measures Technical Report (Southern California Association of Governments, 2020d). SCAG says that it will assess these measures on an ongoing basis during plan implementation.

Table 3-5 shows SCAG's adopted climate and equity performance measures:

Table 3-5: Performance measures related to climate and equity included in Connect SoCal RTP

Category	***Performance Measure***	***Target***
Climate	VMT per capita	Seeking to reduce VMT/capita from baseline of 21.8 miles to 20.7 miles in 2045.
Climate	Transit mode share	Seeking to increase transit mode share for all trips from 3.6% to 4.9%
Climate	Active transportation mode share	Seeking to increase walk mode share from 7.8% to 8.7% of all trips and bike mode share from 1.7% to 2.1% of all trips
Climate	Percent reduction in per capita GHG emissions	Seeking 8% by 2020 and 19% by 2035 (note: these are SB 375 targets)
Equity	Share of employment and shopping destinations reachable within 30 minutes by automobile or 45 minutes by transit during evening peak period	No unaddressed disproportionately high adverse effects for low income or minority communities
Equity	Share of park acreage reachable within 30 minutes by automobile or 45 minutes by transit during evening peak period	No unaddressed disproportionately high adverse effects for low income or minority communities
Equity	Impacts along freeways and highly traveled corridors - demographics of communities in close proximity to freeways and highly traveled corridors	No unaddressed disproportionately high adverse effects for low income or minority communities
Equity	Share of transportation system usage by mode for low income and minority households relative to each group's regional population share	No unaddressed disproportionately high adverse effects for low income or minority communities
Equity	Analysis of Connect SoCal Investments by mode	The share of Connect SoCal transportation investments serving low-income and minority communities outpaces the relative share of financial burden on those groups.

Federal Transportation Improvement Program

Project Selection Delegated to CTCs

SCAG has several Memoranda of Understanding (MOUs) with transit operators and each of the CTCs within the SCAG Region. These MOUs specify the role transit operators and CTCs play with respect to approving transportation projects utilizing federal, state highway, and transit funds within their respective jurisdiction. The CTCs are also responsible for transportation programming and short-range planning in their respective counties. The CTCs develop their respective RTIPs based on FTIP Guidelines prepared by SCAG in consultation with the CTCs, SCAG's Transportation Conformity Working Group (TCWG), and federal and state agencies staff, and with approval by SCAG's Regional Council.

The 2022 Public Participation Plan notes that the "public participation process and coordination is a tiered process within the SCAG region. This tiered process initiates the public participation process at the CTC's RTIP development stage, which occurs long before the development of the SCAG FTIP" (Southern California Association of Governments, 2022a).

The six constituent CTCs conduct project performance assessments in advance of submitting a project for the FTIP. These quantitative assessment processes are described in detail in Chapter 4. Local Option Sales Tax (LOST) measures in Los Angeles County (M and R), Orange County (M2), Riverside County (A), and San Bernardino County (I2) all contain project lists that affect these counties' prioritization of project funding. Imperial County's Measure D does not contain a project list.

Impacts of Project Selection Delegation on SCAG's FTIP Process

SCAG's Board of Directors adopted the 2023 FTIP on October 6, 2022 (Southern California Association of Governments, 2022b). The FTIP includes a listing of 1,718 projects from the six-county region.

SCAG received a total of 24 comments on the Draft 2023 FTIP. Section 2 of the FTIP's Technical Report on Community Input contains SCAG's responses to these comments (Southern California Association of Governments, 2020f). Only one comment was from a member of the public, and this comment did not pertain to a specific project.

SCAG received 26 comments on the 2021 FTIP, three of which were from members of the public (Southern California Association of Governments, 2020f). Two individuals opposed the Toll Corridor Authority SR 241 project ("FTC South Project"), a project that was erroneously included in the 2021 FTIP. SCAG's response to these comments, included in the Community Input Technical Report (Southern California Association of Governments, 2020f) illustrates the extent to which SCAG defers project selection to the CTCs:

> The FTIP is based on project submittals from local and regional agencies. SCAG cannot unilaterally delete or change projects that are contained in the FTIP unless [they are] inconsistent with the RTP. The FTC South Project is depicted in the 2021 FTIP as a study only project with funding programmed for preliminary project definition efforts. There are no right of way or construction funds programed [*sic*] for this study. The project has been deleted from the

> currently approved 2019 FTIP via Amendment #19-29 and will be deleted in 2021 FTIP via Amendment #21-01 as submitted by Orange County Transportation Commission (OCTA) [*sic*].

In October 2021, SCAG published guidelines for submissions to the FTIP (Southern California Association of Governments, 2021). The guidelines describe the role of the CTCs in SCAG's RTP/SCS process:

> To ensure successful compliance with SB 375, SCAG, in collaboration with the CTCs, works to achieve full compliance with the approved SCS. The CTCs ensure that transportation infrastructure investments proposed in the counties' individual Long Range Transportation Plans (LRTP) complement strategies identified in SCAG's RTP/SCS.

2022 SCAG Federal Certification Review Report

In August 2022, the USDOT transmitted a Federal Certification Review report to SCAG (US Department of Transportation, 2022). This review notes that, consistent with California Streets and Highways Codes 182.6 and 182.7, SCAG has delegated its constituent transportation commissions the authority for CMAQ and STBG project selection. However federal law, 23 USC sections 134 and 135, requires MPOs, state Departments of Transportations, and transit agencies to select projects in accordance with specified processes. The FHWA has directed SCAG to review Caltrans' updated CMAQ and STBG administrative policies and incorporate any changes necessary to comply with federal regulations. This may change the project selection process for future SCAG FTIPs, which will include use of federally required performance measures in project selection and perhaps a competitive regional process for project selection. According to SCAG staff who reviewed portions of a draft of this section, the agency now has a "greater emphasis on performance-based planning and programming including MPO project selection for federal sources" and conducts a call for projects, "which involve performance evaluation of individual projects." (A. Nam, personal communication, March 18, 2024). While potentially consequential to SCAG's future practices, analyzing these recent changes, which are based on the most recent RTP/SCS, are beyond the scope of this project.

Highlights

The Southern California Association of Governments region is home to nearly one in every two Californians. The region is enormous, diverse, and SCAG has perhaps as a result, almost entirely delegated procedures for project selection to its six constituent CTCs. However, this delegation also inhibits regional public participation in the process—interested parties must follow proceedings at six separate agencies if they wish to comment on projects whose potential impacts cross county borders, and, importantly, they must make these comments in absence of information on environmental impacts produced by the RTP's GHG and air quality conformity assessment. Portions of this delegation process have recently been challenged by the FHWA. As a result, SCAG has made changes to its processes for the 2024 RTP/SCS cycle and future RTIP cycles. These new developments, which occurred after this research was conducted, warrant future study.

SCAG does not utilize scenario planning to the same extent as other MPOs. Scenario planning at SCAG is used to compare project and no-project scenarios, but not program performance under various possible futures. While such limited assessments are useful in communicating the impacts of the plan

and performing required environmental assessments, they do not assess how individual projects, or even a package of projects, will perform under future conditions that may differ from the project assumptions (regarding cost of transportation, deployment of automated vehicles, climate adaptation, etc.) which could significantly affect transportation behavior.

The Three Smaller MPOs

Fresno Council of Governments

The Fresno Council of Governments (FCOG) is the MPO for Fresno County, which is a designated nonattainment area for ozone and PM2.5 and a maintenance area for PM10 and carbon monoxide. As such, it must satisfy federal requirements to consider transportation control measures (TCMs) to reduce emissions adequate to demonstrate conformity with the SIP for Air Quality.

Fresno County Measure C, a voter-approved transportation sales tax measure that passed in 1986 and was extended in 2006, funds local and regional transit services, building trails, bike lanes, ADA facilities, and other initiatives to improve air quality and bolster the local economy in the region.

Project Performance Assessment

FCOG conducts major studies for various RTP/SCS elements. However, in its 2019-20 to 2021-22 Overall Work Programs, we were not able to identify any specific earmarking of funds for conducting project performance assessments.

Nonetheless, FCOG has employed a qualitative project evaluation rubric to score projects considered for the RTP/SCS process covered in more detail in Chapter 4. This process includes qualitative assessments for four climate and equity-related criteria: 1) whether climate risks are analyzed and incorporated into the project design, 2) improving access for disabled people, 3) benefiting health-burdened areas, 4) serving the transit-dependent.

These criteria were developed by an RTP Project Evaluation Criteria Focus Group composed of representatives from FCOG member agencies and non-governmental organizations with interest in bike, pedestrian, air quality, health, and transportation equity. The Focus Group met on three separate occasions to craft a comprehensive set of criteria, which FCOG's Policy Board approved on Sept. 24, 2020 (Fresno Council of Governments, 2020b). According to FCOG's RTP/SCS Chapter 6 - Financial Element, the criteria were updated from the previous RTP/SCS to allow for multimodal projects to be evaluated under more than one category (Fresno Council of Governments, 2020a).

FCOG has also developed project-level SB 743 implementation guidance[29] for local governments to:

- Develop screening criteria

[29] SB 743, which was signed into law in 2013, changed how lead agencies evaluate transportation impacts under CEQA, by requiring them to now look at additions or reductions to total vehicle miles traveled (VMT) instead of the traditional approach of examining whether the project is likely to cause traffic delays at particular intersections and congestion on nearby individual highway segments, known as Level of Service or LOS analysis.

- Recommend vehicle miles traveled (VMT) thresholds for the SB 743 Local Assistance Program and regional guidelines development
- Recommend a metric and threshold for transportation projects
- Develop a VMT calculation tool that will be hosted on FCOG's website
- Identify VMT mitigation measures
- Recommend VMT thresholds for plans

RTP/SCS

The Regional Transportation Plan & Sustainable Communities Strategy was adopted July 28, 2022. It represents FCOG's long-range transportation vision through 2046. The 2022 RTP is described as a financially feasible plan that achieves health standards for clean air, and addresses climate goals set by the state. With respect to equity issues, the plan states:

> Importantly, the plan does not discriminate or deny equal access to benefits to anyone based on race, national origin, citizenship status, ethnic group identification, religion, age, sex, sexual orientation, color, or disability. Furthermore, it seeks to avoid, minimize, or mitigate disproportionate impacts on communities of color or low-income populations and ensure fair public participation opportunities for all.

The 2022 RTP provides a continuous, comprehensive, and cooperative framework to achieve air quality conformity, reduce greenhouse gas emissions and meet other local, state, and federal goals, which encompasses the region's 15 cities, Fresno County, transportation providers such as urban and rural transit agencies, the San Joaquin Valley Air Pollution Control District (SJVAPCD), Caltrans, other state and federal agencies, and the public.

Planning Vision and Goals

The 2022 RTP calls for more equitable solutions to providing access to safe, clean transportation options that help residents access good jobs, affordable homes, education, and health care. The RTP Vision statement identifies climate and equity as considerations. It envisions:

> A region of diverse, safe, resilient, and accessible transportation options that improve the quality of life for all residents by fostering sustainability, *equity*, a vibrant economy, *clean air*, and healthy communities (emphasis added).

Most goals listed have an element of climate or equity considerations. For example:

> GOAL 1: Improved mobility and accessibility for all
>
> GOAL 2: Vibrant communities that are accessible by sustainable transportation options
>
> GOAL 3: A safe, well-maintained, efficient, and climate-resilient multimodal transportation network

Scenario Planning

FCOG adopted scenario planning for the 2022 SCS, testing five sets of strategies (scenarios) against three "futures" developed with stakeholder input. FCOG hosted two workshops in February 2020 to develop three futures:

1. **Extreme climate**: Assumes the effects of climate change advance rapidly, resources are stretched to their limits, and multiple natural disasters occur simultaneously. Impacts include roadway deterioration from excessive heat, less agricultural output from extreme, prolonged drought conditions, and flooding due to heavy, sudden rainfall.
2. **High-tech innovation**: Assumes an economic boom and innovation across multiple sectors increases productivity. In this future, economic productivity increases, allowing for greater residential and job growth, and increased population and travel. Picture autonomous vehicles, automations, and advance[d] distribution systems with higher paying jobs.
3. **Regulatory challenges**: Assumes state or federal authorities impose significant new regulations on water usage, land development, and travel—for example, imposing significantly higher taxes or new regulations on parking or single-occupant vehicle trips, rationing water usage for certain industries, and cracking down on sprawl development.

RTP/SCS Chapter 5 - Sustainable Communities Strategy (Fresno Council of Governments, 2022a).

Each scenario was measured against performance indicators related to public health, clean air, access to destinations, access to jobs, services in disadvantaged communities, protecting agricultural land, bike/walk friendliness, roadway quality, climate change, VMT, and achievability. FCOG's Policy Board adopted Scenario B ("ambitious and achievable") as the preferred SCS scenario in October 2021.

Project Selection/Evaluation

FCOG initiated a call for projects in 2020 and received 2,994 proposed projects from its member jurisdictions. Of these, 1,988 were included in the RTP's fiscally constrained project list and 956 on the unconstrained project list.

FCOG uses different scoring and evaluation criteria for three major purposes:

1) To rank projects on the RTP's fiscally constrained project list,
2) To obligate project funding through the various programs the agency administers (CMAQ, STBG, and Active Transportation Plan (ATP)), and
3) As the primary tools to prioritize projects that align with the RTP's policy goals and objectives.

Each criterion of the scoring rubric (see Chapter 4 for details) has a point value to be applied to the projects submitted for RTP and funding program consideration. For the RTP, projects that can garner the most points (and thereby align most closely with RTP goals and objectives) are the projects that appear on the RTP's constrained project listing. FCOG ranks projects for:

- Inclusion in the constrained project list
- Prioritizing projects within the RTP/SCS project list

- Funding consideration for programs administered by FCOG

Scored projects move to the constrained project listing for the RTP/SCS, but individual project scores under the different scenarios vary as they are weighted according to the three scenario funding priorities. Points are subtracted from projects to be included in the FTIP that are not in the adopted RTP.

In the RTP, the safety, efficiency, and climate-resiliency goals are prioritized using multiple competitive scoring criteria.

Public Participation

FCOG's Policy Board adopted an updated Public Participation Plan on May 28, 2020 (Fresno Council of Governments, 2020a). In the Plan, FCOG noted that this update included enhanced approaches to outreach to populations experiencing environmental justice burdens. The plan contains specific strategies for involving low-income communities and communities of color, including mini-grants to community-based organizations to assist in inducing local participation. FCOG awarded three such mini-grants as part of the 2022 RTP planning cycle (Fresno Council of Governments, 2022c).

According to the plan, FCOG's engagement options include transportation surveys and public preferences surveys. Its transportation surveys to assess needs, unmet needs, and generate project ideas yielded a total of 3,765 views with 1,673 participants submitting 1,301 project suggestions. A public preferences survey ranking sets of indicators, SCS scenarios and strategies generated by the RTP team received 421 responses in March/April 2021.

The Public Participation Plan does not include clear procedures in case of disagreements between members of the public and MPO representatives, or among members of the public serving on FCOG advisory committees or working groups. As an example, the Leadership Counsel for Justice & Accountability, which participated in the Environmental Justice Subcommittee, raised climate and equity concerns with a number of the strategies developed for the SCS scenarios (Martinez and Martinez, Leslie, 2021).

Environmental and Social Justice

FCOG has adopted environmental justice (EJ) principles and objectives that promote equity throughout the agency's regional planning efforts (see the detailed 2022 RTP/SCS Chapter 4).

FCOG updated its 2018 Environmental Justice Analysis in 2022, which was incorporated into the 2022 RTP. FCOG's Environmental Justice Subcommittee helped in defining the county's Environmental Justice communities.

FCOG conducts an Environmental Justice & Equity Analysis, which assures that FCOG conforms to federal environmental justice principles, policies, and regulations, including Title VI. FCOG is required by law to determine whether the RTP/SCS benefits low-income and minority communities equitably and whether the plan's transportation investments have any disproportionate negative effects on minority and/or low-income populations in the FCOG region, and to minimize negative impacts where they exist.

To certify compliance with Title VI and address environmental justice, FCOG's three main principles underlying environmental justice are:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority and low-income populations.
- To provide opportunities for full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent denial, reduction, or significant delay in benefits by minority and low-income populations.

Consistent with FCOG's 2019 Public Participation Plan and Title VI Program Plan for Engaging Individuals with Limited English Proficiency (LEP), the agency conducted outreach for the RTP that incorporated strategies to engage LEP community members by providing interpreters, translated flyers, television and social media campaigns in Spanish and other languages, as requested. FCOG's RTP community engagement process included several strategies and tools specifically designed for engaging disadvantaged communities and EJ populations including mini-grants, Transportation Needs Community Engagement, and a Spring 2021 SCS Indicators and Strategies Outreach online survey.

FCOG developed a database with estimated socioeconomic and travel characteristics. Staff used this database to map environmental justice communities within traffic analysis zones (TAZs). To evaluate travel-related equity measures, FCOG's travel forecasting model produced estimates of travel characteristics of environmental justice communities compared to non-EJ communities across the county.

For help in defining Fresno County's environmental justice communities, FCOG called upon its Environmental Justice Subcommittee. The Subcommittee met nine times to determine EJ population thresholds and EJ SCS indicators. The EJ subcommittee also recommended the addition of access-based indicators Access to Destinations (Jobs & Services) to assist the public and FCOG board members in ranking the three SCS scenarios.

Federal Transportation Improvement Program

FCOG's Policy Board adopted the 2023 FTIP on July 28, 2022 (Fresno Council of Governments, 2022b). According to this document, projects were selected for the FTIP based on selection and scoring criteria adopted by FCOG's Policy Board. Furthermore, FCOG maintains a list of contingency projects ranked in priority order based on the project's evaluation score. However, project scores do not appear in the FTIP project list.

The FTIP Public Participation Process included a 55-day comment period, an in-person evening public hearing, and two virtual public hearings. The FTIP's Appendix J contains FCOG's responses to the three comments received, none of which were from members of the public.

Public Hearings

FCOG held a public hearing on May 26, 2022, at which it did not receive public comment (FTIP Appendix J). FCOG received three sets of intergovernmental comments, two from local agencies and one from Caltrans.

Highlights

FCOG employed a novel scenario planning approach to assess the plan's performance in futures with varied climate, technology, and regulatory scenarios.

FCOGs' experience underscores how meaningful engagement with equity advocates can be challenging. Disagreements between the region and local organizations such as with the Leadership Counsel for Justice & Accountability suggests significant challenges to sustaining and incorporating meaningful participation with community-based or advocacy organizations throughout the RTP process.

San Joaquin Council of Governments

The San Joaquin Council of Governments (SJCOG) is the MPO and RTPA for San Joaquin County, a rapidly growing area just east of the San Francisco Bay Area and just south of the Sacramento metropolitan area at the north end of the San Joaquin Valley agricultural region. SJCOG also administers the Measure K county voter-approved half-cent sales tax, which was approved in 2006 to fund transit, highway, and streets.

SJCOG's Overall Work Program does not include a work element or section of a work element related to the assessment of individual projects.

RTP/SCS

SJCOG developed the region's 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (San Joaquin Council of Governments, 2022b). SJCOG adopted the RTP/SCS in August 2022.

Policies

The RTP/SCS does not explicitly state an overall vision or goals but includes eight policies and 30 strategies for the region. SJCOG's adopted list of strategies includes three policies that directly or indirectly address climate and equity issues:

> Policy 1: Enhance the Environment for Existing and Future Generations and Conserve Energy.
>
> > Strategy No. 1. Encourage efficient development patterns that maintain agricultural viability and natural resources.
> >
> > Strategy No. 2. Encourage preservation of natural resources.

Strategy No. 3. Enhance the connection between land use and transportation choices through projects supporting energy and water efficiency.

Strategy No. 4. Improve air quality by reducing transportation-related emissions.

Policy: 6: Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts.

Strategy No. 21: Provide equitable access to transportation planning.

Strategy No. 22: Engage the public early, clearly, and continuously.

Strategy No. 23: Use a variety of methods to engage the public, encouraging representation from diverse income and ethnic backgrounds.

Policy 8: Improve the Quality of Life for Residents.

Strategy No. 28. Promote a broader range of housing types.

Strategy No. 29. Support the development of a regional trust fund dedicated to addressing housing issues.

Strategy No. 30. Enhance public health through active transportation projects.

Scenario Planning

SJCOG's scenario planning exercise is detailed in Appendix S of the RTP/SCS (San Joaquin Council of Governments, 2022a). In this exercise, SJCOG developed and tested four groupings of strategies against three future scenarios:

Table 3-6: SJCOG Strategy Groupings and Futures

Strategy Groupings	***Futures***
1. **Stay the Course**—prioritizing the road network and recruitment of large employers 2. **Remake Centers and Corridors**—infill with a broader range of housing types and expanded public transit **3. 20 Minute Neighborhoods**—complete streets and affordable housing 4. **Commuter Villages**—heavy reliance on automated vehicles	1. **Climate migration:** migration of lower-income households to San Joaquin County in order to escape extreme heat 2. **Transportation tech:** automation and electrification of freight and passenger transportation 3. **E-Economy:** an increase in telework and e-commerce

SJCOG tested each of these strategy groupings in isolation based on how well they performed in each of the three futures by applying scoring strategies for dozens of indicators for each future. The performance metrics related to climate and equity were pedestrian and bike network enhancements and transit investment in San Joaquin County vis-a-vis neighboring counties. SJCOG included strategies that scored high in multiple futures in their final proposed list of strategies.

The last section of Appendix S is a consultant white paper provided to "establish criteria by which SJCOG can finalize its RTP project list in a manner that corresponds to the proposed 2050 RTP/SCS land use scenarios and that reflects recent changes to state laws, evolving trends in travel behavior, and its established commitments to State and Federal entities…"

The white paper, which unlike the rest of the appendix appeared on the consultant's (Fehr & Peers) letterhead, included a list of seven capacity-expanding projects that SJCOG could de-prioritize in the 2022 RTP Transportation Project List. These projects were:

- I-5 HOV Mossdale (widening)
- SR-120 (widening)
- SR-99 HOV (widening)
- SR-99 Widening (environmental only)
- I-5 HOV (widening)
- SR 99/120 connector phase 1A (widening)
- SR 99/120 connector phase 1C

The consultant included this caveat: "However, to the extent that these projects address other regional needs, including trade corridor functions, safety projects or projects likely to encourage VMT reduction through greater use of HOVs, these projects may not be good candidates for de-prioritization."

Each of these projects was ultimately included in the 2022 RTP's project list (Appendix J).

Public Participation

SJCOG adopted a public participation plan in 2016 which appeared as Appendix J of the 2022 RTP (San Joaquin Council of Governments, 2016). Local constituents with interests or expertise in housing, land use, environment, and public works participated in the RTP/SCS development through a formal advisory committee, various workshops, online input through social media or web surveys, and public comment opportunities at SJCOG committees and board meetings. SJCOG also conducted a series of public workshops to get feedback from the public.

SJCOG received eight comment letters on the draft RTP/SCS, all from other governmental agencies (RTP/SCS Appendix D).

Social Equity

SJCOG contracted with five organizations to assist in reaching a diverse set of regional constituents. These engagement activities with Little Manila Rising, New Genesis Housing, Public Health Advocates, Stockton Baptist Church, and Grassroot Childcare Cooperative are detailed in the RTP/SCS Appendix

K3. Those who participated in the regional planning meetings organized by these community organizations expressed the need for job and economic opportunities, affordable housing, food security, and being left behind by expensive vehicle electrification and automation.

FTIP

SJCOG is responsible for developing funding priorities for the region and selecting the projects in the FTIP, the 2022 Regional Transportation Improvement Program, adopted on December 9, 2021 (San Joaquin Council of Governments, 2021).

The process for developing the FTIP lists several guiding principles that mostly deal with ensuring project funding availability; they do not, however, specifically include climate or equity as guiding principles. Project selection involved a collaborative process with input from the SJCOG committees, members of the public, and the SJCOG board.

The FTIP includes a list of performance indicators comparing current/baseline measures to projected 2042 values. SJCOG indicates that no change in VMT per capita is projected while transportation-related CO2 emissions per capita are projected to increase very slightly. The document does not, however, indicate how the calculations were made.

The FTIP notes that California Transportation Commission's RTIP Guidelines updated in 2021 require a full lifecycle cost evaluation and consideration of climate change impacts for projects with a right-of-way and/or construction cost of $15 million or greater or a total project cost of $50 million or greater (California Transportation Commission, 2021). The SR 99/120 Connector Project and the I-205 Managed Lanes project, have a total project cost greater than $50 million and were assessed using the Caltrans California Life-Cycle Benefit/Cost Model (Cal-B/C) version 6.2. Section 13 of the RTIP includes this required analysis, which shows a net increase of 6,768 tons of CO_2 emissions over 20 years. This result is presented without comment in the RTP.

Highlights

Two notable features of the SJCOG RTP/SCS process relevant to this study are that they now include health equity metrics and that they engaged with multiple community-based organizations as part of developing the plan.

We also note that the list of possible projects considered for removal on climate grounds were presented on a consulting firm's letterhead and we could find no evidence that these projects, which ultimately remained on the project list, were otherwise considered for removal.

Association of Monterey Bay Area Governments

The Association of Monterey Bay Area Governments (AMBAG) is the MPO for the Monterey Bay Area which includes San Benito County, Santa Cruz County, and Monterey County. AMBAG coordinates the development of the MTP with the three counties that prepare their own county level transportation plans and prioritize projects for funding. AMBAG also coordinates transportation planning and programming

activities for 18 local jurisdictions within the tri-county Monterey Bay Region; with transit providers San Benito County Local Transit Authority, Monterey-Salinas Transit, and Santa Cruz METRO, as well as the Monterey Bay Air Resources District (MBARD); with state and federal governments; and with organizations having interest in or responsibility for transportation planning and programming. Because of this unique structure, AMBAG does not conduct project-specific performance evaluations and has no project elements related to project performance assessment in 2021-22 Overall Work Program (Association of Monterey Bay Area Governments, 2021).

RTP/SCS

AMBAG's MTP/SCS, Moving Forward 2045, was adopted in June 2022 (Association of Monterey Bay Area Governments et al. n.d.). According to AMBAG, the plan seeks to reduce greenhouse gas emissions by providing more direct access to destinations as well as by providing alternative transportation options. It accomplishes this by analyzing where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region.

The plan's vision and goals explicitly contain social equity and consider climate within its environmental sustainability goal.

Policies

To reduce greenhouse gas emissions the plan combines mixed use development with infill development in existing commercial corridors, where regional authorities plan improvements to both transit service and pedestrian and bicycle infrastructure.

Public Participation

AMBAG's public participation process is outlined in the 2019 Public Participation Plan (Association of Monterey Bay Area Governments et al., 2019). Engagement included meetings and workshops with stakeholder groups, elected officials, special interest groups and the general public. Digital engagement activities included creating a GIS-based regional data viewer. AMBAG held 13 public board meetings and 20 public technical advisory committee meetings, and ten public workshop meetings during three periods. Private meetings included 12 meetings with planning directors from the three counties and 18 cities and more than 80 one-on-one meetings with local jurisdictions (Association of Monterey Bay Area Governments, 2022a).

Social Equity Performance Evaluation

For the development of the 2045 MTP/SCS, AMBAG assessed the geographic distribution of transportation investments in low income and minority areas compared to other areas of the region. AMBAG created various definitions of social equity, including ones based on income, race, and mobility (see Table 3-7). AMBAG found that the 2045 MTP/SCS would concentrate more expenditures in low-income areas, areas with minority populations, and areas with low community engagement versus investments planned in the baseline 20235 MTP/SCS (Association of Monterey Bay Area Governments, 2022b). AMBAG conducted this analysis to ensure that a certain percentage of MTP expenditures would serve these communities.

Table 3-7. Definitions for Social Equity Performance Evaluation

	Census Tracts of Concern	***Control Census Tracts***
Income	Low-income: ≥ 33% of population at < 200% federal poverty level for 2015	Non-low-income: < 33% of population at < 200% federal poverty level for 2015
Race	"Minority" areas: ≥ 65 % of population is non-white	Non "Minority" area: > 35 % of population is white
Mobility	Low mobility areas: >= 5% of households have zero vehicles available, > 11.35% of population has a disability, and/or >15% of the population 65 or older had income below the federal poverty level	none

County RTPs

AMBAG has three constituent RTPAs: the Transportation Agency for Monterey County (TAMC), the Santa Cruz County Regional Transportation Commission (SCCRTC), and the San Benito County Council of Governments (SBCOG). Each adopts an RTP which rolls into the MTP. AMBAG and the RTPAs must work together to ensure that submitted projects are consistent with regional land use planning and the requirements of SB 375. Below are highlights from the three RTPs.

Monterey County Regional Transportation Plan

The Transportation Agency for Monterey County (TAMC) developed the Monterey County Regional Transportation Plan which includes:

- A stated commitment to reducing "disproportionate" negative impacts of construction and operations, engaging poor and minority groups in planning, and reducing barriers to transit ridership for youth and seniors
- A framework for improving racial equity around funding, hiring, and public outreach
- A list of four projects that will reduce VMT (rail extension, BRT, smart commute program, and greenway)

San Benito Regional Transportation Plan

The Council of San Benito County Governments (SBCOG) Regional Transportation Plan addresses equity with:

- Equity strategies demonstrating that investments will reduce disparities in mobility, access, economic benefit, and health/safety among different populations using a variety of methods to

engage people of color in the planning processes; and demonstrating that disadvantaged communities won't bear the brunt of transportation construction and operations.
- Performance measures for providing equitable level of service (LOS) for all based on distribution of investments and the percentage of low-income population within a one-half mile of a transit stop.
- Climate-related performance measures, including projected GHG emissions, amount of open space consumed, and acres of farmland converted.

Santa Cruz County Regional Transportation Plan

The Regional Transportation Plan (RTP) for Santa Cruz County provides:

- A Sustainable Transportation Analysis Rating System (STARS) to evaluate performance measures, including equity and climate resiliency.
- A plan for climate-related impacts, such as disruption, evacuation, and asset degradation.

Federal Transportation Improvement Program

On September 14, 2022, AMBAG adopted the Monterey Bay Region Metropolitan Transportation Improvement Program (MTIP) (Association of Monterey Bay Area Governments, 2022c). Projects that AMBAG includes in this MTIP must be consistent with the 2045 MTP/SCS, recent Short Range Transit Plans (SRTPs) of the public transit operators, Regional Transportation Improvement Programs (RTIPs) of the three RTPAs, and Caltrans' 2022 State Transportation Improvement Program (STIP) and 2022 State Highway Operation and Protection Program (SHOPP).

Because of AMBAG's structure as an MPO comprising three RTPAs, project selection could occur at the RTPA level. According to AMBAG, the projects in the studied MTIP are, however, not simply a compilation of transportation projects already approved in other programs, but part of a new program, subject to its own interagency consultation and public comments and review processes. AMBAG notes that RTPAs and transit operators provided explicit consideration and response to public input received during the planning and program development processes regarding the needs of populations traditionally underserved by existing transportation systems, including low-income and minority populations.

Highlights

AMBAG's structure differs from that of the other MPOs studied here. With three constituent RTPAs and RTPs that roll-up into a single MTP, project assessment and selection processes are split across separate decision-making bodies. AMBAG claims that the agency is involved at each step of the RTP process. However, one possible limitation of this inter-jurisdictional structure is that stakeholders will need to engage with multiple organizations in order to comment effectively on projects and services that affect inter-county trips.

Additionally, AMBAG is one of several MPOs that assesses the co-location of project expenditures and low-income communities or communities with people of color as an equity metric. The rationale appears to be to avoid disinvestment in such neighborhoods, as the MTP/SCS contains an analysis that claims the project list does not represent a disinvestment in low-income areas or areas with people of color by

demonstrating that total expenditures in these neighborhoods are no less than in all other neighborhoods. However, the type of project expenditures is important, as this metric could indicate that highway expansions are occurring in low-income areas or areas where people of color live. Maura Twomey, AMBAG Executive Director, provided information indicating that "only 11.25% of the total plan investment is allocated to highway improvement projects" and that "most of the highway projects in the MTP/SCS are for operations, safety, and maintenance." Additional information on the location of highway improvements versus other projects could help in assessing the potential equity impacts of a project list.

Conclusion

This chapter compares the project performance assessment practices of seven California MPOs, focusing on the RTP and FTIP processes. We found that all MPOs are complying with the same regulations and guidance, but they make different choices about how to comply with those processes.

One key difference is in the resources that MPOs devote to project performance assessment. MPOs that devote more resources to such assessments have, almost by definition, more comprehensive assessment processes. MTC makes robust and accessible project-level assessment data available at the time that the public body considers adopting a project list. Other MPOs either present more limited information or no information indicating the relative performance of projects. Several MPOs had controversial projects during the planning period under review, as evidenced by the public comments. For MTC, commenters were able to use the project-level assessment to make their points, but this was not the case for SACOG, SANDAG, or SCAG.

Another key difference is in the use of scenario planning by MPOs to engage with future uncertainties. Scenario planning in regional transportation planning involves considering factors that influence travel activity as variable, rather than static (FHWA Scenario Planning Guidebook, 2011). Many MPOs package assumptions about future policy and economics into various land use scenarios to better understand how the regional transportation system will fare under plausible, divergent possible futures. MPOs can also use scenario planning techniques to consider the climate and equity implications of various project packages or individual projects.

MTC's budget includes resource allocations to fund both project performance assessment and scenario planning, and MTC was the only one of the seven MPOs studied to combine these two methods into a single evaluation effort. We also note that Fresno's Scenario Planning approach showed a commitment to considering how factors outside of the MPO's control might affect the region's transportation and land use future, and how the region could make different planning choices to prepare for different possibilities.

Finally, we found that MPOs varied in their effectiveness in meaningfully engaging members of diverse and underrepresented populations and organizations in their work. We note, however, that most explicitly stated their intent to improve this capability in future RTP cycles.

Chapter 4: How do California MPOs evaluate transportation projects for inclusion in their plans and programming?

Overview

This chapter builds on the material presented in Chapter 3 by focusing specifically on the evaluation tools and rubrics used by our sample of seven California Metropolitan Planning Organizations (MPOs) to evaluate, score, and rank projects proposed for inclusion in the regional transportation plans and transportation improvement programs. To gather and present the material in this chapter, we carefully examined all of the project evaluation and programming-relevant material on each MPO's website for descriptions of, examples of, and references to these evaluation processes. Because two of the seven MPOs—the Association of Monterey Bay Area Governments and the Southern California Association of Governments—rely substantially on project evaluations performed by regional transportation planning agencies and county transportation agencies, we discuss below the information we gathered on the project evaluation processes conducted at 16 different organizations: seven MPOs and nine county transportation agencies.

We show in this chapter that the evaluations vary widely from organization to organization, and within organizations from program to program. Some MPOs have adopted comprehensive, sophisticated, and rigorous evaluation protocols, while others employ relatively simple and often substantially subjective scoring systems. The evaluations also vary regarding when in the project development and programming process they take place.

The first part of this chapter describes the project evaluation rubrics for at least one, and often several, funding programs at each of the seven MPOs (and in two cases, at each of the MPOs' CTCs or RTPAs). In a few cases we are able to say relatively little about an organization's project evaluation and scoring process because we found very little information posted publicly online about their process, but we present information for most of the 16 organizations. We then focus in more detail on three of the most sophisticated and/or commonly used project assessment tools: (1) the one used by the San Francisco Bay Area Metropolitan Transportation Commission (MTC), (2) the one used by Sacramento Area Council of Governments (SACOG), and (3) Caltrans' Cal B/C tool. Finally, we close by presenting a summary of the various performance measures used for monitoring project implementation by the seven MPOs examined here.

California MPOs Project Scoring and Evaluation Processes

Association of Monterey Bay Area Governments (AMBAG)

The Association of Monterey Bay Area Governments (AMBAG) does not conduct project-level evaluations. The three Regional Transportation Planning Agencies (RTPAs), each go through their own process to select projects for funding. AMBAG emphasizes that its Metropolitan Transportation Improvement Program (MTIP) is not simply a compilation of projects already approved for funding by the county transportation agencies; it makes sure that only projects consistent with the RTP/SCS are programmed into the MTIP (Association of Monterey Bay Area Governments, 2021). On the other hand, the two largest transportation agencies affiliated with AMBAG—the Santa Cruz County Regional Transportation Commission (SCCRTC) and the Transportation Agency for Monterey County (TAMC)—do have processes in place for soliciting project proposals for various funding programs and for evaluating those proposals. We discuss the processes of these two county agencies in turn below. The third county member of AMBAG, San Benito County, provides comparatively little public information on its project selection process.

SCCRTC has a consolidated call for projects process for the county's share of funds from state and federal funding programs, including the Surface Transportation Block Grant (STBG) program, the Statewide Transportation Improvement Program (STIP), the Highway Infrastructure Program (HIP), and Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) funds. After soliciting project proposals from local sponsors, staff at the SCCRTC then evaluate project benefits with respect to federal, state, and regional performance measures, goals, and targets. These performance measures include safety, system preservation and infrastructure condition, system performance, access for all, and health and equity. The performance measures and targets are identified from regional plans and guidelines for various funding programs, although proposed projects are not required to address all of them. In addition, projects may also be evaluated based on their consistencies with the RTP/SCS and other regional and local plans for active transportation, complete streets, transit, local roads and land uses, etc., as well as their extent of public engagement and scale of benefits (Santa Cruz County Regional Transportation Commission, 2021). This evaluation process appears to be conducted by SCCRTC staff, with input from advisory committees on various issues.[30] We were unable to find public information about whether the evaluation process involves scoring and ranking of projects using some sort of rubric.

TAMC does not appear to have a consolidated call for projects process, but instead has separate project selection processes for different programs. One major program is the county's Regional

[30] The SCCRTC specifically mentions three advisory committees: Bicycle Advisory Committee, Elderly and Disabled Transportation Advisory Committee, and Interagency Technical Advisory Committee. The Bicycle Advisory Committee is composed of 11 volunteers representing each of the county's five supervisorial districts and four cities, as well as Bike to Work (non-profit), and the Community Traffic Safety Coalition (of community organizations, government agencies, businesses, and individuals). The Elderly and Disabled Transportation Advisory Committee is composed of 16 members who are citizens, social service providers, and government agency representatives. Finally, the Interagency Technical Advisory Committee is composed of 19 members representing city and county public works and planning departments, Santa Cruz Metropolitan Transit District, Caltrans District 5, AMBAG, Ecology Action Transportation Group (non-profit), UC Santa Cruz, Cabrillo College, California Highway Patrol, and the Monterey Bay Unified Air Pollution Control District.

Transportation Improvement Program (RTIP) funded by the State Transportation Improvement Program (STIP). The RTIP selects projects from the list of regional transportation projects in the county's Regional Transportation Plan (RTP), which are identified for funding, according to the 2022 AMBAG RFP, "...through coordination with member jurisdictions and selected based on extensive public outreach and evaluation of project performance relative to the adopted goals and policy objectives." TAMC then evaluates the projects to be included in the RTIP according to the adopted goals and policy objectives, including access and mobility, safety and health, environmental stewardship, equity, and economic vitality (Transportation Agency for Monterey County, 2021). TAMC then selects projects to be included in the RTIP from the RTP's project list that are ready for construction, align with regional priority with multi-modal features, are consistent with AMBAG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), and are excellent candidates for Senate Bill 1 (SB1) grant programs. TAMC also has a call for projects process for its Regional Surface Transportation Program (RSTP). Projects applying to this program are evaluated and scored using a rubric containing four components: project information and regional significance, complete streets, project readiness and cost effectiveness, and prior project delivery performance (see Table 4-1 below for details) (Transportation Agency for Monterey County, 2020). Table 4-1 shows that projects are evaluated across a relatively wide range of criteria, and scored using a mix of binary, categorical, and, in the cases of "Mitigation of safety hazards" and "Incorporating complete street treatments," by counts of project measures/features.

Table 4-1. Scoring rubric for the Transportation Agency for Monterey County's Regional Surface Transportation Program

Components	***Criteria***	***Scoring scale***
Project information and regional significance (25 points)	Traffic volume in the corridor	1 point = 1 to 5,000 Average Daily Traffic (ADT); 5 points = 5,001 to 10,000 ADT 7 points = 10,001 to 20,000 ADT 10 points = 20,001+ ADT
	Mitigation of safety hazards	0-10 points
	Regional significance	0-5 points based on how well the project serves travelers from other areas or more than one jurisdiction
Complete streets (25 points)	Stakeholder outreach conducted on the project scope and design	0 or 5 points
	Incorporating complete street treatments	0-10 points
	Improving active transportation or transit design features	0 or 5 points
	Maintenance project with complete streets enhancement	0 or 5 points

Components	*Criteria*	*Scoring scale*
Project readiness and cost effectiveness (25 points)	Project is ready to bid within X years	1 points = Three years 3 points = Two years 5 points = One year
	Request for funding will fully fund the project	0 points = Funding plan does not fully-fund project 3 points = Funding plan fully-funds project, less than 50% non-RSTP funds secured 5 points = Funding plan fully-funds project, more than 50% non-RSTP funds secured 7 points = Funding plan fully-funds project, more than 75% non-RSTP funds secured 10 points = Funding plan is fully-funds project, 100% non-RSTP funds secured
	Project has already started and/or has completed certain phases	5 points = Environmental Review 5 points = Plans, Specifications, and Estimates 1 point = 30% complete 2 points = 60% complete 4 points = 90% complete 5 points = 100% complete
Prior project delivery performance (25 points)	The jurisdiction is maximizing the use of RSTP fair share	0 or 10 points
	The jurisdiction has delivered previously awarded projects on time	0-10 points
	This funding request does not fund a cost-overrun	0 or 5 points

Fresno Council of Governments

The Fresno Council of Governments (FCOG) selects projects to be programmed into the Fresno FTIP from a pool of Regional Bid projects, which are selected in cycles through a call for projects process. Two major funding programs administered by FCOG are the Congestion Mitigation and Air Quality Improvement (CMAQ) Program and Surface Transportation Block Grant (STBG) Program. Project proposals applying for these funds are scored and ranked by scoring committees, which are comprised of representatives from various governments and agencies, including a) westside cities, b) eastside cities, c) FCOG, d) the Fresno-Clovis Metropolitan Area (which rotates between Fresno and Clovis), e) Fresno County, f) Caltrans, g) San Joaquin Valley Air Pollution Control District (for CMAQ only), and h) transit providers (which rotates among Fresno Area Express, Clovis Transit, and Fresno County Rural Transit Agency) (Fresno Council of Governments, 2020b).

The CMAQ and STBG programs also use scoring rubrics that have components specific to the funding program's objectives but also share some similar criteria (see Table 4-2 for detail on the rubrics). The

scoring rubrics were developed by a programming subcommittee group and approved by the FCOG Policy Board, which are then used by a scoring committee to score and rank projects. Projects are largely scored and ranked on a relative basis, i.e., by comparing them with one another. The two examples shown in Table 4-2 show that the committees assembled to score and rank projects are given specific evaluation criteria to consider, but considerable leeway in collectively scoring these criteria. Many criteria are scored as a range of points, and many of which would appear difficult to quantify, such as preservation of existing infrastructure (scored across a 40-point range). In addition, ten points are specifically allocated to "subjective evaluation," which includes a wide range of factors, including farmland, quality of life, and greenhouse gas (GHG) emissions, among others.

Table 4-2. Comparison of the scoring rubrics for Fresno Council of Governments' Congestion Mitigation and Air Quality Improvement and Surface Transportation Block Grant programs

Congestion Mitigation and Air Quality (CMAQ)	Surface Transportation Block Grant (STBG)
N/A	Rehabilitation, reconstruction, and replacement of existing infrastructure (40-point range): preservation of existing infrastructure
Cost-effectiveness (30-point range): annualized CMAQ funds divided by annual emission reductions (Volatile organic compounds + NOx + PM)	Cost-benefit ratio (10-point range): project annual safety, operational, and maintenance benefits divided by annualized project cost
Congestion relief (20-point range): reduce congestion and increase service capacity and/or reliability	Congestion relief and system expansion (10-point range)
	Congestion management plan (5-point range: higher for projects at locations with more collisions and congestion)
Air pollutant emissions reduction (30-point range): not including GHG	Air quality (5-point range)
Trip and VMT reduction (10-point range)	N/A
N/A	Safety/security (10-point range)
Subjective evaluation (10-point range): Consider a wide range of factors not considered in the above items, including sponsor priority, leveraging of other funds, deliverability, as well as impacts on multi-modal access, connectivity of transportation systems, farmland, safety, energy conservation, quality of life, SCS targets, GHG emissions, etc.	
Construction-ready (4-point range)	
Expedited project delivery (6 points)	
5 points can be added for projects exceeding the minimum local match requirement using targeted performance program funds	
10 points can be deducted for projects not on RTP's constrained project list.	
Note: N/A = not applicable.	

FCOG is also in the process of developing scoring criteria for projects to be included in the RTP/SCS. Based on a draft of the proposed scoring rubric, project proposals will be categorized into bicycle and

pedestrian, capital projects, maintenance projects, operations, and transit. A total of 20 criteria will be used to score the projects, but only subsets of these criteria will apply to each of the five project categories, resulting in different total possible scores for each category (see Table 4-3 for detailed scoring rubric (Fresno Council of Governments, 2020b). We were not able to discern from the documents we reviewed how the scores will be used in project decision making.

Table 4-3. Fresno Council of Governments' rubric for scoring projects for the Regional Transportation Plan/Sustainable Communities Strategy

Scoring criteria	Scoring scale	Weights of each criterion by mode				
		Bicycle & pedestrian	Capital projects	Maintenance	Operations	Transit
Consistency with local plans and policies	1 pt = yes 0 pt = no	2.3%	2.6%	4.0%	2.6%	2.1%
Estimated completion	5 pts = 5 yrs 4 pts = 5-10 yrs 3 pts = 10-15 yrs 2 pts = 15-20 yrs 1 pt = 20-25 yrs 0 pt = 25+ yrs	11.6%	13.2%	20.0%	13.2%	10.4%
Climate risks analyzed and incorporated in project design	3 pts = yes 0 pt = no	7.0%	7.9%	12.0%	7.9%	6.3%
Improve accessibility for disabled people	3-pt range	7.0%	7.9%	12.0%	7.9%	6.3%
Improve safety	3-pt range	7.0%	7.9%	12.0%	7.9%	6.3%
GHG reduction	4-pt range	9.3%	10.5%	N/A	10.5%	8.3%
Innovation: ZEV (& infrastructure)	2-pt range	4.7%	5.3%	N/A	5.3%	4.2%
Improve air quality	8-pt range	18.6%	21.1%	N/A	21.1%	16.7%
Improve access to activity centers	3-pt range	7.0%	7.9%	N/A	7.9%	6.3%
Road usage within jurisdiction based on ADT	2 pts = top 25% 1 pt = top 50% to 25% 0 pt = bottom 50%	N/A	5.3%	8.0%	5.3%	N/A
Pavement management	4-pt range	N/A	N/A	16.0%	N/A	N/A
Pavement condition within jurisdiction	4 pts = bottom 25% 2 pts = bottom 50% to 25% 0 pt = top 50%	N/A	N/A	16.0%	N/A	N/A
Congestion relief	2-pt range	N/A	5.3%	N/A	5.3%	4.2%
Travel time and distance reduction	2 pts = yes 0 pt = no	4.7%	5.3%	N/A	N/A	N/A
Enhance existing network	2 pts = yes 0 pt = no	4.7%	N/A	N/A	5.3%	4.2%
Benefit health-burdened areas	4-pt range	9.3%	N/A	N/A	N/A	8.3%
Serve the transit-dependent	3-pt range	7.0%	N/A	N/A	N/A	6.3%
Maintain productivity standards	1 pt = yes 0 pt = no	N/A	N/A	N/A	N/A	2.1%

Scoring criteria	Scoring scale	Weights of each criterion by mode				
		Bicycle & pedestrian	Capital projects	Maintenance	Operations	Transit
Collaboration with other transit agency/group	2 pts = yes 0 pt = no	N/A	N/A	N/A	N/A	4.2%
New or enhanced commuter service	2 pts = yes 0 pt = no	N/A	N/A	N/A	N/A	4.2%
Note: N/A = not applicable						

Metropolitan Transportation Commission

The San Francisco Bay Area Metropolitan Transportation Commission (MTC) uses a performance assessment tool to evaluate projects for its RTP/SCS, which is discussed in more detail later in this chapter. While the tool is not used for evaluating projects for inclusion in the FTIP, it is used earlier in the planning process to evaluate projects and programs for inclusion in the RTP. MTC's subsequent FTIP project selection process for projects previously evaluated for RTP inclusion varies depending on the type of project and funding source. Below is a list of the funding sources and/or programs/plans used by MTC for a variety of project types, including transit, active transportation, and freeway and road, among others. Each of these programs has a separate FTIP project evaluation and selection processes specified in the program guidelines.

- Coordinated Public Transit-Human Services Transportation Plan, Resolution No. 4310
- Regional Transit Expansion Program, Resolution No. 3434
- 2022 Regional Transportation Improvement Program (RTIP), Resolution No. 4488
- One Bay Area Grant 2 (OBAG 2), Resolution No. 4202
- One Bay Area Grant 3 (OBAG 3), Resolution No. 4505
- Active Transportation Program (ATP), Regional Program, Cycles 5 and 6, Resolution Nos. 4403 and 4487
- Transit Capital Priorities (TCP) for Fiscal Years Starting FY 2020-21 (FTA Sections 5307, 5337, and 5339), Resolution Nos. 4444 and 4510
- Lifeline Transportation Program, FY 2018-19 and FY 2019-20, Resolution Nos. 4416 and 4446
- FTA Rural Area Formula for FY 2018-19 and FY 2019-20 (Section 5311), Resolution Nos. 4036 and 4511
- Transit Core Capacity Challenge Grant for FY 2014-15 through FY 2029-30, Resolution No. 4123

Once selected for funding, a project is eligible for inclusion into the FTIP. In other words, the FTIP is a compilation of projects that have already been reviewed and acted upon by MTC and sponsoring agencies (Metropolitan Transportation Commission, 2022b).

OBAG 3 is one of the biggest funding sources in the above list. Funding for OBAG 3 comes from STBG and CMAQ. OBAG 3 funds are divided into equal halves: 50 percent for the Regional Program, and 50 percent for the County and Local Program. The County and Local Program consists of projects nominated by the nine County Transportation Agencies (CTAs) and selected by MTC through a competitive call for projects process (Metropolitan Transportation Commission, 2022). This process is outlined below:

1. MTC first establishes nomination targets for counties based on population, recent housing production and planned growth, and housing affordability. Nomination targets are set at 120 percent of the available funding capacity to ensure a sufficient pool of projects for regional selection.
2. CTAs, in coordination with MTC, solicit and collect project applications, screen applicants and projects for program eligibility, and conduct initial scoring and/or ranking of projects. CTA evaluation criteria must be approved by MTC staff and a CTA board. At minimum, CTAs must incorporate the following regional criteria into their project evaluations:
    a. Eligibility based on federal and regional requirements.
    b. Alignment with relevant federal and regional plans and policies.
    c. Prioritize projects with demonstrated public support from disadvantaged and vulnerable communities.
    d. Deliverability based on relevant agency capacity and technical expertise.
3. CTAs conduct initial project screening and evaluations and submit project nominations and documentation to MTC for regional evaluation and project selection.
4. MTC staff form an internal multidisciplinary review committee to complete a regional evaluation process and develop a recommended subset of projects for adoption by MTC:
    a. MTC staff first reviews eligibility
    b. Review committee scores projects using the following rubric:
        - CTA Prioritization (75 points): CTAs' project rankings or scores are scaled to a range of 0-75 and normalized across CTAs.
        - Regional Impact (15 points): projects are scored based on their alignment with Plan Bay Area 2050 strategies, anticipated effectiveness in advancing regional objectives, and contribution to regionally significant networks or facilities.
        - Deliverability (10 points): projects are scored based on the sponsor's capacity to deliver the specified project. This component also includes consideration of prior performance on MTC-funded projects, and any anticipated risk to the project development schedule or funding plan.
        - Air Quality Improvement (10 points): CMAQ-eligible projects are scored based on their relative cost-effectiveness in reducing emissions of air pollutants.
    c. Projects are then ranked according to the review committee score. To prioritize high performing air quality improvement projects for CMAQ funding, CMAQ-eligible projects are first ranked from high to low based on scores out of 110 points, which is used by MTC staff to recommend a list of projects for CMAQ funding. CMAQ-eligible projects not selected in the first round of ranking and funding recommendation and all other projects are ranked again based on scores out of 100 points. This second round of ranking is used by MTC staff to recommend projects for STBG funding.
    d. MTC staff may then adjust the project prioritization to achieve program balancing based on the following factors:
        - County Priority Development Area investment targets
        - Regionwide investment targets, including Active Transportation and Safe Routes to School investments
        - Relative STBG and CMAQ funding availability

- Overall program balancing for a variety of project types, equitable investments, and geographic spread

5. MTC staff then finalizes a draft program of recommended projects for Commission adoption.

While the largest part of the project scoring comes from individual CTAs, MTC establishes the criteria that all CTAs must use in prioritizing their projects. That said, the CTAs are allowed to include additional evaluation and scoring criteria; however, those additional CTA-developed evaluation criteria must be reviewed by MTC staff and approved by the CTA's governing board prior to initiating the CTA call for projects. In addition, MTC provides public links to each CTA's website for information on the CTA evaluation and scoring criteria.[31] Finally, while the MTC portion of the evaluation and scoring entails significant qualitative judgments, they are based on a clearly defined set of evaluation criteria.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) uses a project performance assessment tool to score projects based on performance needs at proposed project locations, and these scores go into the overall scores of the evaluation process for selecting projects for funding and programming into the FTIP. Projects fall under different project categories, and the evaluation scoring criteria differ across these categories; we detail these categories in the more detailed discussion of the SACOG assessment tool in Tables 4-15 and 4-16 below. Project applications are evaluated by a performance outcomes working group, focusing on the various project benefits criteria, and a technical project delivery working group composed of experienced project engineers, focusing on cost effectiveness and project readiness criteria. Then, a policy working group merges inputs from the evaluation working groups in order to rank projects[32] (Sacramento Area Council of Governments, 2022). The SACOG evaluation process is discussed in more detail later in this chapter.

San Diego Association of Governments

The San Diego Association of Governments (SANDAG) does not appear to have a consolidated process to select and evaluate projects for the FTIP. SANDAG provides publicly available information on how the MPO determines which projects receive federal funding from sources such as CMAQ and STBG.[33] There is more information on how SANDAG administers the regional source of funding revenues from TransNet, San Diego County's voter-approved transportation local option sales tax. At least 70 percent of TransNet revenue must be devoted to congestion relief projects, which include road widenings such as adding HOV and general-purpose lanes to freeways and local road expansions, as well as BRT and rail capital and other transit investments (which receive a smaller share of the funds than freeway and local roads). The rest, no more than 30 percent, is devoted to maintenance projects. SANDAG has used

[31] See the MTC OBAG 3 website (https://mtc.ca.gov/funding/federal-funding/federal-highway-administration-grants/one-bay-area-grant-obag-3) and (for example) the Contra Costa County CTA website (https://ccta.net/wp-content/uploads/2022/06/ScoringSheet_20220520_CCTA-ATS_OBAG3_fillable.pdf).

[32] According to SACOG, the performance outcome working group and the policy working group are composed of SACOG staff, external experts, and project sponsors, and participants sign an agreement that ensures conflict of interest requirements are met.

[33] See https://www.sandag.org/-/media/SANDAG/Documents/PDF/funding/funding-and-programming/regional-transportation-improvement-program/appendix-i-2023-rtip-2022-11-30.pdf.

this source of funding to support transportation and environmental projects, as well as four competitive grant programs: the Smart Growth Incentive Program, the Active Transportation Grant Program, the EMP Land Management Grant Program, and the Senior Mini Grant program.

The Smart Growth Incentive Program evaluates and scores project applications using two types of criteria.[34] The first type relies on qualitative or subjective criteria to evaluate how well the project sponsor responded to an application question or how well the proposed project will achieve a stated goal. Project proposals are scored by an external evaluation panel, which typically consists of 3-5 members of the public who are familiar with both the San Diego region and the grant program goals and objectives (San Diego Association of Governments, 2021b).

The second type of criteria is quantitative or objective in which a formula or conditional statement is used to determine a score. Some criteria are used to evaluate a project-related data point or metric against a range or scale in order to assign a point value based on where the data point or metric falls within the range or scale. Other criteria assign a point value based on responses to a conditional statement such as a yes/no question or the presence or absence of a condition. This scoring step is conducted by SANDAG staff. Points associated with quantitative criteria undergo a quality assurance/quality control review to ensure data used in the quantitative scoring process are consistent with guidelines and one another, so that the points are awarded appropriately (San Diego Association of Governments, 2021b).

These criteria differ for planning projects and capital projects. The criteria in the most recent call for planning projects include i) relationship to regional transit, ii) further regional mobility hub implementation strategy, iii) smart growth policy implementation, iv) smart growth equity, v) partnerships, vi) sustainability, and vii) matching funds (see Table 4-4 for details); the criteria for capital projects include i) surrounding land use and transportation characteristics, ii) project quality, iii) project readiness, iv) efficient use of program funds, v) matching funds, and vi) compliance with Regional Housing Needs Assessment[35] (see Table 4-5 for details). Table 4-4 shows that the evaluation and scoring of projects in SANDAG's Smart Growth Incentive Program is primarily a qualitative evaluation process, but one based on criteria clearly defined in terms of binary or categorical scoring, or by counting project features.

[34] See https://www.sandag.org/-/media/SANDAG/Documents/PDF/funding/grant-programs/specialized-transportation/specialized-transportation-grant/stgp-cycle-12-cfp-goal-objectives-and-evaluation-criteria.pdf for information on the Smart Growth Incentive Program evaluation criteria.

[35] According to SANDAG's Board Policy No. 033, adoption of pro-housing policy or commitment to housing equity are included as a criterion in the scoring of projects for programs supported by discretionary funding allocated by SANDAG, in order to encourage local governments to comply with Regional Housing Needs Assessment. For details, see https://www.sandag.org/-/media/SANDAG/Documents/PDF/about/about-SANDAG/bylaws-and-policies/board-policy-no-033-2022-11.pdf

Table 4-4. Quantitative criteria and scoring rubric for the San Diego Association of Governments' Smart Growth Incentive Program – planning projects

Scoring criteria (quantitative only)	Scoring scale
Relationship to regional transit	10 pts max 10 pts = within ½ mile of rapid transit /rail stop 5 pts = within ½ mile of major transit stop (non-rapid/non-rail)
Further regional mobility hub implementation strategy	20 pts max 10 pts = land use/zoning strategy to increase housing density and reduce VMT 10 pts = housing and mobility policies to connect housing and transportation networks
Smart growth policy implementation	20 pts max Points awarded for policies on land use, urban design, mobility, sustainability, and resilience that promote smart growth
Smart growth equity	20 pts max Points awarded for planning activities that advance equity
Partnerships	10 pts max 5 pts = interjurisdictional pro-housing partnership 5 pts = partnership with community-based organization or nonprofit
Sustainability	10 pts max 5 pts = project in climate resilient areas/has plans to minimize climate change impacts 5 pts = project includes GHG emission reduction measures/implement jurisdiction climate action plan
Matching funds	10 pts max Points award based on evidence of matching funds

Table 4-5. Criteria and scoring rubric for the San Diego Association of Governments' Smart Growth Incentive Program – capital projects

Scoring criteria (quantitative and qualitative)	Scoring scale	% of total points
1. Surrounding area land use and transportation characteristics		*26%*
A. Intensity of planned development in the project's Smart Growth Opportunity Area	Planned density relative to place type (residential, employment , community center/rural village/mixed use transit corridor) thresholds * - Higher scores for higher density	2%
	Expedited approval process through specific plan, master environmental impact report or other mechanisms	1%
B. Existing and entitled land development around the proposed project	Existing development density within a 0.25-mile radius of project site * - Higher scores for higher density	2%
	Entitled development density within a 0.25-mile radius of project site * - Higher scores for higher density	2%
	Mix of uses * - Higher scores for more uses	1%
	New uses	1%
C. New affordable housing development	Percentage of new affordable housing units * - Higher scores for higher percentage	2%
	Percentage of low- to-very-low-income affordable units * - 50% or more	1%
D. Transportation characteristics (within walking or biking distance from site)	Walking distance to transit * - Higher scores if closer to transit stations/stops	4%
	Distance to bike facilities * - Higher scores if directly connected	1%
	Walkability * - Higher scores for higher intersection density	3%
	Transportation demand management strategies and advanced technologies	1%
E. Community design features	Inclusion of design characteristics prescribed by design and planning guidelines	4%
2. Quality of proposed project		*35%*
A. Support for public transit	How well does the project support the use of regional transit service?	8%
B. Providing transportation choices	How well does the project support travel options that reduce VMT?	8%
C. Community enhancement	How well does the project enhance the public realm?	7%

Scoring criteria (quantitative and qualitative)	Scoring scale	% of total points
D. Addressing project area issues	How well does the project meet special community needs and concerns? How well does the project preserve and integrate cultural and national resources?	5%
E. Sustainability	How well does the project incorporate Green Streets/ Low Impact Development principles?	1%
F. Universal design	How well does the project incorporate Universal Design principles to ensure access to all?	1%
G. Greenhouse gas emission reduction	Has the jurisdiction adopted a Climate Action Plan? Has the jurisdiction adopted a Complete Streets Policy? How well does the project reduce emissions?	5%
3. Project readiness		*9%*
A. Major milestones completed *	Environmental clearance Right-of-way acquisition Final design Project fully-funded	7%
B. Evidence of local commitment	Community support through a comprehensive public participation process	2%
*4. Efficient use of program funds **	Higher scores for smaller amounts requested	*2%*
*5. Matching funds **	Higher scores for higher percentages of matching funds	*3%*
*6. Regional Housing Needs Assessment **	Pro-housing policy or commitment to housing equity	*25%*

Quantitative scores assigned by SANDAG staff are added to the qualitative score given by each individual external evaluation panelist, which generates a total score from each evaluator. Projects are then ranked based on each evaluator's scores and ranked again using the sum of ranks from all evaluators. The final project rankings are used to recommend funding allocations in order of rank. Projects are then recommended for funding in descending rank order until the funding is exhausted (San Diego Association of Governments, 2021b).

SANDAG provides less publicly available information on the project selection and evaluation process for the Active Transportation Grant Program, other than a list of criteria used to score project applications (see Table 4-6 for more details) (San Diego Association of Governments, 2023). However, SANDAG staff indicated that the full set of evaluation criteria were included in the latest Call for projects. However, in contrast to the Smart Growth Incentive Program outlined above, the information published on SANDAG's Active Transportation Grant Program is less explicit about how the evaluation criteria are scored or how the various criteria are weighted relative to one another. While SANDAG staff indicate that the agency does have information on evaluation criteria for this program, it was not posted publicly at the time of this study.

Table 4-6. Publicly available evaluation criteria for the San Diego Association of Governments' Active Transportation Grant Program

Evaluation criteria	How projects are evaluated
Capital grants	
Project connections and safety	Connections to active transportation and transit networks Safety and access improvements
Quality of proposed capital improvement project	Project impact and effectiveness Program objectives, innovation, and advanced technologies
Supportive policies and programs	Supportive education and awareness programs GHG emission reduction Climate Action Plan and Complete Streets Policy
Demand analysis	Population, employment, and intersection densities
Project readiness	Completion of major milestones
Efficient use of program funds	Efficient use based on the dollar amount requested
Matching funds	Additional funds
Regional Housing Needs Assessment	Pro-housing policy or commitment to housing equity
Non-capital grants	
Program objectives and advanced technologies	How well project meets ATGP objectives
Comprehensiveness and GHG emissions reduction	Extensive and thorough plan Accompanying capital improvements Climate Action Plan and Complete Streets Policy
Methodology	Meet demonstrated needs and project goals
Community support	Public involvement and community support
Evaluation	Effectiveness of final project
Innovation	Potential to serve as a model for the region
Demand analysis	Population, employment, and intersection densities
Efficient use of program funds	Ratio of grant request to project score
Matching funds	Additional funds
Regional Housing Needs Assessment	Pro-housing policy or commitment to housing equity

San Joaquin Council of Governments

We were unable to find information published by the San Joaquin Council of Governments (SJCOG) on their process for evaluating and selecting projects for the FTIP. We were also unable to find much information about project selection and evaluation processes employed for specific funding programs. However, a 2020 SJCOG staff report on CMAQ funding recommendations indicates that evaluation criteria were used to score and rank project proposals (San Joaquin Council of Governments, 2020). According to the report, a total of 19 project applications requesting $35,889,515 in CMAQ funds were received by SJCOG. These applications were then reviewed by a Technical Review Committee made up of representatives from SJCOG's partner agencies. The Committee ranked all applications on a SJCOG Board-approved scoring rubric, which was presented during a meeting on December 19, 2019, at which the first 14 projects on the ranked list were recommended for funding. The report provided a ranked list of project applications, shown in Table 4-7 below. Based on the list, it appears that the only criterion

used in ranking the projects was cost-effectiveness, which was measured as dollars per pound of emissions reduced.

Table 4-7. Ranked project applications for San Joaquin Council of Governments' Congestion Management and Air Quality program in 2019/20 fiscal year.

Table 1: CMAQ Applications Ranked by Cost-Effectiveness

Applicant	Project Title	Total Project Cost	Total CMAQ Request	Cost-Effectiveness ($ per lb.)
San Joaquin County	Hospital Solar EV Charger	$840,000	$790,000	$10.99
Stockton	Transportation Management Center Equipment Upgrade	$4,056,000	$3,906,000	$15.27
San Joaquin County	Mountain House Parkway Traffic Signal Synchronization Project	$102,500	$102,500	$15.55
Ripon	East Main Street Traffic Signal	$720,000	$480,000	$25.41
Manteca	2019 Street Sweeper Replacement	$1,050,000	$929,565	$26.52
Ripon	One CNG Solid Waste Collection Vehicle	$375,000	$100,000	$28.85
SJRTD	Zero-Emission Electric Bus Replacement Project (2 2006 Hybrid Buses)	$2,140,000	$2,140,000	$96.30
Stockton	Arch Airport Road Traffic Synchronization and Signal Prioritization Project	$1,257,000	$1,157,000	$99.33
SJRRC	Railcars Purchase	$11,625,000	$7,500,000	$115.16
Port of Stockton	Port of Stockton Near Zero Emission Cargo Handling Equipment	$614,000	$614,000	$126.87
San Joaquin County	Signalization of Mariposa Road and Jack Tone Road	$700,000	$619,700	$137.01
Stockton	Alpine & Alvarado Traffic Signal with Intersection Coordination	$1,040,000	$921,000	$139.36
Tracy	Adaptive Signal System on Grant Line Road	$925,000	$875,000	$150.29
Tracy	Signalization at Corral Hollow Road & Linne Road	$660,000	$330,000	$154.70
Manteca	City of Manteca Phase II Communications Equipment	$4,855,000	$4,563,000	$199.39
SJRTD	Zero-Emission Electric Bus Replacement Project (15 2010 and 2012 Hybrid Buses)	$16,057,500	$8,109,000	$322.39
Lodi	Lodi Electric Bus Demonstration	$1,291,252	$774,751	$539.89
Stockton	San Joaquin & Acacia Conversion to Roundabout	$1,666,000	$1,475,000	$610.00
San Joaquin County	Autonomous Transit Vehicle (ATV) New Service Project	$636,000	$503,000	$2,019.07
		$49,974,252	**$35,889,516**	

Southern California Association of Governments

The Southern California Association of Governments (SCAG), the nation's largest MPO, selects projects for funding using a "bottom-up" approach. Projects are nominated by local jurisdictions and selected by each of the six County Transportation Commissions in the SCAG region, each of which separately develops criteria for ranking and selecting projects for their county TIPs, often called RTIPs. The individual county RTIPs are then aggregated to form SCAG's FTIP. Once county RTIPs are submitted to SCAG, SCAG staff conducts analyses to ensure the projects submitted meet the five tests required under the U.S. Department of Transportation's Metropolitan Planning Regulations and the U.S.

Environmental Protection Agency ’s Transportation Conformity Regulations. The five tests are i) timely implementation of transportation control measures (TCMs), ii) regional emissions analysis, iii) fiscal constraint, iv) interagency consultation, and v) consistency with the RTP/SCS. The draft FTIP undergoes public review before being finalized and adopted by SCAG’s Regional Council (Southern California Association of Governments, 2020b). Thus, much of the responsibility for evaluating and selecting projects in the SCAG region lies with the individual CTCs, which again each use different processes and criteria that we describe in turn below.

Imperial County Transportation Commission

The Imperial County Transportation Commission (ICTC), located in the least populous county in the SCAG region, selects projects for inclusion in the RTIP from “a prioritized list of projects in adopted regional transportation plans including the Imperial County Long Range Transportation Plan and the Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy.” Thus, it is likely that projects are (essentially) selected when the ICTC determines funding for specific plans and programs.

The 2022 Call for Projects for CMAQ and STBG funds published by ICTC outlines how it selects projects for these two funding programs (Imperial County Transportation Commission, 2021a). Project proposals are scored by an evaluation committee composed of representatives from the local Air Pollution Control District, ICTC, individual local agencies, and Caltrans District 11 (as a non-scoring member) (see Table 4-8 below for detailed scoring criteria). Table 4-8 shows that the evaluation criteria and their weighting are clearly spelled out, but the basis by which particular scores are assigned is not. The ICTC reports that the "projects are evaluated on a relative basis" for many of the criteria. In addition, the "factors of overriding concern" are very broadly defined, which likely makes it difficult to consistently evaluate both across projects and over time.

Table 4-8. Scoring criteria for the Imperial County Transportation Commission Congestion Management and Air Quality and Surface Transportation Block Grant funding programs

Criteria	Scoring method	Weight
CMAQ		
Congestion relief	How much a project reduces congestion (primarily road projects) or increases service capacity or reliability (road, transit, and bicycle/pedestrian projects)	20%
Emissions reduction	Projects evaluated on a relative basis based on total emissions (ROG+NOx+PM10+CO) reduced in pounds per year as estimated based on the CARB Cost-Effectiveness Analysis Tool	20%
Cost-effectiveness	Projects evaluated on a relative basis based on CMAQ dollars per pound of total emissions (ROG+NO+PM10) reduced as calculated by the CARB Cost-Effectiveness Analysis Tool	20%
Readiness & deliverability	Evaluated based on project milestones and schedules, as well as proposed activities to ensure project completion on time	20%
Factors of overriding concern	Flexibility to consider factors of overriding concern such as projects of regional significance, timely use of funds, project delivery requirements, leveraging additional funding sources, etc.	20%
Surface Transportation Block Grant		
Community benefits	Evaluated based on social benefits such as increased safety, employment, reduces vehicle emissions, improves connectivity between communities, improves aesthetics, etc.	30%
Project readiness	Evaluated based on project milestones and schedules	40%
Regional significance	Consistency with adopted local and regional planning documents including the 20-year Local Transportation Plan and the Regional Transportation Plan	20%
Continuity	Physical continuity of transportation infrastructure between jurisdictions. Temporal continuity of funding	10%

Los Angeles County Metropolitan Transportation Authority

The Los Angeles County Metropolitan Transportation Authority (LA Metro) has used a consolidated call-for-projects process to select projects. For example, its 2015 Call for Projects highlighted four main regional goals as guiding principles for the call: 1) improving mobility, 2) maximizing person throughput on streets, 3) reducing VMT, and 4) reducing GHG emissions. On top of these four guiding principles, the call also emphasized promoting sustainability, complete streets, and first/last mile connectivity (Los Angeles County Metropolitan Transportation Authority, n.d.). Project sponsors could apply in seven modal categories: 1) regional surface transportation improvements (RSTI), 2) goods movement improvements (GMI), 3) signal synchronization and bus speed improvements, 4) transportation demand management, 5) bicycle improvements, 6) pedestrian improvements, and 7) transit capital. While all seven categories were evaluated against the same set of criteria (albeit with slightly different weights, see Table 4-9 below for details), proposed projects were evaluated only against other proposals in the same category. As with several of the other evaluation and scoring rubrics described here, the publicly available information on the evaluation criteria and their relative weighting is clearly described, but the

manner by which scores are assigned for each of these criteria is not clearly defined in the documentation we reviewed.

Table 4-9. Evaluation criteria for LA Metro's consolidated call for projects

Evaluation criteria	Components of the criterion	Weight of the criteria
Regional significance and intermodal integration	• Support goals in Metro's LRTP • Contribution to regional efforts to address mobility, reduce congestion, and improve air quality • Connectivity with transit • Improve regional accessibility • Improve modes and services by different agencies	30% for RSTI and GMI projects; 25% for other categories
First/last mile improvements	• Facilitate access to transit • Removes access and safety barriers to transit • Consistency with First/Last Mile Strategic Plan Planning Guidelines	5%
Project need and benefit to transportation system	• Mobility benefits • Contribution to a balanced and integrated transportation system • Potential to increase transit use and improve transit system • Eliminate deficiencies in transportation system • Importance to the effective operation and management of the existing transportation system • Further previous actions/investments	30% for RSTI and GMI projects; 35% for other categories
Local match	• 20% monetary local match (except for transit capital projects, where the match can be cash and/or land)	5%
Cost effectiveness	• Cost effectiveness in relation to total project cost • Commitment to covering life-cycle operational and maintenance costs	10%
Land use and sustainability policies/principles	• Advances goals and priorities of RTP/SCS • Project is complemented with local programs or activities that will implement the RTP/SCS and increase the effectiveness of the project • Project sponsor's commitment to coordination activity with land use planning authority	20%
Note: RSTI = regional surface transportation improvements, and GMI = goods movement improvements.		

Orange County Transportation Authority

The Orange County Transportation Authority (OCTA) had a consolidated call for projects, the Comprehensive Transportation Funding Programs 2022, for all transportation funding programs administered by OCTA and funded by the county transportation sales tax, state, and federal sources. Because these various funding programs have different objectives, the selection criteria vary (see Table

4-10 for details). Project proposals are scored, ranked, and submitted to the OCTA Board of Directors for consideration and approval. It is unclear from the publicly available documents we reviewed who conducts the evaluations for most of the funding programs, as we could find information on only one program—the Environmental Cleanup Program—that mentioned an advisory panel that reviews and ranks projects applications (Orange County Transportation Authority, 2021a). While not shown in Table 4-10, similar to the SANDAG example above, the scoring rubric includes many binary (points or no points) and categorical (set number of points awarded based on some factor) means of assigning points in the various categories.

Table 4-10. Evaluation criteria/scoring rubric for Orange County Transportation Authority funding programs

Evaluation/selection criteria	Weights	
Project W: Safe Transit Stops		
If funding is not sufficient for all proposals, projects prioritized based on boarding ranking and the needs of each bus stop		
Project S: Transit Extension to Metrolink		
	Fixed guideway	Bus and station van
Financial commitment/partnership	20%	18%
Project readiness	8%	20%
Regional/local benefits	16%	12%
Transit usage/congestion relief	16%	20%
Ease of connections/community connections	14%	10%
Cost effectiveness	16%	20%
Approved land use	5%	0%
Safety	5%	0%
Project T: Metrolink Gateways		
Financial commitment	30%	
Readiness	20%	
Regional markets/land use	12%	
Transit usage	20%	
Intermodal connections	18%	
Project V: Community-Based Transit/Circulators		
Financial commitment	15%	
Cost effectiveness	10%	
Project readiness	10%	
Operations plan	15%	
Ridership projection	5%	
Funding plan	10%	
Service type	15%	
Agency experience	10%	
Community benefit	10%	
Project O: Regional Capacity Program		

Evaluation/selection criteria		Weights		
		Street widening	Intersection improve-ment	Interchange improve-ment
Facility usage	Existing ADT	10%	15%	10%
	Existing VMT	10%	0%	0%
	Project readiness	10%	10%	10%
Economic effective-ness	Cost benefit (total cost/ADT)	10%	10%	10%
	Funding over-match (local match/total cost – required match)	5%	5%	10%
	Coordination with contiguous project	0%	5%	5%
Facility importance	Transportation significance	10%	10%	10%
	Operational efficiencies	10%	20%	15%
Benefit	LOS improvement	35%	25%	30%
Project P: Regional Traffic Signal Synchronization Program				
Transportation significance		30%		
Economic effectiveness		10%		
Project characteristics		10%		
Maintenance of effort		5%		
Project scale		20%		
Number of jurisdictions		10%		
Current project status		10%		
Funding match		5%		

Despite differences in the evaluation criteria across the different funding programs, they share some common evaluation factors: financial commitment, project readiness, cost effectiveness, expected usage, and connectivity (for transit programs) and level of service (LOS) improvement (for traffic and capacity expanding programs).

Apart from the transportation investment programs in the above table, the aforementioned Environmental Cleanup Program, which is funded with two percent of the gross revenues from the voter-approved local option sales tax Measure 2, addresses urban runoff associated with transportation generated pollution that affects Orange County's beaches and waterways. This program consists of two grant programs, Tier 1 and Tier 2. The Tier 1 Grant Program funds mostly street-scale projects that address more visible forms of pollution; the Tier 2 Grant Program funds large, multi-jurisdictional, and capital-intensive projects. The published evaluation criteria for the two grant programs differ somewhat, but largely address similar factors including the need for the project, project design, expected project performance and effectiveness, project benefits, and project readiness (Orange County Transportation Authority, 2021a).

Riverside County Transportation Commission

We were also able to find relatively little publicly available information about how the Riverside County Transportation Commission (RCTC) selects projects to be submitted to SCAG's FTIP. However, RCTC's

2022 RTIP does outline the process for project selection. While projects in the RTIP are proposed for inclusion in the State Transportation Improvement Program (STIP), since these projects are funded by federal dollars, they are also included in SCAG's FTIP.

RCTC selects projects for the RTIP from "approved transportation plans and programs." Project selection is based on several factors, including "fiscal years available for programming" and "project delivery schedules." Priority candidate projects in western Riverside County are first selected from the RCTC's Measure A (Riverside County's voter-approved half-cent sales tax measure for transportation) 10-Year Delivery Plan. If the 10-Year Delivery Plan does not have enough projects that meet the STIP programming requirements, then projects that are consistent with or enhance Measure A projects are considered. Projects in the Coachella Valley (in the eastern portion of Riverside County) are recommended by the Coachella Valley Association of Governments (CVAG) and are consistent with CVAG's Transportation Project Prioritization Study (TPPS). The proposed 2022 RTIP has been certified by SCAG to be consistent with SCAG's RTP/SCS (Riverside County Transportation Commission, 2021b).

Based on the above process, it appears that the initial phase of project selection is program specific. Selection for the RTIP happens after the projects have already been selected for inclusion in various transportation plans and programs such as the Measure A 10-Year Delivery Plan. While details about the specific project selection criteria and processes are not available for all plans and programs administered by the RCTC, the Call for Projects for Transportation Development Act (TDA) Article 3, or SB 821—Bicycle and Pedestrian Facilities—published by the RCTC outlines how it selects projects for this particular funding program (Riverside County Transportation Commission, 2021a). Project proposals are scored by an evaluation committee composed of a minimum of five members from different agencies and geographic areas within this spatially expansive county, excluding agencies that are applying for funding (see Table 4-11 below for detailed scoring criteria). Funding is allocated according to a ranking of projects based on the evaluation scores. Table 4-11 shows that, for the TDA Article 3 and SB 821 programs, the evaluation criteria, their relative weights, and the rules by which points are awarded in each category are generally clearly defined.

Table 4-11. Scoring criteria for Transportation Development Act Article 3/Senate Bill 821 Bicycle and Pedestrian Facilities Program

Criteria	Scoring method/scale	Weight
Destination served	● 2 pts for each destination served (within a ¾ mile radius for pedestrian projects, and 2-mile for bicycle projects) by the proposed project ● Max of 14 pts.	28%
Safety	● Points are awarded for project characteristics that address safety concerns and/or increase safety for the non-motorized public. ● Max of 15 pts.	30%
Multimodal access	● 1 pt for each transit route, Metrolink stations, or park and ride facility, bicycle lanes, sidewalks or crosswalks improved by the proposed project ● Max of 6 pts.	12%

Criteria	Scoring method/scale	Weight
Matching funds	● 1 pt for each 5% of match provided by the local agency ● Max of 10 points for 50% match	20%
Population equity	● Scoring is based on a ratio, calculated by RCTC staff, of a local agency's total SB 821 allocation received in the last ten fiscal years to the agency's share based on per capita basis. A low ratio receives a higher score to adjust for past inequitable distribution patterns. ● Max of 5 pts.	10%
Total	50 pts.	100%

San Bernardino County Transportation Authority

Little information is available from publicly available sources about how the San Bernardino County Transportation Authority (SBCTA) evaluates, scores, and selects projects for the RTIP, except a statement that RTIP projects are "selected from the adopted Southern California Association of Governments (SCAG) RTP/SCS as well as voter-approved projects that are included in the Measure I 2010-2040 Expenditure Plan and the 10-Year Delivery Plan" (San Bernardino County Transportation Authority, 2021).

Ventura County Transportation Commission

We were able to find relatively little publicly available information on how the Ventura County Transportation Commission (VCTC) recommends projects in Ventura County to SCAG for the FTIP. The Ventura County Transportation Commission's (VCTC) website states that for federal and state funding programs, including CMAQ, TDA, and SB1, the VCTC uses a combined call-for-projects to solicit project proposals, which categorizes projects into transit and non-transit, and then scores all projects within the same category based on the same criteria (see Table 4-12 below for details) (Ventura County Transportation Commission, 2022). Table 4-12 shows that the scoring criteria and their relative weights are clearly described, the basis by which scores are applied is not. As a result, it is not clear whether the assignment of points is relatively subjective (which is implied by the use of terms like "likelihood" and "special considerations") or whether some defined schema is used to assign scores in the various categories for a given project.

Table 4-12. Scoring criteria for the combined call for projects for Congestion Management and Air Quality / Transportation Development Act Article 3 bicycle and pedestrian / Senate Bill 1 state of good repair funds

Scoring criteria	Transit projects	Non-transit projects
Project's potential to promote non-auto travel, reduce motor vehicle trips with an emphasis on serving destinations	0-15 pts	0-20 pts
	Likely to reduce trips and improve air quality by attracting transit users or increase transit system capacity	Bicycle and Pedestrian projects: Likelihood to reduce trips and improve air quality by attracting active transportation users and/or reducing motor vehicle trips

Scoring criteria	Transit projects	Non-transit projects
		Non-bicycle/pedestrian projects: Likelihood to improve mobility and safety particularly on freight or transit corridors, address identified community needs, or provide economic, environmental and air quality benefits
Air quality improvements and special considerations	0-45 pts	0-25 pts
	● Anticipated air quality benefits for CMAQ-defined pollutants (ROG, NOx, PM10, PM2.5) ● Cost effectiveness ● Eligibility to be a Transportation Control Measure (TCM) ● Special considerations: flexibility to considers ways in which the proposed project will benefit City/County residents	
Necessity to continue reliable operation	0-25 pts How a project addresses the need to replace or rehabilitate existing transit system equipment	N/A
Network connectivity	N/A	0-25 pts ● Multimodal (0-5 pts) ● Non-bicycle projects included in adopted plans (0-10 pts) ● Address missing gaps identified in the Bicycle Wayfinding Study (0-20 pts)
Complete street design	N/A	0-10 pts
Deliverability	N/A	0-5 pts
Safety and security	0-10 pts	
Leveraging funds	0-5 pts	

Examining three notable project assessment tools in more detail: MTC, SACOG, and Cal B/C

MTC's Project Performance Assessment process

The San Francisco Bay Area MTC conducts a project performance assessment to evaluate projects for its regional transportation plans. MTC first conducted such assessments in 2013 for its Plan Bay Area, and then in 2017 for Plan Bay Area 2040. Based on feedback that they received after each of these two efforts, MTC staff revised the methodology for the latest round of plans, Horizon and Plan Bay Area 2050. During this recent round, three types of projects were assessed: capacity-increasing investments, operational strategies, and resilience projects to address sea level rise and seismic hazards (Metropolitan Transportation Commission, 2019).

The MTC assessment encompasses three components: 1) a Benefit-Cost Assessment (the primary form of assessment), and 2) a Guiding Principles assessment (a secondary assessment) and 3) an equity assessment (also, a secondary assessment). The Benefit-Cost Assessment compares societal benefits (see Table 4-13) against anticipated project costs (see Table 4-14) (Metropolitan Transportation Commission, 2019). Table 4-13 shows that the MTC quantifies both benefits and disbenefits, values them in time-discounted dollar amounts, and then performs a formal benefit/cost analysis, which is then followed by two more qualitative (Guiding Principles and equity) assessments. This is, by far, the most sophisticated, comprehensive, rigorous, and well-documented evaluation process we encountered in this review.

Table 4-13. MTC's Methodology and valuation for estimating project benefits.

Benefit category	***Benefits/ disbenefits***	***Methodology***	***Valuation***
Accessibility	Auto in-vehicle travel time (per hour)	Change in individual-level accessibility measured by logsum (consumer surplus resulting from a given set of choices available); accessibility benefits of a project measured by the aggregate of individual-level logsum measures (total change in consumer surplus)	Value of time based on regional wage rate
	Truck in-vehicle travel time (per vehicle hour of travel)		Hourly compensation paid to truck drivers
	Auto operating costs (per mile)		Cost of fuel, maintenance and repair, and depreciation, based on forecasted fuel costs and efficiencies
	Truck operating costs (per mile)		
Travel time reliability	Auto (per person hour of non-recurring delay)	Number of hours lost due to unreliable travel time measured as the sum of incident delay across all roadways	Value placed by an auto driver/carrier/shipper on unreliable travel times
	Freight /truck (per vehicle hour of non-recurring delay)		

Benefit category	*Benefits/ disbenefits*	*Methodology*	*Valuation*
Transit crowding	Disbenefit associated with traveling in crowded transit	The difference between the in-vehicle travel time multiplied by a crowding factor (calculated using a formula at the transit link level, based on the load factor on the particular link) with and without the project represents the (dis)benefit of the project with respect to crowding relief	Disbenefit of persons in crowded transit, expressed as their value of time
Collisions	Fatality collisions (per fatality)	Change in the number of collisions due to a project = the change in VMT (by area type (urban/rural), facility type, and number of lanes) * estimated number of collisions by type per VMT	internal costs to the victim (and family) resulting from loss of life + external societal costs
	Injury collisions (per injury)		internal costs to the victim (and family) resulting from injury + external societal costs
	Property damage only collisions (per incident)		internal costs to the victim (and their family) resulting from the time required to deal with the collision + external societal costs from this loss of time
Physical inactivity	Morbidity and productivity (per active adult) Mortality (per life saved)	Morbidity benefits: Health care cost savings for every new 'active' individual. An active individual is considered to be one that walks and/or bikes for 30 minutes a day. Mortality benefits: Risk reduction of mortality of 11% for walking and 10% for bicycling for 'active' individuals, applied to Bay Area mortality rates	Savings from influencing an insufficiently active adult to engage in moderate physical activity
Greenhouse gas (GHG) emissions	CO2 emissions (per metric ton)	Change in emissions = the sum of VMT * estimated future emission lehttps://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsoc	The full global social cost of a metric ton of CO2 over its whole time in the atmosphere
Other pollutant emissions	Diesel PM2.5, Direct PM2.5, NOx, Acetaldehyde,		Negative health effects of increased emissions

Benefit category	*Benefits/ disbenefits*	*Methodology*	*Valuation*
(per metric ton)	Benzene, 1,3-Butadiene, Formaldehyde, All Other ROG, SO2	al-plan_0.pdf?1606001176vels per VMT	
Noise (per mile traveled)	Auto Truck	Change in VMT due to the project	Property value decreases and societal cost of noise abatement
Auto ownership	Costs per vehicle	Predicted change in the number of vehicles owned by households, based on VMT and household demographics	Annual ownership costs including insurance, depreciation, and financing charges
Natural land	Wetland, Forestland, Pasture, Agricultural land	100ft buffer around linear projects (e.g., road/rail extensions) and 150 ft - 500 ft buffer from center of point projects (e.g., interchanges, transit centers), depending on the size of the project.	Benefits of ecosystem goods and services

Table 4-14. MTC's methodology for estimating project costs

Costs	Methodology
Upfront capital costs	Project sponsors submit costs to MTC, MTC reviews costs for accuracy and inclusiveness
Operating and maintenance costs	
Asset replacement costs	Same level of capital investment costs incurred at the end of the assets' useful lifetime
Residual value (negative cost)	Remaining value of assets after depreciation

Benefit-Cost Assessment

The MTC Benefit-Cost Assessment explores projects' performance against three different Horizon "Futures," which are "what if" scenarios based on different assumptions about future growth, investment, and policy environment (Metropolitan Transportation Commission, 2018). The three Horizon Futures described initially in Chapter 3 are:

- ***Rising tides, falling fortunes*:** Which is characterized by a general lack of federal infrastructure funding, an unsuccessful rollout of automated vehicles, a dearth of climate regulation resulting in significant sea level rise.
- ***Clean and green*:** Which is characterized by extensive environmental regulations, higher density and more central housing and commercial development, less low-density sprawling development on the metropolitan fringe, and less dependence on private motor vehicles for travel.

- ***Back to the future*:** Which is characterized by sustained economic and population growth and continued suburbanization supported by increasing use of automated vehicles.

The outcomes from the benefit-cost assessment are further evaluated through supplemental analyses of confidence and sensitivity. The confidence assessment evaluates the accuracy of the travel model in measuring benefits associated with certain types of travel or projects, as well as how complete the travel model is in capturing all primary project benefits. The sensitivity assessment evaluates how the benefit-cost assessment outcomes change in response to modifying some key assumptions such as income distributions, valuation of time, penetration of automated and electric vehicles, and the cost of driving (Metropolitan Transportation Commission, 2019).

Guiding Principles Assessment

The Guiding Principles Assessment, one of the two secondary assessments, evaluates a project's alignment with five guiding principles of Plan Bay Area 2050, which are *affordable, connected, diverse, healthy,* and *vibrant* (Metropolitan Transportation Commission, 2021a). This qualitative assessment contrasts from the quantitative benefit-cost assessment and focuses on potential significant negative impacts associated with the project and may flag projects that do not support the five guiding principles (see Table 4-15). Even this more qualitative element of the assessment explicitly defines the evaluation criteria and the basis of assessment.

Table 4-15. Summary of MTC's evaluation criteria for guiding principles assessment

Guiding principle	Evaluation question	Criteria for project to be flagged
Affordable	Does the project increase travel costs for lower-income residents?	Eliminating a lower-cost travel alternative
Connected	Does the project increase travel times or eliminate travel options?	Increasing travel time for one mode without decreasing it for another mode (unless justified by significant safety benefits); eliminating a modal option from a travel corridor
Diverse	Does the project displace lower-income residents or divide communities?	Displacing lower-income households directly through site acquisition; building an elevated freeway structure through an existing neighborhood
Healthy	Does the project significantly increase emissions or collisions?	A significant long-term net increase in emissions and/or collisions.
Vibrant	Does the project eliminate jobs?	A net reduction of jobs as a direct result of the project.

Equity Assessment

The Equity Assessment, the other secondary assessment, consists of two components. First, a geographic assessment determines if transportation investments have the potential to benefit residents

in Communities of Concern.[36] Using GIS, this assessment checks if a project provides a point of access directly to one or more Communities of Concern. Second, a distribution assessment examines the distributive impacts of project-level accessibility benefits across income groups in all three Horizon Futures. Changes in accessibility benefits are determined for four income groups (less than $45k, $45k-90k, $90k-150k, and more than $150k, in 2019 dollars), then an equity score is calculated as the ratio of benefits per person of the two lower income groups to benefits per person of all income groups. A higher equity score indicates that the accessibility benefits are relatively more progressive across income groups (Metropolitan Transportation Commission, 2019).

Use of the Project Performance Assessment output

The outcomes of the Project Performance Assessment are used to rank and categorize projects as high-, medium-, and low-performing. For previous RTPs, MTC required low-performing project sponsors to submit a compelling case to include it in the fiscally constrained plan project list. For Plan Bay Area 2050, MTC is instead adopting a solutions-oriented approach. This new approach will continue to identify high-performing projects, but for all remaining projects MTC staff will work collaboratively with project sponsors to identify project refinements or complementary local or regional strategies to address performance shortcomings (Metropolitan Transportation Commission, 2019).

SACOG's Project Performance Assessment tool

The Sacramento Area Council of Governments also uses a project performance assessment (PPA) tool to evaluate the extent to which a proposed project can help achieve regional transportation and land use goals. The PPA tool was first used in the 2018 funding cycle and updated in 2020 based on a self-assessment of the tool by SACOG staff and comments from project sponsors and other tool users.[37] The PPA tool generates data indicators for a set of performance outcomes based on project information provided by project sponsors. The set of performance outcomes differs depending on project categories. For transportation projects in the Regional Program, including freeway projects, maintenance and complete street projects, and transit and road expansion projects, there are eight performance outcomes: 1) reduce VMT per capita, 2) reduce congested VMT per capita, 3) increase multi-modal travel, 4) economic prosperity, 5) improve freight movement, 6) safety, 7) maintenance and state of good repair, and 8) socioeconomic equity. For land use projects in the Community Design Program, there are seven performance outcomes, or Blueprint Principles: 1) transportation choice, 2) compact development, 3) mixed-use development, 4) housing choice, 5) uses existing assets, 6) preserves natural resources, and 7) quality design.

Each performance outcome/blueprint principle is measured by one or more indicators (see Tables 4-16 and 4-17). The project sponsor may select only a subset of the performance outcomes to be evaluated for the funding round, and SACOG will only bring forward the data indicators in the sponsor-selected

[36] Communities of Concern are defined by MTC as census tracts with high concentrations of minority and low-income households relative to the regional average, or census tracts with high concentrations of at least three of six other factors (including limited English proficiency, zero-vehicle households, seniors 75 years and over, people with disabilities, single-parent families, and severely rent-burdened households) relative to the regional average.

[37] The updated 2020 tool also underwent a beta testing period and received additional feedback.

performance outcomes (Sacramento Area Council of Governments, 2020a). SACOG's Project Performance Assessment tool relies on clearly defined quantitative indicators. But, in contrast to the future scenarios employed by the MTC, the SACOG outcomes and indicators only describe existing conditions. However, the existing conditions analyses are supplemented by more subjective narratives describing how projects can create benefits to address existing needs or insufficiencies.

Table 4-16. SACOG's performance outcomes and indicators for transportation investments in the Regional Program

Performance outcome	**Indicators by project type**		
	Freeways	**Maintenance and complete streets**	**Transit and road expansion**
Reduce VMT/capita	Transit trips Average vehicle occupancy on project	Jobs + dwelling units Land use diversity Neighborhood services accessibility	
Reduce congested VMT/capita	Congestion severity Travel time reliability Growth in project corridor (transit and road expansions only)		
Increase multi-modal travel	Transit person-trips on segment	Street connectivity Bike network connection Transit activity Residential mode split	
Economic prosperity (jobs, school, agriculture)	Job access Job growth (transit and road expansion only) School access School enrollment Acres of agricultural land near project		
Improve freight movement	STAA truck route status Truck mode share	STAA truck route status Industrial jobs share	STAA truck route status Industrial jobs share Industrial jobs growth
Safety	Total collisions Collision rate Bike/pedestrian collisions & rate (maintenance and complete streets & transit and road expansion only)		
Maintenance and state of good repair	NA (uses State Highway Operation and Protection Program (SHOPP) program)	Pavement condition index Volumes Complete street index	Pavement condition index Volumes
Socioeconomic equity	Replica post-processing indicators	Environmental justice (EJ) population EJ percent EJ accessibility	

Table 4-17. SACOG's Blueprint principles and indicators for land use investments in the Community Design Program

Blueprint principle	Example indicator
Transportation choice	Transportation mode split for residents within half-mile of corridor
Compact development	Combined jobs and housing units within half-mile of project location
Mixed use development	Land use diversity index within one mile of project location
Housing choice	Housing type mix within one mile of project location
Use existing assets	Travel time accessibility to neighborhood amenities by transportation mode Infill/greenfield project location
Preserve natural resources	Combined acres of forest, agricultural land and park/open space within half mile of project location
Quality design	No quantitative indicators

The indicators produced in the PPA tool are not causal, meaning that SACOG staff do not evaluate outcomes with and without the project. Many PPA indicators do, however, give information about existing conditions without the project. These existing condition indicators help to illustrate whether improvements are needed within a given outcome category. Project sponsors must demonstrate how the project responds to the identified performance need in the narrative portion of the funding application. Several PPA indicators also include projections about the project corridor for the year 2040. Again, these future year estimates are not a project/no project comparison. Rather, they depict the vision for the corridor based on SACOG's MTP/SCS. Project sponsors must explain how the project aligns with and can help realize the SACOG MTP/SCS vision in the narrative portion of the application (Sacramento Area Council of Governments, 2020a).

The PPA tool also provides information on regional and place/community type and size on each indicator, so that projects can be compared to similar locations elsewhere. The place/community type categories included in the 2020 PPA tool are agriculture and open space, rural residential, rural and small-town main street, small-town established communities, developing communities, established communities, arterials and suburban corridors, and urban core (Sacramento Area Council of Governments, 2020a).

Use of the PPA tool output

A performance outcome working group composed of experts evaluates project benefits against the performance selection criteria. The performance outcome review evaluates and scores project benefits based on both the PPA tool results that illustrate performance needs and the application narratives that describe how the project can meet the identified performance needs at the project location. The quantitative score from the PPA tool is weighted more for transit and road expansion projects than for maintenance and complete street projects because these larger projects are assumed to have regional benefits that can be measured with more confidence. The final project benefits score accounts for 25 to 75 percent (depending on project category, see Table 4-18) of the overall score that the project receives in the project evaluation and selection process (Sacramento Area Council of Governments, 2020b, 2020d, 2020c).

The overall score may include one or more of these components (depending on project category): project leverage and cost-effectiveness, project deliverability and risk, project sponsor priorities, and asset condition and use. These components are reviewed and scored by a technical project delivery working group composed primarily of experienced project engineers. Results from the performance outcome review and the project delivery review and the overall scores are then reviewed by a policy working group. This final evaluation considers each application as an integrated whole and categorizes project proposals into three priority tiers (low, medium, and high). SACOG staff then recommend funding awards based on these priority tiers to the Transportation Committee and then the full SACOG board (Sacramento Area Council of Governments, 2020b, 2020d, 2020c).

Table 4-18. SACOG's components of the project evaluation score for different project categories

Score component	Transit and road expansion projects	Maintenance and complete street projects	Community design projects
Project benefits	50%	25%	75%
Project leverage and cost-effectiveness	30%	NA	NA
Project deliverability and risk	20%	10%	25%
Project sponsor priorities	NA	45%	NA
Asset condition and use	NA	20%	NA

Comparing and Contrasting the MTC and SACOG Approaches

MTC's and SACOG's project performance assessments differ in several respects. The most apparent difference is the purpose of the assessment. MTC assesses project performance for the RTP list of future investments, whereas SACOG jurisdictions use the project performance assessment tool in their applications for funding awards for projects that are not yet funded. It thus appears that SACOG's project performance assessment may have a greater influence over what projects get funded and implemented in the near-term compared to MTC's assessment, which primarily affects planning and long-term funding decisions. However, MTC has not amended its RTP to include projects that were not previously assessed, and this may indicate that the agency's practice is to exclude low-performing projects from the RTP project list, at least initially. MTC staff report a practice of working with sponsors of low scoring project to either amend them to address the factors causing them to score poorly, so that they can subsequently score well and be included in the RTP; or, failing that, the collaborative process may in some cases help the project sponsor to fully understand why the project scores poorly and is unlikely to make it into the RTP.

The more fundamental difference concerns the methodology of the assessment, and this differs in several ways. First, the core component of MTC's assessment, the benefit-cost analysis, estimates the societal benefits of a project quantitatively (in dollar terms) for three different what-if future scenarios, whereas the core component of SACOG's assessment, the PPA tool, only generates data about existing conditions and long-term visions with respect to key performance measures at a project's location, without measuring or estimating the performance of the project itself. In other words, MTC's assessment models/simulates the impact of a project (benefits and disbenefits) on the transportation and land use system and then quantifies that impact in dollar terms to be evaluated against anticipated project costs.

In contrast, SACOG's assessment describes the current conditions and future visions regarding the location of the proposed project and identifies investment needs based on a set of performance measures, relying on the project sponsor to justify qualitatively how their project can meet such needs.

The second methodological difference is the components of the assessment and their relative weights. MTC's assessment consists of three components: a benefit-cost assessment as the primary component, and a guiding principles assessment and an equity assessment as secondary components. While the benefit-cost assessment appears to be the most important component, we could not find information on the exact weights of the three components in the overall ranking in any publicly available information sources. SACOG's assessment consists of two to four different components depending on the project category. While project benefits are considered in all SACOG project categories, such benefits are weighted differently: 25 percent for maintenance and complete street projects, 50 percent for transit and road expansion projects, and 75 percent for community design projects.

The third methodological difference is how benefits and costs are measured. MTC's benefit-cost analysis puts dollar values on a set of benefits/disbenefits and on the anticipated project costs discounted over the project's lifetime and computes a benefit-cost ratio. SACOG's project benefit assessment first identifies investment needs in terms of the key performance measures defined in the RTP/SCS at the project's location and evaluates whether the project can help meet the identified outcome needs qualitatively. In a different component of SACOG's overall assessment of a project, cost-effectiveness is calculated simply as annual total travel over annual cost.

Lastly, MTC and SACOG address climate and equity concerns differently in their project performance assessment. MTC addresses climate concerns directly in the benefit-cost analysis by estimating the change in greenhouse gas emissions resulting from a project, whereas SACOG addresses climate concerns indirectly by emphasizing performance outcomes such as reducing VMT, increasing multi-modal travel, and promoting compact and mixed-use development. MTC examines the equity impacts of all projects as a secondary component of the overall performance assessment, whereas SACOG includes socioeconomic equity as a cross-cutting performance outcome and allows project sponsors to choose which performance outcomes they wish to be evaluated on, meaning a project's equity impacts may not be evaluated if the sponsor chooses not to include this performance measure.

Project evaluation for funding awards

While MTC and SACOG are the only two MPOs in our sample that use project performance assessment tools to evaluate project proposals, other MPOs (and county transportation agencies in multi-county MPOs) also conduct systematic, albeit often simpler, evaluations of project proposals to determine which ones receive funding and are programmed into the FTIP. Since MTC's project performance assessment is used to evaluate projects for the RTP/SCS, it also conducts separate evaluations for funding awards. As described above, SACOG's project performance assessment tool generates scores that go into the overall evaluation of projects for funding awards. And like SACOG's approach, MPOs and county transportation agencies often use scoring rubrics to score and rank project proposals for funding awards. While these scoring rubrics play an important role in determining funding for project proposals and hence in shaping regional transportation and land use systems, MPOs may have limited control over the design of these rubrics. These scoring rubrics are usually specific to the requirements of

federal, state, and voter-approved local funding programs, each of which may have different objectives and requirements.

Cal B/C – Caltrans' cost-benefit analysis tool

Finally, the California Department of Transportation (Caltrans) uses a life-cycle benefit cost analysis tool, known as Cal B/C, for project-level evaluation. This tool is a suite of Excel Workbooks consisting of five modules that can be applied to different project types: Cal B/C Sketch and Cal B/C Corridor for highway and transit (the former is a simple sketch planning model while the latter can post-process simulation and travel demand model data), Cal B/C Park and Ride (PnR) for carpool, bus, and commuter rail, Cal B/C Active Transportation (AT) for cycling and walking, and Cal B/C Intermodal Freight (IF) for truck and rail freight. The benefits included in the model's calculation are travel time savings, travel time reliability savings, vehicle operating cost savings, accident cost savings, emission cost savings, journey quality benefits, health benefits, and shipper cost savings over the life of the project, some of which apply to specific project types and are included in certain modules only. The sum of these benefits is divided by the total life-cycle costs of the project to generate a benefit-cost ratio, which is a measure of the project's cost-effectiveness (Caltrans, n.d.). Thus, this tool can reflect project benefits in terms of climate change mitigation by measuring emission reductions, but as we understand it the tool does not currently provide information on how the benefits and costs are distributed across different types of communities or travelers.

Table 4-19. Components and Methods Employed in the Cal B/C Analysis Tool Modules

Component	*Description of Methodology*	*Cal B/C Sketch*	*Cal B/C Corridor*	*Cal B/C PnR*	*Cal B/C AT*	*Cal B/C IF*
Travel time savings	The economic benefit of travel time savings, computed as a function of traffic volume, speed, and value of time. The average value of time is considered to be one-half of a person's wage rate.	✅	✅	✅	✅	
Travel time reliability savings	Savings from reduction in delays, computed as a function of speed, delay rate, and value of time.	✅	✅			
Vehicle operating cost savings	Including fuel and non-fuel costs, computed as a function of traffic volume, speed, fuel consumption, and wear factors.	✅	✅	✅		
Accident cost savings	Including economic costs for fatalities, injuries, and property damage, computed as a function of traffic volume, accident rate, cost per accident, and facility type.	✅	✅	✅	✅	✅
Emission cost savings	Economic benefit of emission reductions, computed as the product of VMT change, emission rates, and emission costs. Emission costs are the health costs of pollutants, which vary by type and region.	✅	✅	✅	✅	✅
Journey quality benefits	Benefits of improvements to cycling or walking infrastructure, computed as the product of miles traveled and per mile dollar value of improvements (facility class for cycling, and pedestrian amenities for walking)				✅	
Health benefits	Economic benefits of reduced absenteeism, computed as the product of reduced work absences and value of time; and reduced mortality, computed as the product of reduced deaths and value of life.				✅	

Component	*Description of Methodology*	*Cal B/C Sketch*	*Cal B/C Corridor*	*Cal B/C PnR*	*Cal B/C AT*	*Cal B/C IF*
Shipper cost savings	Cost savings from modal diversion (to a less costly mode), less drayage, and improvements in transload operations and terminal efficiency, computed as a function of shipping volume and shipping/drayage/transload/delay costs.					✅
Life-cycle project cost	Including initial costs for project support, right-of-way acquisition, and construction, subsequent costs (after construction and open for service) for maintenance and operation and rehabilitation, mitigation costs for protecting communities and environment, and, for all projects except active transportation investments, transit agency cost savings due to efficiency improvements.	✅	✅	✅	✅	✅
Notes: (1) all project benefits, or cost savings, and project costs are calculated in constant dollars and present value.						

Many MPOs and RTPAs use the Cal B/C tool to comply with the STIP guidelines that call for MPOs or RTPAs to include benefit-cost analyses in their RTIPs project-specific evaluations of all new projects with total estimated project costs over $50 million, or over $15 million in STIP funds programmed. For the latest round of RTIPs, Fresno COG and a few RTPAs in the SCAG region, including LA Metro, OCTA, RCTC, and SBCTA, included results from Cal B/C analyses for several projects (Los Angeles County Metropolitan Transportation Authority, 2021; Orange County Transportation Authority, 2021b; Riverside County Transportation Commission, 2021b; San Bernardino County Transportation Authority, 2021). MTC also required its nine county transportation agencies to include benefit-cost ratios estimated using Cal B/C in its latest STIP guidelines (Metropolitan Transportation Commission, 2021c). SACOG and some RTPAs, including TAMC and SCCRTC in the Monterey Bay region as well as VCTC and ICTC in the SCAG region, noted that they had no projects meeting the requirements listed above, so there was no need to conduct such analyses (Imperial County Transportation Commission, 2021b; Sacramento Area Council of Governments, 2017; Santa Cruz County Regional Transportation Commission, 2019; Transportation Agency for Monterey County, 2021; Ventura County Transportation Commission, 2021).

Based on our review of publicly available documents, SANDAG and a few RTPAs, like RCTC in the SCAG region as well as Council of San Benito County Governments (San Benito COG) in the Monterey Bay Area, appear to have used benefit-cost analysis tools other than Cal B/C. SANDAG's analysis bundled individual projects together if they were in the same corridor and evaluated their benefits based on 16 indicators in three broad categories—environment and quality of life, mobility and safety, and economy—which were then divided by the total costs to generate the benefit-cost ratio (San Diego Association of Governments, 2022b). As noted in our discussion of SANDAG's RTIP, this was how SANDAG staff evaluated projects for the RTP process; they do not appear to have performed other project-level analyses. RCTC did use Cal B/C for a freeway interchange project, but for its Coachella Valley–San Gorgonio Pass Rail Corridor project the RCTC used a different analysis developed based on the USDOT's guide on benefit-cost analysis, which included additional benefits such as agency and productivity benefits and highway pavement maintenance costs savings (Riverside County Transportation Commission, 2021a). We can find no evidence that San Benito COG's analysis quantified project benefits.

Finally, as noted above, many MPOs and RTPAs use the Cal B/C tool to satisfy the STIP requirement regarding project-level benefit-cost estimates. For project selection for other funding programs and project evaluation for the RTP process, MPOs and RTPAs employ the varied approaches and processes described in this section.

Performance Measures Used for Ongoing Monitoring

Finally, to help the reader make sense of the many and varied uses of performance measures for ongoing monitoring by the seven MPOs studied here, Table 4-20 shows which MPOs use which types of measures for performance monitoring, and which performance measures are most commonly used.

The results show, above all, heterogeneity: no single performance measure is used across all seven MPOs, and few performance measures are common among more than two or three MPOs. The two most common performance measures concern emissions and employment, though even these often

vary in their specifics. The variety in performance measures suggests that MPOs are taking their geographical and operational contexts into account when conducting performance measurement, and possibly goal setting as well. While MPOs' ability to determine their own performance measures means that they could choose measures that favor their status quo, or particular perspectives or interests, this possibility is perhaps balanced out by the MPOs' ability to monitor performance that matters most to their region and which reflects their specific contexts and priorities. California's staggering diversity of geography and context means that there may be relatively few obviously universal measures. Moreover, with respect to their heterogeneity across MPOs, tracking *changes* in a consistent set of performance evaluation measures over time at a given MPO may mitigate any status quo bias, regardless of performance measure used.

Table 4-20: Performance Measures in MPO RTPs, by Type*

Type	Performance Measure	AMBAG	Fresno COG	MTC	SACOG	SANDAG	SCAG	SJCOG
Access	Access to HQTA (percentage of population by demographic)	✓						✓
	Percent of residents within 15/30 minutes of parks, open space					✓	✓	
	Percent of residents within 30 minutes of healthcare	✓				✓		
	Percentage of population/HH growth in HQTAs	✓					✓	
	Percent of residents within 30 minutes of parks, open space	✓						
	Percentage of population within 30/45 minutes of higher educational institution					✓		
	Population near bike facilities (percentage)	✓						
	Share of households located near high-frequency transit (0.5 mi)			✓				
Delay	Hours of truck delay	✓						
	Travel delay (highway)						✓	
	Vehicle delay per capita	✓						
Economic	Household transportation cost			✓			✓	
	Transportation costs per trip			✓				
Environ-mental	GHG/CO2 Emissions/reductions (daily or per capita)	✓		✓	✓			✓
	GHG reduction regionally/per capita					✓		
	Pollution exposure/harm from roadways						✓	
Investments	ATP/bike lane miles		✓			✓		
	Distribution of transportation investments, by demographic (percentage)	✓	✓					
	Road lane miles: new/expanded/maintained		✓		✓			

Type	Performance Measure	AMBAG	Fresno COG	MTC	SACOG	SANDAG	SCAG	SJCOG
Jobs	Number/share of jobs within 30/45-minute transit trip	✓		✓	✓	✓		
	Number/share of jobs within 30-minute drive	✓		✓	✓			
	Percentage of jobs/employment growth in HQTAs	✓					✓	
	Jobs near bike facilities (percentage)	✓						
	Number, share of jobs accessible by 20 min bike trip			✓				
	Number, share of jobs accessible by 20 min walk trip			✓				
	Share of jobs located near high- frequency transit (0.5 mi)			✓				
Land use	Land consumption						✓	
	Residential density							✓
Mode share	Mode share				✓		✓	✓
	Mode share to jobs centers			✓	✓	✓		
	Alternative/Active transportation trips (percentage)	✓						✓
	Transit ridership					✓		✓
	Daily number of minutes walking or biking						✓	
	Passenger miles traveled (PMT)		✓					
	Percent of population taking walk/bike trips						✓	
	Transit boardings per capita						✓	
	Transit mode share						✓	
Other	Border wait times					✓		
	Percent utilization of regional transportation system						✓	
	Transit Service Hours by Service Type (mode)				✓			
	Transit Service Hours Per Capita				✓			
	Pavement condition						✓	

Type	Performance Measure	AMBAG	Fresno COG	MTC	SACOG	SANDAG	SCAG	SJCOG
	Fatalities/serious injuries (total/per VMT/per capita)	✓		✓		✓		
	Travel time to work	✓				✓	✓	
Travel conditions	Peak travel time/index		✓					
	Travel time reliability						✓	
	Average trip length							✓
	Freeway corridor peak-hour travel time (minutes)			✓				
VMT	VMT					✓		

Note: This performance measures analysis includes only measures focused on transportation and omits statutory and federally stipulated performance measures (such as FHWA performance measures and Transit Asset Management targets) that all MPOs must use.
*Blank spaces denote no measurement found.

Conclusion

In this chapter we examined the project evaluation and scoring methods for at least one, and often several, funding programs at each of the seven MPOs, and six county transportation agencies to which one of the seven MPOs delegates project evaluation and ranking. The information published on their evaluation methods, rubrics, and scoring ranged from extensive and detailed, to scant. We presented our findings for each agency in turn, followed by more detailed examinations of project evaluation at two large MPOs—MTC and SACOG—which conduct more extensive evaluations than the other agencies examined. We also reviewed Caltrans' Cal B/C, an environmental-impact focused benefit/cost analysis tool developed and maintained by Caltrans and used by several regional agencies and county transportation agencies. Finally, we provided a summary of the various performance measures used for monitoring project implementation by the seven MPOs examined in this study.

Overall, we find that all MPOs evaluate and rank projects for inclusion in their RTP/SCS and/or FTIP. However, the extent, consistency, rigor, and transparency of these evaluations vary substantially from one another. Second, we found that MPOs employ different approaches to project assessment: most use scoring rubrics, but some use metrics-based indicators and cost-benefit analysis as well. In general, we observe a positive relationship among (1) the quality of assessment methodology, (2) the role it plays in the planning and project selection processes, and (3) the extent to which climate and equity are integrated into MPO plans, programs, and projects. Finally, we see that most MPOs are gathering extensive transportation system performance monitoring data, which presents an opportunity to use them more systematically in their project evaluation.

Table 4-21: Project Evaluation Criteria used by MPOs/County Transportation Agency

MPO/County Agency		Quantitative criteria	Qualitative criteria	None-found
AMBAG	SCCRTC			✅
	TAMC	✅		
	San Benito COG			✅
Fresno COG		✅	✅	
MTC		✅	✅	
SACOG		✅	✅	
SANDAG		✅	✅	

MPO/County Agency		Quantitative criteria	Qualitative criteria	None-found
SCAG	**ICTC**	✅	✅	
	LA Metro	✅		
	OCTA	✅		
	RCTC	✅		
	SBCTA			✅
	VCTC	✅		
SJCOG				✅

Most of the MPOs and county agencies examined here use scoring rubrics to assess and compare projects across a range of criteria. For example, AMBAG, FCOG, MTC, SANDAG, and most of SCAG's CTCs all use scoring rubrics. These rubrics include both objective and subjective evaluation criteria, and they typically transparently report the criteria used and weights applied. The criteria and the weights assigned to each vary, sometimes substantially, across funding programs. The more objective, quantifiable evaluation criteria often draw on commonly available data: traffic volumes, project-specific funding availability, anticipated year of construction, or they employ project components like miles of bike lanes. In some cases, rudimentary project-level cost-benefit assessments are included in the scoring rubrics as well. Project evaluators, who may be MPO staff or committees comprised of various stakeholders, typically consider and score more subjective criteria, such as whether the project improves accessibility for the disabled, or they offer non-quantitative estimates of effects on accessibility, greenhouse gas (GHG) emissions, vehicle travel (VMT), or criteria air pollutants.

Scoring rubrics have numerous advantages: they are clear about the criteria and easy to understand and explain to the general public; they allow for somewhat consistent evaluations of projects when MPOs lack data or resources for more rigorous evaluations; they can be relatively easy and quick ways to evaluate projects that are not expected to significantly affect key transportation, climate, or equity outcomes; and, even for larger, high-impact projects, they can be useful for an initial screening.

Scoring rubrics have many limitations as well: First, they typically employ a mix of objective and subjective determinations of which evaluation criteria are included and what relative weights are assigned to them. Second, while the evaluation criteria and weights are typically clear, they often appear arbitrarily defined. Third, the bases by which point values are assigned may be vaguely or not defined, which leaves considerable discretion to individual reviewers. Fourth, the subjective determinations can

be made years in advance of FTIP project selection and may not be updated. Fifth, the scoring becomes less grounded and consistent when considering second-order, longer-term, and cumulative effects. And sixth, their usefulness may be limited when decision-makers disagree over the values and priorities embedded in the scoring rubrics.

For example, scoring rubric criteria and weighting may support state climate and equity goals, but they may also include criteria that advance other regional objectives and priorities that may conflict with these state goals. For example, highway projects that add weaving sections and flyovers at intersections with other major highways may reduce collisions, reduce delay, and emissions per vehicle mile, but may also encourage more vehicle miles of travel as well.

SACOG's project performance assessment tool differs from the rubric-based approach employed by most MPOs in that it produces evaluations for indicators that are not normalized by weighting. Further, SACOG uses more advanced methods and data than most other MPOs and county transportation agencies, which makes the links between a project and its forecasted effects easier to understand. This makes it easier for decision-makers to understand and debate the value of various evaluation criteria. However, this wealth of information can have a downside if it provides more information than staff, stakeholders, and time-constrained decision-makers can fully grasp.

Finally, the benefit-cost approach to project assessment has long been considered an evaluation gold standard, albeit a data- and resource-intensive one. MTC's Project Performance Assessment Process and Caltrans' Cal-B/C tool are two examples. Among their virtues, benefit-cost assessments allow programs and projects of very different types, scales, costs, and time horizons to be evaluated and compared to one another in an apples-to-apples manner.

Benefit-cost assessments include assumptions about the economic value of social and environmental outcomes and use discount rate to put streams of forecast project costs and benefits into net present value terms. Among the seven MPOs examined, the MTC's benefit-cost assessment is paired with other, more qualitative evaluation criteria making it more comprehensive than benefit-cost assessments alone. Similarly, Caltrans's Cal-B/C tool also allows for comprehensive assessments of project benefits and costs that are tailored to different project types. Both tools quantify travel time savings and reliability, safety, quality of life, health, economic, and environmental benefits, and life-cycle costs of projects, though they vary in specific metrics.

The additional analyses that MTC conducts using the output of its benefit-cost assessment include a scenario assessment that considers a project's benefit-cost ratio and equity score under three different future scenarios to consider its robustness under multiple possible futures. The other additional assessments are two separate evaluations of a project's alignment with MTC's guiding principles and equity.

The comprehensiveness of the MTC assessment model permits a shift from purely project-focused planning. For example, the MTC assessments described above revealed that comparatively low-cost efforts to reduce vehicle speeds and, in particular, aggressive driving, were among the most cost-effective ways to improve public health, reduce emissions, and increase equity, which would not

typically emerge from a project-focused scoring assessment. Similarly, the effects of policies to price driving and parking can be compared directly with transportation capital project investments in terms of the travel, income, health, environment, equity, etc., effects, which is also not possible with most MPOs' project-focused scoring rubrics.

Some closing thoughts on project/program evaluation transparency

We sought in both Chapters 3 and 4 to characterize the programming and project evaluation processes at our sample of California MPOs, based on the information they make publicly available on the web. We chose this approach because information available from the world wide web has gradually become the *lingua franca* of information access. While it is possible that we may have in some cases failed to locate relevant information despite diligent searches of the MPO websites, we can say with certainty that the contents of current Regional Transportation Plans, Sustainable Communities Strategies, and Transportation Improvement Programs were generally very easy to find, while the evaluation criteria and project and program scoring rubrics used to evaluate projects for inclusion in the RTPs, SCSs, and FTIPs were often much harder to find, if they were publicly posted at all.

Further, because the specific evaluation criteria vary across specific funding programs, the evaluation criteria are sometimes scattered in an asymmetric fashion across MPO websites. In addition, the posted information on evaluation criteria is often dated well before the last RTP/SCS, making it difficult to know whether the criteria are current or out-of-date. And finally, if not surprisingly, MPOs tend to organize their websites and the information on them very differently from one another, making it a challenge to directly compare evaluation, planning, and programming processes and documents across MPOs.

Finally, we note that most MPOs currently gather and report a significant array of performance monitoring data, though the specifics vary significantly from agency to agency. These data can be used to track performance over time, even if they are not necessarily used or directly incorporated in project evaluations. How various projects and programs are evaluated, scored, and selected are most often described in Call for Project guidelines aimed at project sponsors, rather than members of the general public and media. Unlike the latest RTPs, SCSs, and FTIPs, the evaluation and scoring criteria are more often archived as PDFs and can be found only through a search within the MPO website.

Chapter 5: The Role of Climate and Equity in California Regional Planning: Insights from Stakeholders in MPO Processes

Purpose

This chapter presents the results of our discussions with key planning actors involved in the development of long-term regional transportation plans (RTPs) and nearer-term federal transportation improvement programs (FTIPs). It reports on observations that Metropolitan Planning Organization (MPO) board members, MPO staff, and representatives of advocacy groups have shared with the research team about how the regional transportation planning process works under Senate Bill (SB) 375 and about how state climate and equity goals figure into the work of MPOs as they assemble and evaluate projects for inclusion in these documents.

This chapter explores a spectrum of perspectives on climate and equity goals and the role of the regional planning process in advancing those goals. We seek to explain how federal, state, and county policies and regulations interact with local power dynamics among political actors involved in RTP/FTIP planning and programing in ways that may hinder advancing state and federal climate and equity goals.

Methods

To complement the comprehensive review of public documents described in Chapters 3 and 4, we spoke with public officials and community advocates who play a variety of roles in the RTP and FTIP planning and programming through both one-on-one interviews and focus group discussions. Appendix A includes the interview discussion guide. The team spoke with 32 different individuals involved with the seven (4 large and 3 smaller) MPOs examined in this study. Thirteen senior planning staff members from the seven MPOs participated in individual interviews. In addition, the team convened three focus group discussions with MPO board members and two more with community advocates engaged with MPOs as part of their organizational work (Table 5-1).

Table 5-1. Summary of Key Informants Participating in Study Interviews and Focus Groups

	Number of research participants	***Data collection activity (and #)***	***Interview and focus group hours***
MPO Staff	13	Interviews (7)	8.3
MPO Board Members	11	Focus groups (3)	4.3
Community Advocates	8	Focus groups (2)	2.9
Total	**32**	**12**	**15.5**

To secure the participation of interview and focus group participants, the research team identified and recruited senior staff who were centrally involved in community outreach, regional planning, and/or RTP/FTIP project selection and programming at the seven MPOs. To do this, we began by consulting MPO websites, staff directories, and organization charts. Next, we consulted with representatives from the California Association of Councils of Governments (CalCOG), the statewide organization representing regional associations, councils of governments, and MPOs, that regularly interact with key MPO staff to identify additional staff to contact at each MPO.

Recruiting MPO board members to participate in focus groups proved particularly challenging. Most MPO board members are locally elected officials whose primary role is serving as city council members or county supervisors. Given the many demands on their time as well as their varying levels of familiarity with RTP and FTIP planning and programming, it took the research team considerable time and effort to assemble the MPO board member focus groups. To assist in recruitment, the team worked closely with CalCOG, and it was CalCOG staff who directly invited MPO board members to participate in the focus groups.

To identify community-based advocacy organizations and their representatives who regularly engage with MPOs, the research team combed through MPO board meeting and subcommittee meeting minutes, as well as public comment records. A list of potential research participants was compiled, focused on individuals who could reflect on community or resident interests in the planning process. Further, the team worked with both ClimatePlan, a statewide network of advocates working to advance equity and climate justice across California, and the California Transportation Commission (CTC) equity staff to recruit focus group participants from their respective contact lists. These organizations offered the first-degree connections and trust that enabled us to secure participants who might otherwise have hesitated to participate.

Semi-structured interviews and focus groups allowed the research team to ask the participants about their insights on MPO project selection processes and use of project assessment tools, as well as on how these processes reflect state climate and equity goals. In general, these conversations began with questions about the participants' particular roles in the MPO broadly, and with the RTP and FTIP project evaluation and selection processes in particular. Subsequent questions centered on the role of equity and climate considerations in the RTP and FTIP processes, as well as their perceptions of the strengths and limitations of those processes.

The team securely recorded the individual and group discussions and then transcribed each conversation. The team used an iterative process to analyze the interviews to identify and refine salient themes that emerged from the various observations by the participants and then matched their individual comments to these themes.

Research Limitations

These data were gathered utilizing qualitative methods that supplemented the information reported and analyzed in the previous chapters of this report. The research team selected MPOs that reflected a diversity of contexts, but undoubtedly missed some of the nuance and specificity of regions where an

MPO was not chosen. California is a large and diverse state, and the research team acknowledges that some limitations on generalizability arise from our limited sample size.

Additionally, in areas with small MPOs, there was often a smaller advocacy community or a community with stretched capacity. Thus, not every MPO had equal representation in the community organization focus groups. With more time and resources, future research efforts could direct resources to increase the ability of staff, board members, and community-based organizations or community members to participate.

Further, it is worth noting that the project scope did not include recruiting members of the general public or community residents to participate in interviews or focus groups, and instead focused on representatives of organized advocacy or interest groups, as proxies for broader community interests. This approach has its limitations; an average resident or community member may have perspectives that differ from those of recognized interest groups, or they may not be aware of or have a perspective on the MPO process at all. Indeed, both advocates and MPO representatives included in this study voiced concerns that average citizens may lack awareness or understanding of the MPO process and how to engage in it. Alternatively, some research participants also cautioned that the views of organized CBOs could miss other important community points of view. Future research could provide for more expansive recruitment to collect perspectives from the general public to complement the insights gathered here.

Finally, in each of the MPO regions in this research, participants acknowledged that much of how their region will approach transportation—specifically work commutes—after the COVID-19 pandemic is still not clear. Equity and climate are increasingly primary concerns of these organizations, but as the world continues to reestablish a “new normal,” much is unknown. Future research should examine how MPOs’ and advocates’ strategies and goals have changed as well.

Understanding Climate and Equity at the Regional Level

Participant Understandings of Climate and Equity Are Diverse

Overall, research participants spoke in relatively more consistent terms about their region's climate focus—typically involving greenhouse gas (GHG) emissions and reductions in vehicle miles of travel (VMT)—than about the region's approach to advancing equity. With respect to the latter, the interview and focus group discussions revealed notable variation both from one region to the next, and among planning participants within a single region.

State definitions of climate and equity, as expressed in SB 375 and key policy documents, anchor some of the patterns observed in focus groups and interviews. Participants' comments regarding climate goals appear to reflect the more concrete framework for GHG emissions reduction laid out SB 375 and associated state transportation documents. Conversely, state policies and plans frame transportation equity in comparatively broader terms, which was mirrored somewhat in participants' own wide-ranging framings of equity.

State Language on Climate is Specific

To set the ground for what the research team observed as more concrete, agreed upon interpretations of approaching climate targets in regional planning, the material below outlines state documents the team reviewed following conversations with participants. Definitions provided by the state on how to advance climate policies guides part of the framework for understanding the contrast in how respondents considered climate as opposed to equity in planning.

California's SB 375 and related state laws, policies, and plans call for the reduction of vehicle travel and GHG emissions to achieve California climate goals for regional transportation planning. For instance, SB 375 establishes a clear planning framework for pursuing GHG emissions reduction targets set by the California Air Resources Board (CARB), as discussed in Chapter 2. Similarly, the California State Transportation Agency (CalSTA) makes reducing the transportation sector's carbon footprint one of the agency's Core Four Priorities, and calls for enhanced multimodal investment, smarter land use and development, and zero-emission vehicle innovation (California State Transportation Agency, 2023)). Climate objectives in the California Transportation Plan (CTP) 2050, outlined in Chapter 2 reinforce SB 375's focus on GHG emissions reduction for MPOs. Finally, CARB's own determination to accept or reject an MPO's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is based exclusively on whether the SCS, if implemented, can achieve the targeted emissions reductions.

While participants did not reference these specific state documents in conversation with the team, they likely influence how MPO participants discuss and attend to climate goals. In particular, we observed some consistency in how participants in MPO planning describe their climate efforts as further detailed in this chapter. When asked to outline their climate-related goals and efforts, various regional planning participants mentioned working to reduce emissions by investing in multimodal transportation and encouraging more compact land development.

State Language on Equity is More General

In addition to reviewing statements describing climate goals and objectives, the team examined documents expressing how the state and regional transportation planning agencies define equity. When we asked interview and focus group participants about efforts to advance equity, they described that work in more varied terms than those used to discuss climate efforts. This may reflect the broad approaches to equity contained in key state policy documents. Again, the summary below of state language addressing equity may help explain the general ambiguity participants seemed to express toward implementing equity.

Most notably, SB 375 defines equity in terms of accessibility to transit and employment opportunities when requiring MPO regional transportation plans to include:

> Measures of equity and accessibility, including, but not limited to, percentage of the population served by frequent and reliable public transit, with a breakdown by income bracket, and percentage of all jobs accessible by frequent and reliable public transit service, with a breakdown by income bracket (S.B. 375, Chapter 728, Section 1).

The California Transportation Plan 2050, emphasizes broader equity goals and objectives like reversing unspecified “harmful transportation practices of the past;” centering “historically excluded voices” in transportation decision-making processes; promoting high-quality and affordable mobility options; and eliminating transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups (California Department of Transportation, 2021, p. 74). The plan also offers specific equity performance indicators, for example the:

> transportation and housing cost burden, the number of community-based organizations (CBOs) meaningfully engaged in developing plans and projects, air quality in disadvantaged communities, and access to active transportation in disadvantaged communities (California Department of Transportation, 2021, p. 74).

Similarly, CalSTA includes equity among its “Core Four” priorities and states its aim to “create an equitable and accessible transportation network and to provide equitable opportunities for all people” in the context of community harms from past transportation investments:

> Historically, transportation decisions prioritized movement of vehicles over the movement of people. We also built a transportation system that in some cases had detrimental impacts in underserved communities (California State Transportation Agency, 2023)).

While this language highlights attending to underserved communities as central to transportation equity, it does not explicitly define equity, access, or opportunities in the context of a people-centered transportation system.

SB 375 provides no explicit authority for considering equity as a criterion for SCS approval. Further, CARB's own guidelines for evaluating an MPO's RTP/SCS include equity only as an informational reporting component in the assessment. Rather, the explicit and single determining factor in CARB’s approval of an RTP/SCS is CARB's analysis of whether the SCS, if implemented, can provide the targeted GHG emissions reduction.

Conversations with MPO planning participants—from staff to boards to advocates—similarly reveal more uniformity among climate actions and solutions and more diversity among their equity goals. Although these state documents were not mentioned outright by participants, they provide additional context and written evidence for the patterns we discerned from our discussions with them.

Attitudes of Focus Group Participants Toward Climate and Equity

In recent years, California MPOs of all sizes have conducted parallel work to put equity definitions and policies on board agendas. Here, we report on how different participants—staff, board members, and advocates—discuss equity.

Staff Perspectives on Defining Equity and Climate Goals

The perspectives shared by MPO staff were notable for their multi-dimensional observations, reflecting the internal efforts of the organization's staff, the concerns of and dynamics within the MPO board, and

the interests and activities of community stakeholders. Conversations with staff shed light on how MPOs define equity and the process by which they arrive at those definitions.

Staff reflections indicate that many grappled with the same key question about their organization's equity efforts: How should the MPO define the communities or people whom equity efforts should consider? We also observed that staff report receiving direction from the MPO board and input from the community as key inputs informing the MPO's approach to equity work.

Board Policy as a Starting Place

We heard from many MPO staff that they looked first to the MPO board to establish general policy direction for equity. For example, staff at a larger MPO described how board policy had been important for emphasizing equity as a foundation-setting principle for the regional planning process, which opened doors to further discussion on what equity means for their region. At the start of a given plan update, the staff ask the Board to articulate its policy priorities:

> We'll ask questions to try to get them to focus on prioritizing projects…. [For] this current one, our board has decided…to ground the plan in the triple bottom line…equity, economy, environment (Participant J).

According to the staff we interviewed at this MPO, adding equity to the set of priority goals in their recent RTP update was an attempt to convey equity's importance to the project selection and implementation process to local governments in the region. The staff described the equity goal as broadly aspirational.

Staff at another large MPO described how a confluence of factors during the pandemic led its board to adopt an equity statement directing staff to prioritize equity in all projects and programs. These included heightened public awareness of equity, increased community engagement, and state requirements to reduce the pollution burden in “environmental justice” communities (identified using CalEnviroScreen criteria). Staff are working to operationalize the equity statement:

> We're still figuring out how we will apply that…. [W]e've done an initial kind of equity analysis to determine where funding in the region has been invested, and if disadvantaged communities are benefiting in the way that we would like them to from transportation projects and investments (Participant H).

> If you read it, [it] probably sounds a bit more like a vision in our board policy framework for the plan…. [T]he punchline is…“Investing in communities, so that race is no longer a predictor of life outcomes and outcomes for all are improved (Participant J).

Staff at another large MPO reported working to operationalize equity by adopting a racial equity plan. The staff noted that a big push was made to integrate equity and align with state goals and requirements. The plan is centered in all that the MPO does and places a specific emphasis on equity in RTP project selection:

> We have a racial equity plan that was our policy that was adopted…ensuring…how we develop our plan…. [I]t focuses very heavily on equity concerns in particular, for numerous, disadvantaged communities throughout the region…. [W]e're right now, kind of as we're developing the update to our plan kind of reassessing how we do some of our technical analyses to better understand, for example, travel patterns of low-income communities, and how we start to really think about project concepts that that focus around that (Participant K).

Looking to the Community for Local Concerns

Staff also emphasized their efforts to move from broad organizational equity definitions and goals to "an understanding of [equity] locally." At several MPOs, staff emphasized the importance of public engagement activities that allowed staff to ask, "What does equity mean in your community?" and to develop buy-in on equity planning from local governments:

> What we're trying to do in that engagement with the public is to bring information to them and to ask them questions that ferret out what equity looks like there. We're not trying to define [equity] strictly from the beginning. We're trying to set a broad framework…and then identify that through the process…[which is] admittedly hard (Participant J).

> So, we've given examples…. [I]t could mean you have roads that are in desperate need of repair and…actually hindering people's abilities, or…hitting their pocketbook and [that] need to be prioritized for investment. It could be that you have hotspots in your community…like high levels of traffic accidents that involve…pedestrians and bicyclists. It could mean that…[a] significant…number of residents need transportation options,…some sort of transit service. It could be any of those (Participant J).

Finally, staff interviewed at one smaller MPO emphasized the importance of nuance when defining and operationalizing equity and reported thinking about equity differently depending on the context. For example, they told us that, for all projects, equity means engaging in public participation with specific emphasis on disadvantaged communities:

> [T]hrough our public participation plan, every time we do a regional transportation plan, [the plan] becomes more robust, and how it…reaches communities of concern. Over time, ...starting way back when Senate Bill 375 was first passed and equity became more in the forefront of the planning process itself, our MPO formed…close coalitions with a lot of our local advocates…. [S]ome of these folks have now been involved with the MPO since…2010 or 2012 as far as our outreach…. [I] would say in this last regional transportation plan, we did a lot of focus groups focusing [on] disadvantaged communities to make sure we were centering the needs of those groups (Participant C).

Staff at a different large MPO reported having established a workgroup to focus on social equity. The group emerged from the agency's longstanding partnerships with community-based organizations that represent historically underserved and underrepresented people in the planning process.

Taking Cues from Peers

Research interviews with MPO staff also revealed that they are aware of and even inspired by how their MPO peers are working to address equity. One MPO staff interviewee told us that perceptions that other MPOs were "doing more" spurred them to increase equity-centered work at their own MPO and continued to describe what that process entailed:

> I'm just going to be honest…. [O]ther regions had a more robust definition of equity, and I thought our region could do better…. [W]e needed to progress…beyond [just]…low income and minority,…the minimum required,…[and to] look at what was really affecting equity in our region…. [M]obility…and low community engagement…[were factors. We] have some isolated communities, and…what we heard when we were doing meetings [was]: "I have basic needs of getting around," or "I have two jobs, and you know I can get to one really great, but I can't get to another one very well…." Things like that (Participant L).

This MPO subsequently worked to develop more expansive equity metrics to inform decisions about the regional plan and to ensure that its wider equity definition could be implemented throughout the organization's work:

> [W]e do have metrics…on the plan scale…. Most…[have] to do with access to things: so, access to healthcare,…to parks,…to bicycle facilities, that type of stuff. Access, to make sure…that our plan is equitable…. [I]t's not just your typical low income or minority definitions. We…[used] a wider definition, at least this past go around…. [W]e wanted to talk about populations of…low mobility, where there were zero car households or…older populations that maybe couldn't drive anymore…. [W]e looked at communities that have linguistic isolation or low education attainment…as…[factors] preventing access to different things (Participant L).

Acknowledging Multiple Competing But Adjacent Goals

Conversations with staff also point to the challenges inherent in MPO efforts to achieve multiple, sometimes conflicting goals, including climate, equity, economic opportunity, and affordable housing. This was a common theme across the MPOs. In one region, staff noted the tension between equity and climate goals. Advancing economic development and opportunity is an important regional priority, yet it does not receive the same state attention as climate and equity. A staff person noted:

> Whenever the state commissions any study, they only focus on these two goals…. And we keep telling them: "These are not the only goals we have to meet." For [our region], …economic development has at least equal weight, if not more weight, than the climate goals (Participant A).

Staff at this MPO explained that infrastructure investment was particularly important to the region's economy, as the local workforce depends in part on jobs in the transportation and distribution services industries. These jobs, often focused on agricultural products in the region, are not the same "clean-economy, knowledge worker jobs" common in the Bay Area, said the staff, but they provide needed employment opportunities. Thus, infrastructure investment to support these services was important in

this region and, from the perspective of locally elected officials, perhaps even more important than concerns about VMT or GHG emissions:

> If you look at our RTP, economic development is one of the top priorities. And goods movement is also one area that we…encourage cities to look into…to ensure…our infrastructure is improved to facilitate goods movement. We have so much farm product we need to ship out. We need to be sure that's going to be shipped out with proper transportation infrastructure. It's the reality of our region (Participant A).

In another region, we learned of similar tensions, though in this case between goals for housing production and for VMT reduction. Staff at this large MPO recalled how their organization had, in the 2000s and 2010s, scrutinized projects primarily on environmental outcomes, overlooking evaluation of those projects' equity effects. Now, according to staff informants, the MPO seeks projects that positively affect both climate and equity. Nonetheless, staff acknowledged that what they consider to be their equity-oriented policies and projects do not always align with GHG emissions reduction efforts.

For instance, in its earlier regional vision for sustainable land use, this large MPO had targeted transit-rich areas for growth, as such areas could likely absorb increased population but also temper associated increases in VMT. However, staff reported that the MPO has recently included so-called "high-opportunity" areas in its targeted growth zones, even though these are "high VMT" areas:

> We included those as growth geographies for equity reasons…. [This] was…more in line with affirmatively furthering fair housing and RHNA[38] than it is with CARB's greenhouse gas goals…. We're trying to…advance multiple goals, not just the climate goal (Participant D).

The staff member's remarks reflect state efforts to identify geographic areas as desirable for affordable housing expansion based on an array of economic, social, and other factors, such as educational attainment and performance, employment and economic status, job access, exposure to environmental hazards, and civic life opportunities (California Department of Housing and Community Development & California Tax Credit Allocation Committee, 2023; Kirkeby, 2020). When such "high-opportunity areas" are car dependent, however, adding housing or other development would likely increase VMT. In such cases, housing supply and affordability goals may conflict directly with VMT reduction goals.

Another MPO also reported beginning to engage more in work around housing supply and affordability, as geographic equity has garnered more attention:

> You know one of the things that affirmatively furthering fair housing has asked us to look at is to not only make transportation investments in historically underserved communities, but to consider getting affordable housing into what they call heavily resourced areas. So, it's looking at having places where there's already great infrastructure and…great schools, making sure that you're getting housing there that's available as well. So that's been something we've been

[38] The Regional Housing Needs Assessment process mandated by state housing law. It requires cities and counties to adequately plan to meet the housing needs of everyone in the community.

> looking at closely. We're really relatively new to the regional housing game, at least in a very robust way. And now we're looking at how to combine those housing funds together with transportation funds as well (Participant C).

Board Member Perspectives on Defining Equity

Both across and within regions, MPO board members expressed diverse perspectives about how to define equity. Disagreements on the direction of equity work sometimes reflected a contrast between spoken and written priorities along with a noticeable ambiguity regarding specific equity issues in their communities.

For example, individual board members serving the same large MPO had different answers when asked what equity means for their region. One member from an urban area asserted:

> Equity to us is people getting the resources and help that they need. Some people need more help than others, and so it's not about getting the same help across the board…[i]t's about making sure there's access to transit and diversity of housing options for these communities…. [We recently] developed…an action plan…[to take] a proactive and genuine approach to representatives of black, Indigenous, Asian, Pacific Islander, Hispanic/Latino, and communities of color in the rural, urban and under-resourced community…. [W]e're not all monolithic (Participant W).

Meanwhile, a board member from a more rural section of the same MPO region explained:

> I also understand and appreciate the new focus on channeling funding through an equity lens. [B]ecause our communities were built on a more traditional Gold Rush approach, especially in rural California, we don't have the urban challenges that our neighbors have. For example, none of our communities were built on redlining policies…. [W]hen you channel funding through an urban equity lens, it doesn't translate to our county…. [O]ur equity issues [consider] the rural poor, our disadvantaged and disconnected communities. [W]e have a…very high senior population that is also disconnected, and transit is ineffective and not financially sustainable in our vast county. So those are the transportation issues that we're grappling with. As California moves towards more of a one size fits all urban planning model, it doesn't translate to rural California, especially in rural California that is highly populated with a transient population—the tourist population. And yet we have to ensure that our road network ensures their safety, as well, so it's a real challenge (Participant Q).

Given that this MPO only recently adopted an equity action plan, these visible differences in board members' understanding of equity may present issues for the organization to address in subsequent plan implementation work:

> We adopted it. But…we're just talking about it now as we're doing this MTP update and how we're actually going to implement it (Participant W).

Other participants also reflected on the diversity of views among their board members, perhaps contributing to less specific or “catch-all” interpretations of equity. A board member of one MPO noted:

> [T]he equity concerns have a broader perspective. Meaning conservatives have equity issues, too. They don't call it equity issues. They call it economic opportunity (Participant S).

Still, some board members worried that equity definitions, within their MPO, were perhaps too variable or malleable and could generate potential misunderstandings of what equity means. One board member from a larger MPO explained:

> We have a huge, wonderful equity statement that we passed a couple of years ago, but the definition of equity seems to be changing—people want to change that. They want to mean equal rather than equity. To me, equity means we look at the past. Dynamic inequities that created situations in the past [are] part of what we need to go into…in the future if we address equity (Participant P).

A board member of another MPO sums up the current sentiment surrounding the multiplicity of equity definitions in MPO boards, stating: “Everybody has their own idea what equity means” (Participant R).

Overall, board members embodied a tendency to communicate their equity priorities more broadly, leaving room for further discussion on what equity means for their MPO and how they plan on tackling equity issues in their region.

Advocate's Perspectives on Meeting Equity and Climate Goals

While MPO board members and staff expressed varying understandings and approaches to equity and climate, both across regions and sometimes within one region, community and environmental advocates consulted in this study discussed equity with more consistency and comfort. Informants from the advocacy community also saw a far clearer nexus between climate and equity goals. Collectively, the advocates expressed significant concern that MPOs struggle to define equity because they approach equity and climate goals more typically as an either/or proposition than as an opportunity to advance both goals concurrently. One advocate explained:

> [I]t's very obvious to me that climate is the priority. And equity is not…. And they certainly aren't thinking about the intersections of those two things…. [E]ven just thinking on a statewide level, about the CARB scoping plan, and about…EV [electric vehicles] and active transportation standing to have the strongest health benefits: [A]ll of the focus is really on the EV side…. [I]t is our opinion that active transportation is a more equitable option. The communities that we deal with can't afford an electric vehicle…. And not only that, but everybody… has to be a pedestrian at some point. In addition to that…more cars on our roadways, doesn't lead to more equity in our communities…. [W]e will still have Black people disproportionately dying on our streets. And so, it's not an equity issue. Right. It's a climate issue. And that's all it is (Participant AA).

While most advocates with whom we spoke saw significant unrealized connections between equity and climate goals in MPO planning, several advocates did express concerns that climate takes priority over

equity in several regions, precisely due to this lack of acknowledgment and/or understanding of the connections between the two. Advocates stated that few MPOs acknowledge—or have the know-how to make—these connections. One advocate reflected that in working with their local MPO:

> [E]mbedded in all of our psyches [as advocates] is…that nexus of equity and climate. But that piece can be really lost in the larger understanding…. I prioritize the equity conversation, and one of the ways I think about that is: If you prioritize poor people and how they move around, you will inherently…limit your resources. But, what we want to do is think about the people first, right? But it does work on the climate piece…because that's how you get around it without expending a lot of resources and money…. I think that piece is lost, and that that nexus can be better communicated in the larger messaging (Participant Y).

Despite these challenges, many advocates expressed some approval that many of the MPOs now "have good language around racial equity"(Participant Z). Others observed that state goals and laws have helped MPOs to begin recognizing equity as a concern and to center it in their work. Some advocates mentioned that their MPO made impactful public statements around this shift:

> [W]ithin the last years [there] has been a deep transformation…. [The MPO] has an overall commitment as an organization to equity…. [It has] an equity mission statement…. [T]hat's really, really important, because it sends a message to the public that there's a deep commitment for the organization to take equity seriously…. Also…they have an equity-like formula component that goes behind every project, and…[their] working group [involving community organizations] is a…great example of how they take equity by heart (Participant EE).

Advocates also suggested that many MPO staff are trying to incorporate equity and to engage in conversations about equity in ways that extend beyond technical analysis. Further, some advocates themselves have learned how to participate more effectively in the regional process. One advocate noted that their work with their local MPO had shifted since 2018:

> [Previously] I [spent] my time in a different way to try to achieve the same ends…of getting more, more ambitious…in better [aligning] regional plans with climate and equity goals…. I think I spun my wheels a bit with staff over, like, modeling assumptions, whereas…since then we've kind of tried to take it into more of a policy values conversation with [legislators] and other decision-makers and CARB to try to improve the overall process and outcomes rather than try to argue about spreadsheets (Participant BB).

Seeing this shift from MPOs has been encouraging for advocates, but there is still a level of uncertainty as to what it means to implement equity. One advocate explained that defining equity and establishing language around equity is important, but not enough:

> I think they do a really good job of…writing equity in at the forefront like in the transit-oriented communities policy. [I]t's on the first page that we want to prioritize equity priority communities. How do we do that? We don't know…. [T]hat was a big piece of our advocacy of…what does that mean? And I feel like CARB is trying to answer that question, too. Like we can say it, but

> what does it mean? And is there some sort of formulaic way to know that we're really doing that (Participant Y).

A common theme noted by advocates was the centrality of MPO boards and leadership for advancing equity. Many advocates argued the bottom line for equity in regional planning depends on the people responsible for upholding MPO processes; they pointed to the need for both MPO staff and board members to do better to work together to honor community voices and needs. An advocate working within a large MPO region reported that:

> [Their MPO has]…a statement that says, "We recognize the damage we have caused." …The statement is very valuable, and it's brought up on a regular basis at the board meeting. [But on] the board, right now, there's a lot of political tension… where you see folks that are trying to advance real transit solution[s] and then there are folks that are trying to stop everything and continue to fund freeways and protect those values.… [T]he board is not necessarily in alignment with the staff (Participant CC).

Other advocates concurred, recalling conversations in which they simultaneously recognized some MPO staff for their efforts to uplift equity, but also still needed to tell staff, "[Y]our Board up there, the people who are overseeing and who are leading this organization, they don't believe in equity" (Participant AA). Advocates observed that, even if some members of an MPO's board prioritized climate and equity, the ability of those members to effect change within the wider board depends on the relative influence of those members:

> [T]here's some folks in the Board of Directors who are really, really vocal against climate change. And those folks, you know, they're not in leadership positions on the board (Participant EE).

This advocate perceived "some faults" among the board leadership—namely the chair and vice chairs—as problematic. The advocate explained that, because board leaders "represent their own specific districts [and]...don't put on their regional hat[s],…they're not really in sync with some of the priorities that we have" (Participant EE).

Some advocates understood the barriers to implementing equity in regional planning as involving specific relationships with individual people, like board members and leadership. Other advocates, however, described the barriers to equity in more systemic and cultural terms, reflected in the particular constellation of local government jurisdictions and development patterns within a region. Said one advocate who interacts with local governments in a large MPO:

> This [is] more big picture…but I just feel like land use is a reflection of culture. And, you know, we live in a country that is built on systemic racism…. And so, we can set some good intentions around some planning processes. But if American culture is rooted in [racism], it's hard to change that. It's not impossible…but…I just think the MPOs are responding to what they're hearing. And what they're hearing may not be in alignment with…racial equity [and] climate goals, because there [are] other value spectrums…. [T]hey're just…working with the hand that they're dealt and…who makes up these things (Participant Z).

Another advocate agreed, protesting, “we spend energy as NGOs [non-governmental organizations] working with staff on…crafting good policy language for new programs and really need to…tear it down to the studs and…rebuild the way we fund and pick all of the investments that we're making in transportation” (Participant BB).

Yet another advocate, who primarily interacts with a certain MPO, highlighted, “the timeline [of the RTP] is only going to work for the status quo, the people that are already showing up to engage in these processes. And until we can change that we're not going to be reaching the equity folks…. [I]t's an overhaul of the system,…it's a characteristic of white supremacy. And these are embedded in our systems and our institutions. And so, until we can get around those, it's going to be difficult for us to embed equity truly” (Participant AA).

Overall, advocates were in strong agreement that defining climate-oriented and equity-oriented regional planning required considering the intersection of the two issues and developing intentional discussions and policies in support of that. Furthermore, MPO board members and staff have to commit to investing in work contributing to those policies, keeping in mind a larger context of systemic barriers that could inhibit progress.

This qualitative approach allowed the research team to hear perspectives from board members, staff, and community members from across the state. There was a general sentiment across all groups that equity and climate goals are now more present at the staff level of MPOs, but not necessarily at the board level. Additionally, the commitment to those goals and ability to operationalize them varies from region to region. Some of these differences were highlighted when interview and focus group participants were asked about the strengths and limitations of their local RTP development process. This topic will be covered in depth in the next section.

MPOs: Structural Cracks in the SB 375 Foundation?

In this section, we shift attention to how research participants discussed the organizational environment in which regional planning for SB 375 takes place. The policy framework underpinning SB 375 places the state's metropolitan planning organizations at the center of planning for GHG reductions through regional transportation planning and investment and land development.

Many of the regional planning actors included in this study, including MPO board members and staff, point to structural challenges inherent to MPOs as reasons why the organizations at centerstage in SB 375 efforts have not made more progress on state climate and equity goals. Many of these challenges are well-known to MPO and SB 375 observers. For example, since SB 375 was first passed, some have raised questions about MPOs' ability to deliver targeted GHG reductions (Barbour & Deakin, 2012; Rose, 2011). Scholars of U.S. regional transportation planning also note that MPOs are largely advisory planning bodies, not “implementing agencies,” and that the local governments and transportation agencies that own, construct, and operate a region's transportation system have more influence than MPOs over the projects proposed for and selected into long-range RTPs and the subsequent FTIP process and various spending programs (Sciara & Handy, 2017). Many have also noted that, while SB

375 tasks MPOs with developing GHG-reducing land use strategies, the law gives MPOs no authority to implement or enforce those strategies (Barbour, 2016; Sciara, 2020).

Despite these constraints, we also learned from MPO and community informants about MPO actions to push beyond these challenges. In fact, in the face of constraints, MPOs find innovative ways to be impactful and achieve state goals. We outline both constraints and impacts below.

Limited MPO Authority Seen as Problematic for Advancing Goals

A common sentiment voiced by board members included in this study is that MPO power is largely symbolic; MPOs have limited regional authority to execute plans, a responsibility mainly held by counties and municipalities. One board member from a smaller MPO attributed its challenges meeting regional GHG targets to its limited influence over "implementation:"

> Oh, from my perspective [that] is our toughest challenge. How do we get these strategies implemented with the local jurisdictions? And, in general, some of the things that our plan [calls for]…like all lane tolling.… Everybody knows how that polls. It's not very well accepted, but that has to be on our plan in order to meet that greenhouse goal (Participant X).

They continued:

> A lot of communities just sort of opt-out asking for grants…because they don't want to get brought into the regional process.… [T]hat disconnect for me is one of our largest challenges.… How do we get the buy-in…from the local communities and jurisdictions (Participant X)?

Another called attention to MPOs' limited political power and lower profile relative to other entities in the intergovernmental system for climate and equity planning. Turnover among board members can also hurt an MPO's ability to be effective on these issues:

> We don't play well together in the sandbox. I mean the State vs. the County vs. the City vs. some obscure MPO, right? Who the heck knows what [an MPO] is?.... [Y]ou have these people on an MPO that have been appointed, and there's a bit of a revolving door.… Any given year there might be a third or a half of our board members that get gutted.… People don't understand the agency or maybe [do] not want to get that engaged (Participant V).

We further noted some frustration among board members that MPOs were not more effective, an observation some attributed to MPOs' underlying organizational structure and authority and the responsibilities set out for them, including under SB 375. One board member lamented, "Let's face it, 375 passed a long time ago, and we haven't made very much progress with regards to its intent of sustainability" (Participant P).

While various informants expressed frustration with MPOs' limited authority, research interviews also revealed that some MPOs are able to make advances nonetheless. For instance, staff at the Bay Area's MTC encourage local governments to make changes in their land use plans and zoning ordinances,

in part by providing cities with “technical assistance” on their housing elements and connections to the state’s Regional Housing Needs Assessment (RHNA) process. The traditional approach has been for MTC staff to “to help the jurisdiction realize, they do need to rezone around that…rail station, or in their downtown, or something more assertive.” Additionally, the MPO has increasingly used monetary incentives, by tying “funding eligibility to land use decisions and policies,” as with the evolution of its Resolution 3434 and the newly adopted Transit-oriented Communities Policy.

Similarly, MPOs may be influential on *how* projects are implemented, with some beneficial effect. For example, one MPO reported working to enhance equity by unveiling new mobility services in disadvantaged communities first. Said a staffer, “We have an electric bike share and electric vehicle share program that is priced on a sliding scale for low-income people. And those are rolled out in our disadvantaged communities first. And so in terms of all of our mass transit, you know, those are taken into consideration. You know that sliding scale piece, and how to get low-income people to where they need to be.”

Despite the conversations about limited authority, we also heard that many smaller MPOs actually felt like they were “nimble” and able to be more flexible. Moreover, the “Big 4” MPOs approached this challenge by leaning into collaboration to exert even greater united power and vision. As one “Big 4” MPO stated:

> Our top projects. We were collaborative with the…6 County Transportation Boards. We were collaborating with them. They come up with their plan, and we vet it. Luckily, we don't have to worry too much about…transit because each county has their own transit people.

MPO–County Dynamics: County Agency Plans, Self-Help Tax Measures, and the RTP

As regional bodies governed by locally elected officials, MPOs carry out their transportation planning and programming responsibilities in a decidedly intergovernmental context. They must simultaneously respond to federal planning requirements, advance state and regional climate and equity goals, *and* work with the plans and decisions of independent county-level agencies. We heard in various ways how MPOs struggle to meaningfully strike a balance in their land use and transportation planning between county-level decisions and priorities on one hand and state and regional expectations for climate and equity on the other.

MPO staff and board members frequently described how the transportation plans and programs developed separately by county-level transportation agencies (regional transportation planning agencies or RTPAs) with independent funding were often a significant building block for the MPO's regional plan. Staff from a multi-county MPO said that their MPO typically adds to its regional plan projects chosen by county-level transportation agencies; however, the MPO's holistic planning, which includes land use modeling and development scenarios, informs prioritization of those county projects and when they are advanced:

> [Our MPO and the county agencies] work together in terms of priorities…. [The] RTPA does have its own funding that it can allocate and advance projects. And so, and they're required to do that under State law…. [Our MPO] is respectful of that, and we do respect that process. And so [for] many of the things that come to us, we work in conjunction with timing of projects (Participant L).

So-called self-help counties, which as discussed in Chapter 2, collect voter-approved local-option sales taxes to fund transportation project lists included in the ballot measures, pose a special challenge to an MPO's ability to pursue climate and equity goals. A county can include projects in its voter-approved "tax expenditure plan" regardless of their alignment with the MPO's regional priorities, including any climate and equity initiatives. A longstanding board member at one MPO noted bluntly:

> They're self-help counties. They have their own county sales tax, so they're pretty much able to build anything they want with [their sales tax revenue], along with state and federal money (Participant R).

A board member from another MPO further argued:

> [T]he county should stop being able to go out for sales taxes that increase GHG emissions with their expenditure plans, and…they should be forced to go back to the voters within the next 10 years with the plan that actually doesn't increase GHG emissions…to modify the existing sales taxes and get voter approval for that (Participant T).

Advocates who participated in this study also noted MPOs' limited authority over local jurisdictions that must implement its plans:

> [F]or the RHNA process…the state's trying to move more…[toward] holding communities that don't meet their housing needs accountable. And I [wonder]...what would it look like for an MPO to have more accountability powers, to hold jurisdictions accountable for climate and equity related goals? Or is that a role of the state? ...I think it's tricky when you set a plan, but you're not implementing the plan, but somebody's got to set a plan for a region" (Participant Z).

Another advocate credited MPOs but also noted the implementation challenges, saying:

> I don't think we would…be able to move as quickly with progressive policy without the MPOs…setting that agenda…. [B]ut then they don't implement and, you know, the implementation is much harder to track and follow and make sure it goes through (Participant Y).

Yet, some MPOs utilize their power to reopen the tax expenditure plans previously approved by voters to recraft and refocus on projects more aligned with current state and local equity and GHG reduction priorities. One "Big 4" MPO mentioned reforming bridge toll fees and fines to not disproportionately affect low-income individuals or cause excess fines or misdemeanors.

Another MPO suggested that when trying to adequately address equity during implementation, how programs are rolled out is critical:

> …we have an electric bike share, electric vehicle share program that is priced on a sliding scale for low-income people. And those are rolled out in our disadvantaged communities first. And so in terms of all of our mass transit, you know, those are taken into consideration. You know that sliding scale piece, and how to get low-income people to where they need to be (Participant N).

MPO Board Membership and Voting Structures Shape Prospects for Equity

Some MPO board members told us they feel they cannot exercise their fair share of influence at the MPO due to power imbalances in the distribution of board seats. Such concerns echo questions in the literature about MPOs' representativeness. Across the U.S., few MPOs use proportional voting, and many instead employ “one government–one seat MPO voting [which] often overrepresents suburban counties or cities and underrepresents urban jurisdictions and central city low-income communities of color” (Sciara, 2017).

Among our study participants, some MPO board members represent areas with more of a given region's population, but do not have a proportional share of the vote. Meanwhile, MPO board members from areas with low population shares, typically rural areas, can report feeling outnumbered by members representing urban areas. When considering this tradeoff between representing residents versus jurisdictions, some focus group participants favored allocating a higher share of MPO board votes to urban areas, to mitigate power imbalances that can favor smaller, more lightly populated jurisdictions:

> There's a power struggle, and many areas that have a high population don't get any more of a vote *per se*…than a population—a community—that has a much smaller population. Yet, they have equal voices in our process. And that's the way our government is set up. We have it at the national level with communities like…Washington, D.C. They don't even have a Congressional Representative, let alone two Senators, even though their population is much higher than some states. So, we have that kind of situation in our local areas and MPOs, as well (Participant P).

In contrast, other focus group participants did not favor population-based representation and voting power on MPO boards. One board member elaborated:

> [Population-]weighted voting would make [the most populous jurisdiction in the region] the biggest dog on the street…. [This jurisdiction] could control it. Matter of fact, in voting…[one jurisdiction already] has more seats than any other city…. [T]hey're big enough…[that] every council person…could have a seat on the MPO. So luckily, they never show up—unless there's something really hot they want to hear about…. But the population…weighted voting…[steer] well clear of that because it would disadvantage [smaller jurisdictions]…. Like, [a lightly populated jurisdiction] would hardly have one vote (Participant R).

Voting structures were not the only contributing factor to power differentials among elected officials on MPO boards. One board member explained that power can reflect the resources and constraints associated with their specific public office:

> [Our] board is made up of a combination of supervisors, city councilmembers, and mayors, and…one or two…random appointees. I think the…mainly…suburban supervisors, broadly speaking, aren't term-limited and have a bunch of staff…. And so, the suburban supervisors end up accumulating most of the power at [the MPO]…. The city council members don't have…staff. They often have other jobs…. [M]any of them are term-limited. It's difficult for them to…stay and acquire…institutional knowledge and…spend the time to…become regional leaders. And then the mayors are all term-limited…busy running their cities, and so, don't have a lot of time to spend on this. And so…you end up with…suburban supervisors kind of being the top dogs (Participant T).

An advocate echoed those points, noting that power imbalances at the MPO can affect which issues receive more attention:

> MPOs mostly represent the values and priorities of local governments, especially suburban local governments, [which] mostly don't have the state's big climate and equity priorities at the forefront…because they're oriented towards a model of urban development and growth…it's very kind of sprawl and highway-oriented…partly because of the role that sprawl developers in the highway-industrial complex play (Participant BB).

The same advocate, who had worked with a large MPO on their 2010 RTP update, also noted that power imbalances seemed to affect the attendance of some board members at meetings and thus, the prioritization of climate and equity issues at the MPO:

> CARB puts out…good language on climate and equity…. And there's legislative leaders… putting out good things…. The Governor and CalSTA are doing CAPTI[39]…but the lower you go in [level of government], the more disconnected I feel like the decision-makers are from that agenda…. [M]aybe the most dominant issue is how these [MPO] boards allow the smaller, more suburban jurisdictions to punch above their weight…in terms of the power. You know, I haven't really gotten to the bottom of why the [largest city in the region] is pretty AWOL on the MPO (Participant BB).

Notably, focus group participants from the San Diego region and beyond pointed to constructive steps taken in San Diego to allow for more representative, population-weighted voting, and to the impact this change has had on SANDAG planning activities. (We identify SANDAG by name in this context because it is uniquely identifiable as the only MPO in our study to implement this practice.) The California legislature mandated SANDAG's change to population-weighted voting in 2017 with AB 805, passed after significant errors became public regarding SANDAG's estimating and reporting of revenue from voter-approved sales tax measures (California Office of the Legislative Counsel, 2017). The law, which

[39] Climate Action Plan for Transportation Infrastructure.

revises sections of the state Public Utilities Code that sets forth SANDAG's functions and governance, requires new financial auditing procedures, and it allows for any two SANDAG board members to call for a population-weighted vote on any action item). Media coverage of AB 805's passage anticipated that SANDAG's population-weighted vote option would "empower large cities like San Diego and Chula Vista, at the expense of small and rural cities like Del Mar and Santee" (Keatts, 2017), as expressed by the board member from a different MPO in the statement above.

Advocates participating in the study note that population-weighted voting has been impactful in San Diego, especially for community members pushing the MPO to prioritize climate and equity in the regional process:

> With the new direction, the adoption of AB 805, we have a lot more accountability with the agency. And we've been pushing a lot on the equity space and having regular meetings with staff (Participant CC).

Said another focus group participant:

> I would say, between 2018 [and now]…our relationship with SANDAG has really shifted, so I'll say within the last five years. A lot of it has to do with advocacy efforts that went into AB 805, which…shifted the whole SANDAG voting structure (Participant EE).

Irrespective of the debate surrounding population-weighted voting, concerns whether decision-makers appropriately embodied the communities they serve were prominent in our focus groups. One advocate contemplated:

> We know that the people that are making these decisions; they aren't a diverse representation of our community…. And they don't understand what a lot of our community members are going through…. How do we get to folks in those positions of power (Participant AA)?

An observer from outside the region remarked:

> [It] seems like the reforms in the SANDAG region to require proportional voting…has had some positive outcomes for prioritizing the needs of communities most impacted…by allowing San Diego City to exert more [voting power] (Participant BB).

Such discussions about power dynamics are inevitable points of contention when discussing the capacity of the MPO to act as a fair and impartial engine to forward regional climate and equity work. Conflicts among local jurisdictions over MPO board seats and votes, as well as the regional level balance of elected officials representing urban versus suburban areas can impede effective and potentially representative decision-making.

Inherent Tension in MPO Board Member Roles

Members of an MPO board are not directly elected to the MPO. Instead, most occupy their particular board seat by virtue of being an elected official (e.g., city mayor, city council member, or county

commissioner) of a local jurisdiction in the region. Observers of MPOs routinely note the resulting, underlying tension in MPO decision-making: MPO board members are elected by constituents in their jurisdiction and expected to represent their interests. At the same time, appointment to an MPO board requires board members overseeing the MPO process to place the broader, long-term interests of the region first, ahead of the individual jurisdictions and voters who put them into office. This obvious tension has long been at the center of critiques of MPO governance and decision-making (Gerber & Gibson, 2009; Sciara, 2017). We saw evidence of this tension in the remarks of various interviewees and focus group participants.

Putting the Region First

Some board members and advocates suggested that MPO boards struggle to define and pursue regional interests and that state-informed climate and equity goals may take a back seat to board negotiations over local government project interests. A representative of one non-profit with a mission to advance sustainability and equity statewide observed:

> I perceive that each of these MPOs is a collection of local municipalities that have their own agendas. And so, I feel like they're working to create consensus-building processes. But I…don't think [climate and equity goals] are top of mind, necessarily(Participant Z).

When asked about MPO decision-making for the RTP, another advocate remarked:

> [H]ow they decide projects…feels sometimes like a roll up of…whatever the local cities said they wanted to do…like…100 cities in a trench coat…. It doesn't always feel like the MPO is really trying to set an agenda or vision, but it's just sort of like assembling a bunch of visions and rolling it up into one document (Participant BB).

Separately, an MPO board member in one of California's large multi-county regions, described the significant effort required by the board's leader to engage directly with each county and its constituent jurisdictions:

> [That]…is going to be quite an undertaking…. [E]ach county…has their own differences of what they need, and [the leader is] trying to knock down the silos between some of them and say, 'No, we're a region here. We got a plan for the region, not just individual cities or individual parts of your city.' That's the hardest part to get across with leaders…new members of the MPO…is that we're not here for your city; we're here for the region, planning for the region. Your city may not get anything right away, but it may get it later (Participant R).

With respect to equity in particular, one board member noted a lack of baseline consensus among board's members about addressing equity in its decision making:

> [T]he MPO is…different cities in the county that have different motivations. In the city proper, one of our major city goals is addressing diversity, equity, and inclusion, and there's a lot of self-education. There's funding dedicated to…diversify our staff and our outreach and fund businesses and programs. But, as a [regional organization]...that hasn't been a priority….

> [T]here's [not] been a lot of follow through in terms of training at the board or even [discussing] this…at the board level to be able to prioritize funding. And frankly, I think we're pretty divided…I don't think it would go very far with our current environment…. [T]here's just not necessarily buy-in across the board (Participant U).

A board member in a different region described how efforts to form an equity working group on the board were received unevenly by members and with some discomfort:

> It was a work in progress…. We formed this…working group. And [the] board is not all 'on board,' so to speak…. People feel…this is a transportation body. Right? Why are we talking about [this] social issue? It's a fair question…probably why it got me thrown on to…the working group…. So, they're not participating in the working group…just a lot of silence…they might say in one…or conversations with one or two of us, but it's not something they're gonna say during a board meeting that's publicly broadcast and being recorded (Participant W).

Given widely varying views of, and commitments to, climate and equity goals among MPO board members, many board members who might wish they could do more on these issues can face difficult uphill battles even to introduce such conversations among board members:

> It's a bit of a third rail to talk about taking [a congestion relief project] off [the list]…. We're already tenuous[ly] trying to keep our 13-member board moving forward with effective collaboration on so many other issues. So, it's a little bit of a pick your battles…. [You want to avoid conflict with]...one person just kind of chiming in for their particular project. You know, "The funding should go to my whatever…" because…you're trying to meet up with them on some other issue (Participant U).

Another board member built on this sentiment and remarked:

> And so, it would be a huge… political lift to change how we allocate [TDA money to better support climate/equity]. And so we're not going to and the only thing we're going to kind of really consider changing how we allocate is new money. But then we don't generate that much new money, and then, when we do generate new money, it's the sort of politically influential folks who often get to sort of weigh in on how it's been (Participant T).

Another board member commented that board members who are strong advocates for better climate and equity progress on their board, especially if they're younger, may face backlash or disapproval from opposing board members who may be more traditional and deem them too fiery:

> [In] this activism, [there's] this blood sport, and coming to council and kicking somebody in the shin, and people outside giving them high fives and beating up on the staff…distrust for, you know; well, "you don't know what you're talking about." …I mean, it's not quite that indignant, but…I think the equity issue coming to the forefront…has resulted in…a certain level of division…. I'm also seeing it on some of the other boards where there's just a new, a new younger and…motivated…stack of electeds that have come, and I think just naturally with any

> new elected, I mean, it takes time to…orientate, and anybody that's shopped online in the last five or six years, and then got elected to office might be in for a little bit of a surprise that…a transit project doesn't come overnight (Participant V).

For regional-level climate and equity strategies to be effective in the long-term, sustained commitment from and consensus among MPO board members is important. Members must agree to leverage the board's influence to enact change and recognize the value of each regional player. Where MPO board members are focused more on developing short- than long-term solutions, then the influence of climate and equity initiatives on the RTP/SCS and accompanying FTIP may be less impactful.

The RTP/SCS has a 20-year planning horizon, while the FTIP has a 5-year planning horizon. However, the term for many elected officials serving as MPO board members lasts four years. This temporal misalignment can affect the time horizons of MPO board members in trading off both short- and longer-term considerations, as well local versus regional impacts. An MPO board member described these tradeoffs this way:

> Elected officials have to worry about not just the next election but maybe the next newspaper that comes out…. So, it's very difficult for us to plan for…the Regional Plan that goes 20, 30, 40 years out. People [are]…responding to problems they're having today and want a solution tomorrow or next year. And a Regional Plan was never intended to deal with that. The Regional Plan was intended for building things so that we would have something that would work 20 years from now (Participant P).

Still the board member voiced concerns that “politically, it's suicide” for local officials who fail to push for “old solutions” desired by the public, like adding expensive highway capacity to provide short-term congestion relief. Even when board members are well-informed about more cost-effective land use solutions, they must respond to constituents who may not share the same knowledge or priorities but on whom their re-election depends.

Despite these many challenges to incorporating climate and equity goals into MPO decision-making around RTPs and FTIPs, the story of MPO decision-making is not simply one of parochial bargaining and internecine conflicts. For example, one member shared:

> One thing that we…initiated at the board level was to—instead of focusing so much of our money on kind of really big projects…[and] locking up our matching funds—is that the board initiated and got buy-in from everybody else to do a…grant program for small projects for underserved communities…. [J]urisdictions would apply [for funds]…. [S]ome of those smaller projects came…directly out of the board, but otherwise [project prioritization is]… very much in alignment with each jurisdiction’s or the county's general plan, the housing element, what are the key pieces to get the housing (Participant U).

A board member from a different MPO described that, despite fractious county politics divided along both geographic and political party lines, the region benefits from the moderating influence of one board member:

> [This board member] is a real, moderate, and kind of glue…[who] stands with [the opposing party] on a lot of issues…instead of maybe jockeying for every inch. [W]e've…created a little more congeniality…[and have]...been able to…govern in a productive direction by taking somebody who is worried about…[economic growth] and melding it with equity concerns (Participant S).

At one smaller MPO, staff described how the MPO and its partner agencies collaborate through a "unified voice" process to pursue federal discretionary funds for regionally significant projects that lack resources. Ultimately, regional representatives visit Congressional delegation offices in Washington, D.C. to lobby together for key RTP priorities.

> [For our MPO's unified] voice process, we generally…[put] together some sort of prioritization methodology for figuring out…the highest priorities…. [This prepares us for when we are] sitting across the table with…somebody who is only going to give us about 15 to 20 min of their time…. They're a senator and…we want to…hit them with projects 1, 2, and 3… [The process] helps us to shape which projects are going into our regionally significant listings of projects, as opposed to, say, cooking up a quantitative methodology, running all the projects through that, and then telling our board afterwards: "This is what came out of our system." ...We go more of the qualitative route, the qualitative/quantitative route, and then use that as our list (Participant B).

The staff member further explained that the unified voice process encourages jurisdictions to "have skin in the game" (Participant B). Local jurisdictions who want to ensure their regionally significant projects are a part of the process will often pay for the project study report or utilize local funds to ensure the project is shovel ready. Board members then partake in unified voice legislative trips "with just a handful of projects that [they're] all expert on and [leave] behind kind of the projects that are…[not] best positioned to land money and are in line with our RTP and in line with what we expect" (Participant B).

Collectively, our interviews and focus groups highlight the challenges to regional land use and transportation planning overseen by metropolitan planning organizations governed primarily by local officials answerable to the local constituents who elected them. In addition to these structural challenges, MPO board members vary greatly in their political views; urban, suburban, or rural orientation; focus on regional versus local needs; and commitment to addressing climate and equity goals in their work. This variation can stand in contrast to the climate- and equity-informed aims of MPO staff, regionally based advocacy organizations, and state policy.

These structural challenges notwithstanding, our interviewees and focus group participants also paint a picture of increasing MPO commitment to climate and equity planning and programming, though such progress is by no means uniform across MPOs. Examples include the efforts described above to align local goals with state climate, equity, *and* economic goals through MPO board member education and engagement.

Engaging the Community

Many of our focus group participants described how there was clear room for improvement in their MPO's ability to conduct community engagement and reach "equity priority communities." Many board members expressed their own challenges connecting to and understanding the needs of the disadvantaged communities they wanted to uplift in their regional plans. A board member from one MPO stressed the general challenge:

> [Our MPO experiences a] lack of connection…. When we have focus groups, we just don't get a lot of people. Or when we have community meetings, when we set up ways to engage the public, they're kind of old fashioned…. [F]or folks that can be entertained endlessly on their tablet or their device, going to a public meeting as part of a process that might take multiple years, [is] just not as exciting as something you can get on Amazon the next day…. [H]ow do we make it cool to be involved (Participant V)?

Other board members specifically complained about an inability to engage traditionally underserved groups. One from a different MPO explained:

> The disadvantage[d] or the equity groups that you're trying to affect…it's very difficult to get them engaged. We've held meetings…. Very poor neighborhoods, low-income, a lot of challenges…[with] certain needs…. [O]ur MPO…need[s] to do a better job understanding…the needs are of these disadvantaged communities…. [W]e have to actually hold meetings in those neighborhoods,…have their representatives in the room with us…, and really start…touching those individuals…. [Y]ou've got to really encourage them to be at these meetings…and hear what they have to say, and try [to] meet some of that demand. But they've got to feel like they're part of the process, and we don't do a very good job…in the State of California. I don't think we do a very good job of making them part of the process (Participant X).

Another MPO board member expanded on this point, explaining that community engagement at their MPO still has room to grow to fully capture the scope of their communities' needs:

> When there's a clear…disadvantaged community or…underrepresented [group]…it's like, "Oh, okay, let's…check the boxes to make sure we do this—the outreach—and make sure that there's equitable funding distribution amongst the communities." I think we do that fine. But I don't think that there's a very sophisticated or in-depth understanding of…different community needs,…different ways that those communities might be communicating,…[or] might not be able to be involved in the…[traditional opportunities we're providing] for involvement…. So, I'd say it factors in but…at the…most basic level,…we get a C grade…. [W]e're passing (Participant U).

Advocates have also questioned whether the elected officials representing them on MPO boards use their voices to raise issues felt by community members. One advocate asserted:

> [W]e do still feel a pretty strong disconnect when you think about the [board] that's making that final vote…. [A]re they having any conversations on the ground? And how important are these

> policies to them in terms of equity and climate? Sometimes…it's really hard to tell (Participant Y).

Another advocate similarly wondered if board members reflect the lived experiences of community members impacted by climate and equity issues. They characterized their MPO as "old, old school," and continued:

> [T]hat's the attitude that they have here. You know, when you come and talk about equity, they included [it] in the mission statement, and…if you look it up,…they're using their right language. But are they really living in that way (Participant DD)?

We heard from MPO board representatives across all regions about their common struggle to define or identify which constituents comprise an equity priority community. One board member described the conflicting demands elected officials face. On one hand, they must "[listen] to their constituents," even those who are unaware of or do not embrace state climate and equity goals, and on the other hand they must also recognize that the most vocal stakeholders may not be representative of the wider community. Said one MPO board member, "[T]he loudest voices are not always right.… [Y]ou need to hear all the voices,…take them all into consideration" (Participant O).

The MPO board members we consulted also had varying views of community-based organizations advocating for equitable transportation. Some questioned whether these organizations represent the best interests of equity priority communities. Other participants saw such groups as important constituents with views deserving consideration. One board member cautioned against weighing the opinions of advocacy groups too heavily:

> [There is] a distinct separation between the [position of the] environmental community [about a project] and the actual needs of the people that are using a facility…a lack of compromise…a real disconnect (Participant X).

They observed that:

> A culture…has developed in the environmental community that you can hold projects hostage till you get what you want. And they do that at the expense of…low-income and disadvantaged communities.… [T]he advocates all say, "Oh, equity is important to us. We have to help the low-income, the disadvantaged," all that. And then, when you propose…[to fix or do an interim project on] this highway that…[low income residents] travel on every day…they just can't… support that project in a meaningful way (Participant X).

While this board member laments environmental advocates that marshal equity rationales to stop highway projects, board members elsewhere faced opposing but seemingly similar issues. In a different MPO region, a board member described their challenge to manage the opinions of stakeholders who frequently fight density, growth, and climate-centered transportation equity goals. They remarked:

> One of the challenges…as an elected,...for those of us that have been around the block a while, we know that the loudest voices are not always the majority voices…. [T]here is a staunch, no growth group [here] that has really gained traction…. They want to build additional [roads], but they don't want additional development…. [W]e can't really have an honest dialogue about this issue because they're twisting and skewing facts to their very staunch, no growth agenda (Participant Q).

The experiences of some community advocates suggest tokenization is a further challenge to effective community engagement. For advocates who had won hard-fought access to MPO board members, some found that ensuing conversations with board members about their climate and equity concerns seemed unproductive. One advocate described their experience working with the MPO's advisory council: "I was anticipating participating in my own community, [but the advisory council] is very tokenized." A seemingly supportive local official advised the advocate:

> Yeah, well make sure that you talk real soft and don't say too much. Just say that you're curious about participating. Don't let them know your [advocacy] role…. And once you're in, then you do what you gotta do. But be careful because they really expect you not to know too much, and [it's better] if they think that you don't know a lot…because they don't want any muckrakers (Participant DD).

The advocate was dismayed, exclaiming, "And this is coming from someone that's inside, you know?" The same advocate explained that, when they have shared feedback with MPO board members or staff, the board appears to already have a plan for allocating funds and will push ahead with its decisions, regardless of community input or equity goals. "I think that's where the equity stops," they said**.**

A story relayed by an MPO board member elsewhere confirms similarly:

> The MPO staff committed to do community outreach but then didn't actually do the community outreach before the decision was made…. And then [the staff said]..."*[W]e are still going to do community outreach. We're just going to do it after the decision [is] made, and we'll then be able to…update the decision if we really need to*." …It's just like…[our MPO] just doesn't know how to really do this stuff (Participant T).

In still another region, one community representative described how their group has had considerable success conveying to MPO board leadership their concerns about the climate vulnerabilities faced by disadvantaged community members. Even so, in the advocate's view, the stance of those board members on climate issues was not commensurately vocal or aggressive. The representative remarked:

> I feel like this is when [it is] politics, right? Not necessarily the…planning perspective is…prioritized…. [It] has more to do with…politics, rather than planning policy…. [T]hat's my perspective (Participant EE).

Reflecting on their frustrations with community engagement and doubts about its integrity, the advocates we consulted emphasized the need to prepare their community members to become the future leaders shaping the regional planning process:

> We have the conversations, we tried to push our agenda, but we also look at it as a systems-change issue. How do we get to folks in those positions of power? How do we help build the next generation who…is connected to…and understands these issues?...[I]t's not going to change tomorrow. But let's be honest, this work isn't going to go away…. [I]t's going to be a…multigenerational approach…[to] prepare the next generation to lead this work so that…in 10 years, maybe there are folks in positions of power who do inherently understand the issues…on the ground (Participant AA).

As the participant above noted, part of the challenge of the MPO as a regional decision-maker is that different political players have different motivations. The advocate asked:

> What are their values, loyalties, and losses? We can't look [at MPOs] as a whole institution, we need to look at the individual people that make it up, and how do we create change with those folks (Participant AA)?

Part of that entails considering how board members value their constituents and equity priority communities against the larger set of issues under their purview, including where community engagement plays a role in those decisions.

Strengths and Limits of the RTP Development Process

Development of a region's long-range transportation plan or RTP is the key output for MPOs. Through our interviews and focus groups, we gleaned specific insights about RTP development and how state equity and climate goals figure into the plan development process.

Notwithstanding this core focus on climate and equity, we found that California's housing crisis loomed large in the accounts shared by so many research participants. Thus, we first describe the large shadow cast by the state's housing challenges over MPOs' RTP planning.

Intractable Housing Scarcity Has Intra- and Inter-regional Impacts for Transportation, GHG Emissions and Equity

Overall, the research team heard consistently how housing scarcity and affordability challenges reverberate powerfully from region to region, impacting MPOs' work aimed at state equity and climate goals. Many study informants told us that housing scarcity and unaffordability—whether in their own or adjacent regions—placed added pressure on their region's transportation system and contributed to rising VMT, despite state goals:

> You can't talk about transportation without also talking about housing. We are…part of the extended Bay area. There are people that live [here] and work in San Jose, Oakland, San

> Francisco, on a daily basis, many of them driving there and back daily. What should be a one to one-and-a-half hour commute…if they're going during the worst traffic hours…winds up being a…two-and-a-half to three-hour commute…. [That's] five to six hours out of their day every day, just transporting themselves to and from work (Participant N).

Further, this MPO participant also expressed how scarcity in one region's housing market spills over into other regions:

> People are continuing to move over [here]…and take up our apartment and housing supply. We are not like—a lot of the country is seeing a housing depression. We are not. We continue to build here…. And all of that adds to our transportation modes (Participant N).

Another board member echoed:

> So, transportation is a very big issue, and people are upset about commute times and things like that. And it…also affects our housing prices (Participant O).

In one of the state's large regions, an MPO board member explained that:

> Housing is an extremely high priority for our MPO…. T]en years [ago]…when I was first on the [MPO], all we talked about were highways and roads and the transportation system…. [W]e went from there to today, where housing is probably our biggest challenge and dominates most of our discussions and most of our planning process (Participant X).

Yet, housing scarcity also plagues smaller MPOs and can be used to justify roadway investments. As this mid-size MPO board member noted:

> A main concern for us is housing affordability—just trying to meet our RHNA allocation. Across our cities, we have a jobs-housing imbalance. Pre-COVID…[our city] had 47,000 residents. We were getting 30,000 commuters…at our job centers…. [W]hat we're trying to do is distribute those: housing and jobs…. [O]ur transportation planning is really tied…to that, and…we have a lot of agreement and cooperation in terms of what we're trying to do. [T]his new road with this overpass will unlock the housing that we can build in these areas…. So, we need this road in order to be able to do this more higher density housing (Participant U).

Within one region where MPO board policy has emphasized transit-oriented development as a VMT reduction strategy, a community advocate asked:

> And how important are these policies to them in terms of equity and climate? Sometimes it's, it's really hard to tell [if the MPO's policies are impactful. Our MPO board has a] big split of the [members] who were…not okay with density near transit. So also thinking about the housing and, and the land use piece and those exclusive policies…. We just really saw…[board members] blockading…any density in the neighborhoods that they represent. So that's super

> problematic and something else…[to] add to the list that we need to continue working on (Participant Y).

Multiple study participants were pointedly critical of California's RHNA process, and its ability to promote affordable housing production. A MPO board member in one of the state's many housing constrained regions said:

> Everybody gets excited about…[RHNA]. I don't myself because all of it is a planning exercise. You designate where homes can be built. We designate a lot of [housing and identified] underperforming commercial properties…[where] housing could be built…All the city has to do is plan for it. We don't have to build anything. But right now, you can't get a developer to build anything anyway; the true cost [is] prohibitive (Participant R).

In another region with severe housing affordability challenges, an MPO board member told us:

> [In previous General Plan update rounds], it was very easy [for a city] to fake a housing element. Zone a bunch of land that isn't going to be rezoned…. Traditionally, folks have…called the RHNA process a paper tiger.… [P]eople get really excited about it…but it doesn't do much. And when it did do something, it was pretty negative.… [In] one housing element, we just put a bunch of [housing] in the North…because that's where the people wanted housing, right? But it wasn't necessarily good for VMT or for our social equity as a community (Participant S).

This same board member, however, remarked that SB 375 itself increased attention to equity by the MPO, and increased scrutiny of local housing elements by state housing officials (to “make sure they're real”) together had made a difference:

> [B]efore I was in the legislature [and] I was on a City Council, and…so I've been through 3 housing elements, and this is the first time that I've ever seen anything real in the process, meaning: substantive.... [C]ommunities have to build housing that is better from a VMT and an equity standpoint (Participant S).

Further, some MPO participants were optimistic that recent attention to siting housing in resource rich areas could open opportunities for addressing equity through combined housing and transportation efforts within the MPO process. According to a participant from a smaller region:

> [T]he geographical equity question…[has] been an interesting one as we've gotten more into housing.…”[A]ffirmatively furthering fair housing” has asked us to look at…not only…[making] transportation investments in historically underserved communities, but to consider getting affordable housing into what they call heavily resourced areas. [I]t's looking at…places where there's already great infrastructure and…great schools [and] making sure that you're getting housing there…as well. So that's been something we've been looking at closely. We're really relatively new to the regional housing game, at least in a very robust way. And now we're looking at how to combine those housing funds together with transportation funds as well (Participant C).

Value of MPO Policy to Regional Transportation Plans May Be Underestimated

By asking for their account of the RTP development process, we learned that interview and focus group participants attached visible importance to the specific policies set by MPOs for meeting state goals, particularly GHG emissions reductions goals. Several of our participants, particularly those affiliated with larger MPOs, told us that such policies were important complements to federal and state requirements.

Some participants told us that selecting the "right" project investments may be less important for achieving GHG reductions than adopting regional policies to establish clear parameters to guide regional planning, programming, and project operations. For example, participants affiliated with a particular MPO suggested that policies adopted for their regional plan were more cost effective and impactful in reducing GHG emissions than were individual projects:

> [T]ransportation projects are expensive and move the needle less per dollar spent than many of the policy actions taken in transportation and outside of transportation. And while the debate at the state level has often been…about…the need for MPOs to change their project priorities, our achievement of greenhouse gas goals…comes more from those policy actions than from transportation projects by themselves (Participant D).

For example, RTP development in one region involved evaluating policy proposals under the same three scenarios used to assess projects; these scenario analyses highlighted how cost effective some policy initiatives might be:

> We evaluated each of those [policies] individually…[and] as a package,…roadway pricing, speed enforcement, all of our land use strategies.… [M]any of them are extremely hard political lifts, but in terms of the actual dollar figures required to put some speed cameras and/or to install a toll gantry…those are…some of the most high-impact things that we can do in terms of getting to our climate goals and just in terms of improving mobility. And so that process helped to daylight some of those benefits (Participant D).

Based on these policy analyses, the MPO included proposed policies into the first iteration of the RTP/SCS. Those interviewed told us that these policy evaluations: "help move us a good chunk of the way towards our goals."

Similarly, a cross-section of participants in the San Diego region told us that they viewed new policies governing the allocation of regional funding included in the most recent RTP as important. One participant explained that, in a departure from prior, more fiscally conservative plans:

> In this [2021] plan, we have multiple sales taxes, we have road usage charges. We've got various pricing mechanisms that we didn't assume in previous plans (Participant H).

A community advocate for one diverse and economically vulnerable area within an MPO region also noted that a road usage charge (RUC) had been proposed in the most recent plan. Though his

organization had not taken a position on the policy, he saw it as a step that could help to “address climate change, [by] reducing emissions, and also lowering vehicle miles traveled.”

He then expressed disappointment at the MPO board's subsequent decision, after plan adoption, to reverse course and remove the RUC policy from the plan, which he attributed more to “political blowback” and “politics rather than planning policy:”

> There was an opportunity there for the Board to talk a little bit more about climate change because the data shows that…a lot of our emissions come from traveling…. So, it doesn't make sense…[to get rid of]...that specific funding mechanism proposal (Participant EE).

Participants affiliated with another MPO also described the policy assumptions underlying its RTP (as well as some MPO-driven regionwide projects) as particularly important for achieving GHG targets:

> [I]n our plan we have some pretty aggressive assumptions about…transition from a gas tax mechanism to fund transportation to a mileage-based fee mechanism, which ultimately get modeled along with the…capital investment plans and have pretty significant implications on meeting some of our targets. Same thing with policies with respect to congestion pricing. So, we'll incorporate these types of elements (Participant K).

Participants affiliated with another large MPO described how higher-level MPO board policy sets the stage for a given plan update and referred repeatedly to the board's recent “Triple Bottom Line” policy framework for advancing equity, the economy, and the environment. They told us that this policy guidance was shaping efforts to solicit and prioritize projects from member local governments. Building on the triple bottom line policy, the board at this MPO is considering a policy proposal to make roadway capacity projects ineligible for future regional funding rounds, though its adoption remains far from assured.

Path Dependency from Prior Plans and Sales Tax Measures Can Limit Progress

Our conversations with MPO staff, board members, and community advocates elucidated two forces favoring largely incremental change from one RTP/SCS to the next: deference to the prior regional plan and inclusion of local sales tax measure projects.

Most MPO staff interviewed described how RTP development typically begins by using the prior RTP as a baseline, although the degree of deference to decisions and commitments made in earlier plans varies across MPOs. Projects retained from prior RTPs into a new one may have been added years ago, when concerns about GHG reductions or equity were less pronounced. Additionally, project bundles attached to previous voter-approved local county sales tax measures create path dependency, given the political, legal, and logistical difficulties involved in abandoning or re-envisioning projects included in voter-approved measures and their expenditure plans.

One MPO staff member explained how RTP/SCS development starts with:

> the…MTP [regional transportation plan] projects from last time. We update it…and keep in mind…the full 20 plus years project list…. [W]e don't necessarily even start with the financially constrained part. We just start with…what we call an unconstrained list…projects that we feel…are really important to have but we couldn't identify reasonably available funding…. Some projects may drop off [because]…either the philosophy has changed, or the climate conversation has changed, and you know the project has either been dropped or not moving forward, or it's being reimagined into something else. Other things that come up…as we work on other efforts or other studies or other community driven processes, …and so those get added to the list (Participant L).

Separately, staff at one MPO also described how having local sales tax measure money attached to a project was one route to being included in the RTP. At another MPO, staff explained that RTP projects are assembled from county agencies' lists, which are influenced by local tax measures:

> [T]he counties themselves are working with their local jurisdictions in developing many of those [project] concepts. Many of those concepts are a part of sales tax initiatives…. The lion's share of them probably are, and they're submitting that to us. And so, we don't necessarily have the opportunity to really…screen and push [them] out…. [W]e're not necessarily plucking projects out of that process…. [W]e're working with the county commissions to…[understand] their submittals of the projects, recognizing that many of those projects are pipeline projects…long-standing planning efforts that have been ongoing. And so, we don't necessarily pull some of those projects (Participant K).

Starting RTP development with a blank slate and thereby compelling reconsideration of all projects, even those linked to tax measures, is a less common approach, but one taken by at least one MPO. According to our participants, previous MPO leadership generally deferred to measure projects, seeing them as a promise to voters, and included them in the RTP, even though:

> a lot of those were roadway widening projects, and it was going to be really impossible to keep those projects…and achieve the GHG reduction target that we needed to (Participant H).

But at least one MPO, the leadership announced that everything was on the table for the most recent RTP update, instructing staff to identify measure-funded projects that could be considered for removal or change, even if the steps for revising the associated tax measure expenditure plan promised to be onerous:

> We have to go back now and ask our board…to agree to amend the [measure] ordinance, and that's not going to be a very exciting, popular thing that we have to do.

MPOs Leverage Project Assessment under GHG Constraints for Better Projects

Formal project assessments and region-specific GHG reduction targets can provide MPOs leverage for improving and refining the projects for which member local governments and agencies seek funding. For example, one staff member described how examining the performance of proposed projects under three

different planning scenarios serves as a first-cut analysis. It allows the MPO “to incorporate some of the highest performing projects” as well as to ask project sponsors “for commitments to refine the scope or to…[adopt] complementary policy”…for lower performing investments (Participant D). The MPO staff and local sponsors then work iteratively, considering such refinements and fiscal constraints “to determine which projects would fit within the fiscally constrained transportation element.”

At another MPO, the project scoring criteria for prioritizing RTP investments served as an important signal to local governments, communicating the kinds of projects seen as responsive to regional goals. Member cities, particularly those with staff capacity to act on these signals, then work to tailor the project in various ways. Said one participant:

> Cities with more staffing resources…more people who are able to think through our scoring process…[can] see what kind of project probably will gain the advantage in our scoring system… [T]hat's how we…encourage cities to submit projects that will actually help the region achieve the goals we set (Participant A).

In another region, RTP project selection processes led a county agency to revise its light rail plans for an existing rail corridor, changing instead to a bus on guideway application that could more flexibly serve community pick up and drop off needs. While the project's future is still uncertain, MPO staff see the change in scope as evidence that project sponsors are aware of regional goals and sometimes tailor proposed projects to better meet them:

> That [project]…was reimagined basically to address climate concerns and…budget issues…, and to get it moving way faster than it could…as just a light rail project (Participant L).

In the same region, the proposal for a new part-time HOV facility to augment existing state highway capacity between two population centers was similarly revised. Said MPO staff:

> We pulled the HOV lane out because there was a lot of pressure and discussion that [this] was essentially just a part-time general-purpose lane widening project (Participant L).

A spokesperson for a community-based organization in a different region also cited this example. According to this advocate, the group campaigned against the widening, given the health impacts already experienced by the community due to freeway proximity, and was:

> successful in stopping this project…because our community organization and our community members and partners…showed up to [the MPO] meeting and said, “No.” We participated throughout the entire process, and not only just saying no, but coming up with a proposed solution (Participant EE).

In this case, the MPO staff also described how they worked with local partners to secure state permission to operate buses on the highway shoulder lanes in that corridor, to provide desired connectivity without adding capacity. Said the staffer:

> That is one [example]...of…[a] non-GHG supporting project being removed and…reimagined in a way that's much more climate change friendly. Additionally, the bus-on-shoulder project was also seen as “addressing that equity issue of how to get faster transit” from one town, to the other, “where…a lot of the jobs are” (Participant L).

These examples notwithstanding, some interviewees also suggested that local governments and agencies sometimes make relatively marginal revisions to proposed projects in response to specific scoring criteria, but without fundamentally altering the nature of the project.

Board Policy More Important for RTP Than FTIP

We found in many conversations that regardless of the context, the staff at one MPO stressed that equity does not necessarily directly play a role in TIP programming and adoption, even as it is woven into all that they do. When asked how equity concerns are considered in the FTIP process, one staff member replied:

> So, directly? Not really…. [T]he FTIP is to me really a financial summary, a financial catalog…. [E]quity [concerns are worked in]...by way of the funding awards that we administer…a fund type…a funding program, whether it's…a discretionary FTA [program], or…any other type of fund source that…we're responsible for distributing…. The equity is woven into the process that distributes those funds, that assigns those funds to a project that came in through a call for projects…. Their entry into the FTIP is just the formalization of it (Participant B).

Conclusion

California’s MPOs are central to the state’s SB 375 policy framework, which seeks to reduce transportation related GHG emissions and improve transportation equity through integrated regional transportation and land planning. Individual MPOs steer this planning process in each of the state’s diverse regions and adopt the resulting decisions and commitments. This chapter examines how key actors—namely MPO board members, MPO staff, and advocates and community members—are involved in regional transportation planning in California and how they understand and view its performance for addressing state climate and equity goals. It complements the picture of MPO efforts revealed in previous chapters from careful review of planning and project assessment documents.

Informed by that document-based analysis, we interviewed and conducted focus group discussions with 32 individuals who participate in regional planning in the three key roles. In these conversations, we asked research participants to describe the processes used to develop the long-range regional transportation plans (RTP/SCS) and near-term capital programs (FTIPs) that encapsulate the policy, planning, and investment commitments adopted by each MPO. We also probed deeply into how these various actors define, discern, assess, and act upon the climate and equity implications of these commitments in each region. We recruited participants to capture how regional planning unfolds in a range of contexts throughout the state, differentiated by regional size, geographic location, and level of urbanization, characteristics that also reflect different regional economic orientations, for example towards agriculture, tourism, or technology. Despite these efforts, not all regions were represented in the study. Further, recruitment of advocates was limited in smaller regions where community-based

organizations were fewer in number or lacked organizational capacity to participate in research. Thus, we acknowledge the potential that our work does not comprehensively account for the regional planning practices for addressing climate and equity, and that it misses certain nuances of participants' experiences with these practices.

Nonetheless, visible overlaps across participants' accounts, within individual regions, across different regions and across participant groups, allow us to identify common themes about MPO efforts to advance state climate and equity goals. Interview data collected from participants also reveal important differences about these efforts, as observed within and across different regions and by different participants. We highlight the main results:

Participants have different understandings of climate and equity. State language describing these objectives in SB 375 and key state policy documents appears to facilitate greater consistency and specificity in discussions of climate goals, typically rooted in GHG emissions and VMT reductions; and to leave considerably more room for planning actors to define what it means to advance equity in different contexts.

Climate and equity goals are understood in a region in multiple dimensions, reflecting MPO staff's orientation toward state planning requirements and GHG targets, board members' own views and their sensitivity to the views of constituents, and advocates' own grounding in the lived experiences of communities historically facing transportation disadvantage and exclusion from regional decision-making.

Whereas MPO staff and board members often discuss the pursuit of equity and climate goals as separate endeavors, many planning advocates instead see a tight nexus between them and call for actions that advance both simultaneously, for example, improving pedestrian conditions.

MPOs use state GHG reduction targets as constructive leverage with local project sponsors, requiring local agencies and governments to tailor and improve proposed projects to better serve state goals; the magnitude or impact of project revisions may be limited.

In the view of many board members, staff and advocates, MPOs' own structural limits explain, at least in part, the limited progress on climate and equity goals under SB 375. Many such limitations are documented in the planning literature and extend beyond California MPOs. These include MPOs' lack of implementation authority, their reliance on independently funded local agencies, unrepresentative MPO membership and voting structures, board members' electoral incentives to favor local over regional needs, and persistent MPO failures to achieve effective and meaningful community involvement.

The passage of state law AB 805—which revised MPO board membership rules and expanded population-based voting in SANDAG—has transformed access to MPO decision-making in San Diego for disadvantaged communities and their advocates.

Planning actors highlight that extreme housing scarcity and unaffordability throughout the state directly impact the ability of regions to reduce VMT and attendant emissions, and to facilitate more equitable access to opportunities.

The key gatekeeper for access to future investment funding is the RTP development process. This gatekeeping function—and potential progress toward equity and climate goals—can be diminished when the RTP process too readily accommodates prior commitments and/or local sales tax measure projects, without examining whether climate and equity progress would be enhanced by their removal.

Chapter 6: Conclusions and Recommendations

Conclusions

All seven Metropolitan Planning Organizations (MPOs) reviewed for this study are incorporating climate and equity considerations into their goals and objectives, planning processes, and assessment methods. But the extent of this incorporation varies substantially across the MPOs and, for most MPOs, across their various funding programs. In particular, the evaluation rubrics, scoring, and project rankings used to determine which projects will be included in their Regional Transportation Plans/Sustainable Communities Strategies (RTPs/SCSs) and Federal Transportation Improvement Programs (FTIPs) can range from comprehensive, formal, rigorous, and transparent benefit/cost, goals achievement, and equity evaluations, to opaque project selection processes that are not publicly described or documented. Similarly, some of the MPOs examined perform in-house bottom-up and top-down evaluation of programs and projects for their RTPs/SCSs and FTIPs, while others largely delegate project evaluation and scoring to county transportation agencies.

Project evaluations for both emissions and vehicle travel impacts are typically more formal, quantitative, and consistent than are equity evaluations, undoubtedly due to the codified federal and state requirements concerning the former. As a result, the MPOs studied vary considerably more in terms of how they incorporate equity considerations in their work. Several have made notable progress in recent years, particularly with respect to seeking more input from communities and advocacy groups not historically represented in regional planning processes. In addition, some of the MPOs studied conduct plan-level equity assessments, and a few include equity evaluations in project-level scorecards or assessments.

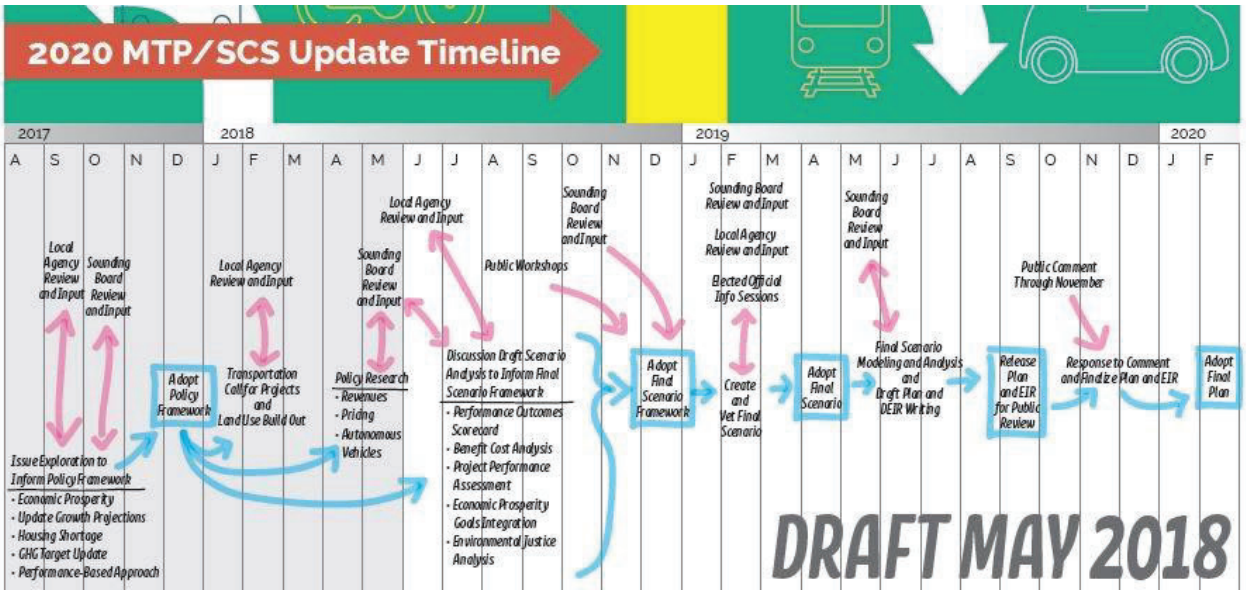
Given this overview, we offer in this closing chapter some overall findings and recommendations from our research presented in this report.

MPO Processes and Politics

MPOs produce large volumes of documentation for their transportation plans and investment programs. For the large MPOs' RTP/SCSs, the compilation of the plan, appendices, environmental review and compliance documentation, technical appendices, responses to comments, meeting presentations, and staff reports can easily exceed 10,000 pages.

In addition to being voluminous, the process can also appear chaotic and/or mysterious to outsiders (and perhaps to many insiders as well). Figure 6-1 illustrates the distinct RTP/SCS update activities and their relationships across a 30-month period at the Sacramento Council of Governments.

Figure 6-1: SACOG's 2020 MTP/SCS Update Timeline



Source: (Sacramento Area Council of Governments, 2018a)

While public processes and documents may create an ocean of information of varying relevance to different audiences, our conversations with MPO staff, board members, and advocates presented in Chapter 5 illuminates what these insiders see as the most salient elements of RTP and FTIP adoption.

Focus on the RTP/SCS is Instrumental to Climate and Equity Outcomes

Our research suggests that, at several of the MPOs studied, the RTP/SCS plays a significant role in gatekeeping access to funding; more so than the FTIP. Thus, early and rigorous project vetting and amendment using climate and equity criteria when they are being considered at the RTP/SCS preparation stage is necessary to ensure that future projects contribute meaningfully to these goals.

Including a project in the RTP sets the stage for its sponsors to pursue further project development activities (planning, design and redesign, environmental review, identifying funding sources, and so on). Once a project demonstrates these signifiers of "project readiness," including it in the FTIP is often largely procedural. Given this, the FTIP is often ultimately a compilation document driven substantially by previous analyses conducted for the RTP/SCS.

Project Performance Assessment

While all MPOs evaluate and rank projects for inclusion in their RTP/SCS and/or FTIP, we found that MPOs use different approaches to project assessment, including scoring rubrics, metric-based indicators, and cost-benefit analysis. Overall, we noted that,in general, the higher the quality of assessment methodology, the greater role it plays in both the planning and project selection processes, and the extent to which climate and equity are integrated into MPO plans, programs, and projects. We also note that most MPOs are gathering extensive performance monitoring data that could be deployed more fully for project evaluation purposes.

Scoring Rubrics

Many of California's MPOs, and their county transportation agencies and RTPAs, employ scoring rubrics to assess and compare projects across a range of possible costs and benefits. Of the MPOs included in this study, AMBAG, FCOG, MTC, SANDAG, and SCAG's county transportation commissions all use scoring rubrics. MTC also uses a supplemental project-level assessment for larger, more consequential projects.

These rubrics include both objective and subjective evaluation criteria, and they typically report the criteria used and weights applied to each. These criteria and the weights often vary, sometimes substantially, across funding programs. The more objective, quantifiable evaluation criteria often draw on commonly available data like traffic volumes, project-specific funding availability, anticipated year of construction, or project components like miles of bike lanes to be added. In some cases, ostensibly objective criteria may include a rudimentary project-level cost-benefit assessment.

A project's evaluators, often MPO staff or committees of stakeholders, may also use subjective criteria such as whether the project improves accessibility for disabled people, or directional estimates of impacts to accessibility, greenhouse gas (GHG) emissions, vehicle travel (VMT), or criteria air pollutants.

Scoring rubrics are a straightforward and typically parsimonious means of evaluating projects and useful in cases where MPOs lack detailed evaluation data or resources, or where the stakes are low, as for projects that are lower-performing or not expected to significantly affect key climate and equity outcomes. Even for larger, high-impact projects, scoring rubrics can be useful for an initial screening when data availability or analytical resources are more limited.

However, scoring rubrics have many limitations. They typically employ a mix of objective and subjective determinations that are assigned various weights or to a maximum number of points allowed for each criterion. These subjective determinations are typically made by a technical working group that may or may not include MPO board members and can be made years in advance of FTIP project selection. Further, the basis by which the various criterion weights are assigned are not always clear and can appear to be somewhat arbitrary. The rubrics and criterion determinations in them are ultimately summed to embed myriad values and priorities in a single assessment score. Such scoring rubrics tend to break down when considering second-order, longer-term, and cumulative project or program effects. Their usefulness may also be limited when decision-makers disagree with one another over the values and priorities that may be at stake (such as the appropriate tradeoffs between economic development and greenhouse gas reductions).

Finally, while we generally observe commonalities in the evaluation criteria (which are often dictated by the particular funding program), the approach to scoring these criteria can vary substantially across MPOs and county transportation agencies. For some rubrics, the means by which points are awarded in each category are spelled out clearly, explicitly, and transparently, such that different evaluators could be expected to arrive at a similar score for a given project. In other cases, while the criteria and their assigned weights may be clear, the means by which points are to be awarded in a given category are not, which permits considerable discretion among evaluators. So, in some cases, either the scoring is largely subjective, or the scoring schema is not clearly described, or both.

Metric-Based Assessments

SACOG's project performance assessment tool differs from the rubric-based approaches described above. It produces evaluations for indicators that are not normalized by weighting or common rubrics. In addition, SACOG uses more advanced methods and data than most other MPOs and county transportation agencies we examined to produce many of its projected outcome indicators. This approach makes the role of different indicators in a project's forecast outcomes more transparent. This can be useful when decision-makers disagree about how to value or prioritize various indicators.

However, the disaggregated, project-level metrics produced for such assessments are so extensive, they may flood staff, stakeholders, and time-constrained decision-makers with too much information to fully grasp. Finally, we were unable to discern how SACOG ultimately incorporates these project-level assessment results into decision-making for the RTP's project list; we looked for but could not find published assessments for stakeholder or decision-maker consideration in advance of the RTP's project list adoption.

Benefit-Cost Assessment

Another approach to project assessment is reflected in MTC's Project Performance Assessment Process and Caltrans' Cal-B/C assessment, both of which are life-cycle benefit-cost assessment tools. A benefit-cost assessment results in a ratio of benefits to costs, which allows programs and projects of different types, scales, costs, and time horizons to be evaluated and compared to one another in an apples-to-apples manner.

A life-cycle cost assessment includes not only the initial cost of capital but also costs for operations and maintenance, rehabilitation or replacement, and a residual value (which may be negative for capital projects that must be removed at end of life), all of which are discounted into common year terms.

Among the seven MPOs examined, the Bay Area MTC's benefit-cost assessment is by far the most comprehensive. Additionally, MTC's evaluation includes a more comprehensive and advanced assessment of accessibility than Cal B/C.

Benefit-cost assessments include assumptions about the economic value of transportation outcomes, including the social and environmental costs and benefits as well as the discount rate. For instance, MTC's methodology uses driver or shipper wages (as opportunity costs) to assign an economic value to travel time reliability; when travel times are unreliable, drivers must build in extra time (and its economic cost) for a trip to assure on-time arrivals or deliveries. Making both these valuation assumptions and their calculations explicit helps to illuminate the priorities and tradeoffs that can be opaque in scoring rubrics.

MTC's Extra Mile: Scenario Assessment and Guiding Principles Alignment

While MTC's benefit-cost assessment approach is the most advanced and comprehensive of those we examined, two additional features of their project-level assessment make it likely the most robust as well. The first feature is the scenario assessment, which is a categorical assessment

(advances/even/challenges) of a project's benefit-cost ratio and equity score under three future scenarios. The second is an assessment of both alignment with MTC's guiding principles (supports/does not support) and equity.

Such scenario-based assessment approaches illuminate how projects will perform under varying reasonable assumptions about future conditions outside of the MPO's control, like federal policy, technological advancements, and regional and global market conditions. The alignment assessment can help to identify no-regrets strategies that support plan goals across an array of plausible outcomes.

The comprehensiveness of the MTC assessment model permits a shift from project-centered approach to regional planning. For example, the assessments described above revealed that comparatively low-cost efforts to reduce vehicle speeds and, in particular, aggressive driving were among the most cost-effective ways to improve public health, reduce emissions, and increase equity. Similarly, the effects of policies to price driving and parking can be compared directly with transportation project investments in terms of the travel, income, health, environment, equity, etc. effects, which is simply not possible with most MPOs' project-focused evaluation rubrics.

Insiders' Perspectives on the Program and Project Evaluation Processes

Through our interviews and focus groups with MPO staff, board members, and climate and equity advocates, we were able to learn more about how MPOs conduct program and project evaluations from the perspectives of insiders to the process. This section summarizes our principal findings from those conversations.

To Refresh or Redo the RTP?

When preparing a new RTP, MPOs vary in how they treat project commitments made in the prior RTP/SCS. Our conversations with MPO staff, board members, and community advocates suggested that transitions from one RTP/SCS to the next were most often modest and incremental due to two factors: (1) the typical deference given to the negotiations, agreements, and commitments that went into the prior regional plan, and (2) the inclusion of voter-approved projects specified in local option sales tax ballot measures, almost regardless of project evaluation results.

Community Engagement

Representatives from community-based organizations resoundingly report that status quo timelines and processes for community engagement are insufficient to meaningfully include people who have historically been excluded from, and harmed by, transportation decision making. Community advocates see engagement as key to meeting both climate and equity objectives, but that the process requires more time and procedural changes. The increased state policy focus on equity has fundamentally altered what is expected of the public input process, and yet the time frames in which engagement is expected to occur remain for the most part unchanged.

MPOs Take Time to Adopt New Policy Considerations

In contrast to equity, the participants with whom we spoke offered a more consistent understanding of climate-oriented goals, such as reducing GHGs and VMT, and increasing investments in alternatives to

automobile travel. Concrete policy frameworks engendered by SB 375 and related legislation have resulted in measurable targets, which appear to facilitate shared understanding among participants. For instance, CARB's own determination to accept or reject an MPO's RTP/SCS is based exclusively on whether the SCS, if implemented, can achieve the targeted GHG emissions reductions. By contrast, CARB includes equity only as an informational reporting component when evaluating an RTP/SCS; it is not part of CARB's SCS determination.

Further, at times climate and equity goals appear to conflict, both with one another and with respect to other criteria. MPOs can struggle to navigate this friction and can end up focusing on one or another in project selection. For example, this can sometimes lead to focusing more on regional economic development in project selection, especially at the smaller and more rural MPOs.

Some MPOs have only recently begun to seriously engage with regional housing policy and affordability outcomes, including thinking about how equity intersects with housing policy. Some MPOs are considering how to respond to state directives to target opportunity-rich areas for housing expansion, given their decidedly limited control over land use. Specifically, expanding housing into areas that boast rich educational, employment, social capital, and other opportunities, but that are largely automobile dependent, can put housing, equity, and environmental considerations into conflict.

MPO staff typically look to their boards for RTP/SCS policy direction. However, these boards, composed mostly of locally elected officials who may be unfamiliar with recent state (and federal) climate and equity guidance: they, may need time to learn about these new policy directives, but may only be serving on the MPO board for a limited term, so they may not gain this knowledge. Regional policies that affect transportation system performance, such as road user charges or development density bonuses near transit stops and stations, may be more cost-effective ways to reduce GHGs than new transportation projects, but these ideas may be unfamiliar or seen as politically unpopular by many MPO board members.

MPOs Learn from One Another

Our conversations suggested that MPOs boards and staff tend to pay attention to their peer organizations in other regions. Many MPOs share similar challenges to advancing climate and equity work, including for example how high housing costs can increase vehicle trip lengths and the volume of inter-regional trips, all of which contribute to higher levels of VMT and per capita greenhouse gas emissions from passenger vehicles. In addressing this issue, MPOs can motivate one another to advance climate and equity policy and planning work.

MPOs Feel Constrained by Requirements

Many of the MPO staff and board members with whom we spoke expressed some frustration with state mandates, some of which they either saw as too "one-size-fits-all" in application or as constraining creative regionally-developed solutions to transportation, housing, environment, and equity challenges. For instance, several MPOs representatives expressed the desire for more flexible funding to creatively address problems and engage in more strategic decision making. One example of such flexibility would be the ability to pay representatives of community-based organizations for their time in assisting with participatory planning work.

Some MPO staff and board members told us that state policies to advance climate, housing, and equity goals could better reflect the widely varied contexts, economies, land development patterns, transportation needs, and travel behavior across the state's diverse regions, thereby allowing regions to pursue economic development along with these two other goals. It was not uncommon for representatives of smaller MPOs to describe state goals, policies, and funding programs for climate and equity as designed for "big metros" that do not characterize many of the state's regions.

Differing Definitions of Equity Challenge Implementation

From our review of public documents and conversations with staff, board members, and advocates, it is clear that MPOs do not have a common definition for equity. These differences can be seen both within and across the regions studied. Different understandings of equity can lead to disagreements about whether and how projects and policies do or do not address equity. For example, a roadway capacity expansion project that some may see as harmful to a lower-income suburb or exurb might in fact provide an equity benefit if it increases the speed and reliability of travel between that community and an area with many higher paying jobs.

MPO's Governance Structure and Regional Perspective

Some of our interviewees and focus group participants expressed concern over the composition of MPO governing boards and the distribution of board votes. Research participants who called MPO representativeness into question noted that board power can skew to favor less populous suburban jurisdictions at the expense of more populous urban centers, which raises significant implications for equity communities. We note that the 2017 changes to MPO board representation and voting in the San Diego region addressed this issue in one region.

Some of those we interviewed expressed the view that MPO staff are often better equipped to think about and address regional problems, state goals, and solutions than many of their locally elected board members, and that climate and equity outcomes would benefit if staff had a voice in, and the opportunity to advocate for, climate and equity concerns in MPO processes.

Obfuscating Impacts

In both our review of public comments discussed in Chapter 3, and in our interviews and focus groups discussed in Chapter 5, we heard from advocates that MPO board members and staff often deflected comments on and questions about the environmental effects of projects to be included in the FTIP because they considered the conformity requirement to relate only to the entire FTIP to be adopted, and not individual projects in it. Thus, according to some MPO staff, the FTIP was not the appropriate document to disclose, for example, project-level VMT, which would be analyzed in a project-level EIR. Thus, in practice, prior evaluations of projects for inclusion in the RTP/SCS and subsequent evaluations for project EIS/EIRs are more likely venues for project-level environmental engagement, even though the FTIP is statutorily a key element of environmental review. This requires extensive engagement, time, and monitoring from stakeholders for them to understand individual project-level effects under CEQA; the effect can be to conceal key information about particular projects that are being proposed for regional planning purposes.

Recommendations

Given the foregoing findings, we conclude our report with specific recommendations for relevant actors and future researchers.

For the California Air Resources Board

4. In updating the Sustainable Communities Strategy Evaluation Guidelines:
    a. CARB staff could explore whether CARB has authority to recommend or compel MPOs to use certain best-practice project evaluation methods to guide their transportation investments. This could be the case if an MPO's project selection meet the definition of "transportation strategies" so that CARB staff can evaluate their likelihood of reducing VMT or GHG emissions. If so, MPOs that do not implement best practices may fail the "policy analysis" determination component of the SCS evaluation.
    b. If CARB lacks authority to compel the use of best practice project evaluation approaches, CARB could consider requiring MPOs to report on the connection between their project selection processes and their performance monitoring and targets, particularly those pertaining to climate and equity. These reports would include a combination of narrative statements and supporting information from process design and data and would be intended to explain to the public how the MPO considers its performance monitoring and targets as part of its planning and programming processes.
    c. In updating guidance for equity reporting in the SCS evaluation as part of SB 1000 implementation, CARB could consider the following:
        i. To meaningfully engage communities, direct MPOs to create and publish accessible/educational guidance on RTP/SCS/FTIP processes to help educate community leaders in advance of any required engagement meetings. MTC's Guide to the TIP is an outstanding example of a document that elucidates and educates those unfamiliar with MPO processes. MPOs can report on the effectiveness of this educational approach in working with community-based and advocacy organizations. (Related to MPO Recommendation #4B)
        ii. CARB could advise MPOs, in partnering with local community organizations, to educate these organizations on the decision-making and engagement processes relevant to their communities. This may require mini-grants and training programs so that staff of community organizations can take sufficient time to become educated and engaged participants. These trained staff—in understanding both the MPOs processes and objectives and the community needs—could then serve as translators between communities and MPOs to help identify and advance community needs within MPO (or county transportation agency/RTPA) processes.
        iii. CARB could consider whether, as part of implementing the California Department of Justice SB 1000's guidance "to promote public facilities" and "promote physical activity," MPOs or project sponsors should be directed to provide priority communities with project-level impact assessments, including

changes in access to destinations that may result from a project's completion and operation.

iv. CARB could move its evaluation of equity from a reporting item to a more formal evaluation of MPO equity efforts and progress as part of the state's RTP/SCS determination. CARB could consider having a standard set of equity metrics MPOs should report on to make it clear what equity goals should be consistently considered as part of the development of the RTP/SCS.

5. CARB staff in the Sustainable Transportation and Communities Division could review and follow Caltrans' development and implementation of the Caltrans System Investment Strategy (California Department of Transportation, 2024)—specifically the project-level accessibility assessment tools that use accessibility assessment methods developed by Conveyal.
6. CARB staff could consider working collaboratively with the California Department of Housing and Community Development to provide MPOs with guidance on the connections among housing and climate, equity, and transportation planning.

For the California Transportation Commission

1. As part of updates to the RTP and STIP Guidelines, the Commission could recommend that Caltrans create data standards so that key project-level performance information that is calculated as part of planning processes (like VMT impact, homes/land taken, etc.) can be shared among governmental agencies. To do this Caltrans could provide for an input standard for internal and external developers of project-level assessment methodologies. The Commission could then adopt administrative procedures to only accept project-level information that meets the statewide transportation project data standard.
    a. See Appendix B in the full report for possible fields for a statewide transportation project data standard.
    b. A data standard would help to facilitate the development of open-source project-level assessment tools and/or enhance the interoperability of MPOs' internally developed assessment methodologies, so that one MPO can easily adopt methods developed by another so that state, regional, and local agencies, the legislature, NGO stakeholders, and members of the public can better understand proposed projects in their communities. This recommendation would substantially reduce the costs needed to improve the quality of project-level assessment models.
    c. A data standard would also help to limit vendor lock-in that can result from excessive customization of assessment or project tracking tools for non-standard project data schema.
2. In addition to the above data standards, the Commission could recommend that Caltrans create reporting or publishing requirements for project-level characteristics and performance information. Project-level data could be made available through a web-based query tool with file export (e.g., csv or json) or an application programming interface that allows users to query the database directly. This would allow third parties, such as construction firms or advocacy groups,

to create views of California's transportation project information. This would likely increase transparency by ensuring that the public and stakeholders have access to high-resolution information on proposed projects.

3. The Commission could consider, as part of the RTP Guidelines, creating guidance for the implementation of scenario planning approaches to assess climate and equity outcomes across varied (both desired and plausible undesired) futures.
    a. Most MPOs examined in this study are doing some form of what they would call scenario planning, but how they perform this work varies widely. Some MPOs consider a scenario to be a certain set of assumptions about the future ("Future Scenarios") and others consider a scenario an array of possible future outcomes, policies, and projects ("Program Scenarios").
    b. Transportation Planning for Uncertain Times: A Practical Guide to Decision Making Under Deep Uncertainty for MPOs (Lempert, Popper, and Hernandez, 2022) provides practical guidance for how MPOs can utilize best practices for scenario planning and could be included in the RTP Guidelines as a Planning Example.

For the California State Legislature

1. When considering future policies that amend the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the legislature could seek to build in incentives based on empirical evidence rather than the output of forecasting models. Such a state policy would positively reinforce an MPO's modeling accuracy by, for example, rewarding MPOs that achieve or exceed modeled reductions in the greenhouse gas intensity of travel.
    a. One possible policy mechanism towards this end would be to allocate Greenhouse Gas Reduction Funds to MPOs based on empirical observations of VMT or GHG emission changes from passenger vehicles and light duty trucks.
    b. The Greenhouse Gas Reduction Fund may be a viable source of funds for MPO-administered discretionary funding programs like the Regional Early Action Program, which could have an outsized impact on creating incentives to align MPO actions with state targets – if allocations were based on observed reductions in GHG emissions from transportation.
2. California may need to update its Streets and Highways Codes §§ 182.6 and 182.7 based on FHWA Federal Certification Reports that found that the requirements set forth in these sections contradicted federal law and regulations. In doing so, the legislature could consider including the following policies in the law:
    a. Require public reporting of project-level data in a standardized format (Incorporation of Commission Recommendation #1 into law).
    b. Require some projects to be assessed for climate and equity impacts in advance of their inclusion in an RTP or FTIP project list (Incorporation of MPO Recommendation #3 into law).

3. In future amendments to SB 375 or the California Environmental Quality Act, consider specifying that environmental assessments that utilize scenario planning or forecasting of multiple futures will meet the statutory requirements of CEQA.
4. Create a legal framework for compensating organizations or individuals involved in certain community engagement activities when a public agency makes a determination that it is unlikely to receive representative community input through uncompensated outreach processes. Such a framework would allow community members, particularly those from disadvantaged communities, to be compensated to participate in workshops or focus groups.
5. Where unequal representation of MPO board membership and unequal voting power between residents of different jurisdictions within a region impedes regional progress on climate and equity goals, examine the potential for other remedies and approaches. An example is AB 805 in the San Diego region, which implemented population-weighted voting for jurisdictional representatives
6. Consider legislation to give MPOs additional authority to review and set conditions for local option sales tax projects that are likely to increase GHG emissions. Potential conditions could include requiring a VMT mitigation program within the measure or specify a minimum threshold on the percentage of expenditures that are directed at projects that improve accessibility without increasing , and including provisions for regional land use coordination (through housing element certification) as a condition of accepting any city-dedicated funding streams (local return funds) specified within the measures.
7. Authorize the Department of Transportation to collect data and track a small set of key performance measures on California's environment, transportation, and equity goals for all California MPOs. This would allow the state to better track performance in its metropolitan areas toward meeting state goals and would permit a common base of comparison across metro areas.

For Metropolitan Planning Organizations

1. For those MPOs without the current capacity to do so, develop the ability to conduct project-level performance assessments.
    a. Devote resources in future Overall Work Programs to adequately fund development of data and tools for conducting project-level performance assessments.
    b. For some MPOs, this would require an increase in project-level data fidelity (see Commission recommendation #1 on project-level data).
    c. MPOs may initially focus performance assessments on big-budget projects or otherwise high-impact projects that, without mitigations, could be expected to have significant effects on air quality or VMT. By focusing project-level assessments on a few consequential projects, MPOs could assess a sample of lower-cost multimodal projects to provide comparisons to decision-makers on the performance of different types of projects.

2. Develop a capacity for and culture permissive of scenario planning in order to more meaningfully incorporate different (both desired and undesired) assumptions about the future into the planning process.
    a. MTC, SJCOG, FCOG are all doing scenario planning that includes multiple futures, which research shows increases the robustness of planning forecasts (Lempert et al., 2022). The scenario work at these MPOs can be viewed as examples for other regions.
    b. With scenario planning, an MPO will tend to focus less on a specific future (any one of which is unlikely to occur) and can instead consider a range of assumptions on technology, extra-regional policy, climate change, and economy that characterize a range of possible futures. One approach could be to engage stakeholders and board members on a range of possible futures over the time horizons they are considering, which could help lead to the selection of projects and land use scenarios that perform well over an array of possible futures. Doing so can steer away from any tendency to project past patterns of sprawl and auto-focused transportation into future plans.
    c. Scenario planning requires MPO staff and consultants to express uncertainty about the future, which can conflict with expectations that model outputs be represented as accurate or precise, which is often inherent to environmental mitigation planning. However, acknowledging inevitable uncertainty can enrich discussions and debates about the effects of projects and policies in the RTP/SCS.
3. MPOs could assess all projects for each RTP cycle, not just those that are being amended or newly considered for inclusion in project lists. This assessment may initially focus on high-budget or consequential projects (see MPO recommendation #1C).
    a. Re-justifying any projects carried over from prior plans can be an informative, though admittedly resource-intensive, practice that can serve to align the new RTP with current policies and state and regional goals. While this could be seen in some cases as re-litigating contentious projects, it does allow changing conditions to better inform project evaluation.
    b. Re-assessing projects against contemporary goals and priorities can also help steward the use of scarce project planning and engineering funds, as projects that are not aligned with contemporary policies and state and regional goals may be later canceled and removed through political processes during planning or right-of-way acquisition.
4. Work within CALCOG or across multiple MPOs to learn from one another and establish best practices for:
    a. Engagement with/sustained funding to support community engagement in and facilitation of RTP/SCS public input processes.
    b. Public documents that guide and encourage community members to meaningfully participate in the RTP/SCS and FTIP project selection processes. Again, MTC's Guide to the TIP provides an excellent example.
5. Develop assessment methods that include extra points for project readiness (ability to bid quickly, deliverability, construction-readiness, etc.) may bias legacy projects that were envisioned long ago over newer projects that are more responsive to contemporary objectives on climate and equity. MPOs should consider systematically including/weighting project

congruence with current MPO goals and objectives to counterbalance this potential bias toward legacy projects.

6. MPOs could include key measures from a project's EIR, such as anticipated VMT effects, in developing project lists for their RTP/SCS or FTIP. Currently, projects that increase VMT are difficult for the public to assess because MPOs are not required to provide project-related VMT impacts in an RTP or RTIP/FTIP process. Instead, MPOs in California have referred RTP/SCS commenters concerned with project-level impacts to project-level EIRs, which would contain the requested data, but often embedded within hundreds or even thousands of pages of additional information.
7. The data needed for project-level assessment is not consistently or comprehensively collected by most MPOs. To address this, consider the specific data needs for more universal and comparable evaluations, such as:
    a. Project location information.
    b. Project descriptive characteristics submitted in a standardized format (see Appendix B).
    c. A methodology to assess the project's benefits and costs, including direct and indirect determinants of climate and equity outcomes.
        i. Those developing accessibility metrics can look to MTC or SACOG's methods or the Caltrans System Investment Strategy methodology.
        ii. If cost-benefit assessment is used (as is done by the MTC), values or range of values for some parameters can be set statewide.
        iii. If benefits are assessed through indicators (as with SACOG), then develop approaches and methods that merge scenario planning with indicator assessment.
        iv. Data that may be needed to incorporate impact assessments based on the evolving research on the health effects of ultra-fine particulate matter and transportation noise in evaluating the costs and benefits of transportation programs and projects.

For Community Based Organizations

Given the findings of this research, members of community-based organizations (CBOs) may wish to consider:

1. Working with other CBOs and interested parties to build and maintain relationships to address climate and equity concerns on an ongoing basis to enable sustained MPO engagement across multiple planning rounds.
2. Advocating for language interpretation services to encourage participation among limited English proficiency (LEP) populations.
3. Partnering with other CBOs and interested parties to collaborate with MPOs in advocating for both more and more flexible state and federal funding to advance climate and equity goals, particularly in isolated parts of the MPO region.

4. Working to educate the next generation of MPO board members on community perspectives on climate, equity, and access issues in order to uplift lived experiences in their planning processes.

For future research and development

1. While there are no universal definitions of transportation, regional, or planning process equity, these can be described systematically so that participants in MPO planning and project evaluation processes can be clear with one another about what definitions are being employed and why. Practice and research in this area is evolving quickly, and research on it can help inform and guide meaningful planning for equity and participation.
2. MPOs sit at an unusual and, for most members of the public, largely opaque place in the governmental hierarchy. This relative opacity can both discourage public and community participation, and lead to idiosyncratic and arguably inequitable governance structures.
    a. More research is needed on how MPO structure and composition affects regional planning and policy outcomes.
    b. For example, SANDAG had a 6-year RTP cycle as a result of AB 805 (2017), which led to changes in the organization's governance structure, including taxing authority and the weighting of governing board members' voting.
        i. Future research could assess whether these governance changes materially affected the project list between the 2015 and 2021 RTPs, compared to those of SANDAG's peer MPOs.
3. The focus of this research was the role of state climate and equity goals in regional transportation planning in California. Yet, the staff, board members, and community representatives we interviewed repeatedly noted how increasing levels of housing insecurity across the state reverberated through regional transportation systems, affecting both climate and equity. Accordingly, future research could delve deeper into the intersections of housing on the issues of climate, equity, and transportation planning.

References

Association of Monterey Bay Area Governments. (2021, May 12). *Monterey Bay Region Overall Work Program (OWP) & Budget FY 2021ד2022*. https://www.ambag.org/sites/default/files/2021-05/FY_2021-22_OWP%20and%20Budget-ADA-PDF-A.pdf

Association of Monterey Bay Area Governments. (2022a). *Appendix D: Public Participation*. https://ambag.org/sites/default/files/2022-05/Appendix%20D_Public%20Participation_rev1.pdf

Association of Monterey Bay Area Governments. (2022b). *Appendix G: Performance Measures*. https://ambag.org/sites/default/files/2022-05/Appendix%20G_rev2.pdf

Association of Monterey Bay Area Governments. (2022c, September 14). *Monterey Bay Region Metropolitan Transportation Improvement Program (MTIP)*. https://ambag.org/sites/default/files/2022-09/2023%20MTIP-Adoption_PDFA.pdf

Association of Monterey Bay Area Governments, Council of San Benito Governments, Santa Cruz County Regional Transportation Commission, & Transportation Agency of Monterey County. (2019, October). *2019 Public Participation Plan*. https://www.ambag.org/sites/default/files/2019-12/Final_2019_PPP_with_Appendices_PDF_A.pdf

Barbour, E. (2016). Evaluating Sustainability Planning Under California's Senate Bill 375. *Transportation Research Record*, *2568*(1), 17–25. https://doi.org/10.3141/2568-04

Barbour, E., & Deakin, E. A. (2012). Smart Growth Planning for Climate Protection: Evaluating California's Senate Bill 375. *Journal of the American Planning Association*, *78*(1), 70–86. https://doi.org/10.1080/01944363.2011.645272

Barbour, E., Rodriguez, E., Thoron, N., Handy, S., & Lee, A. (2021, December 1). *MPO Planning and Implementation of State Policy Goals*. UC Berkeley: Institute of Transportation Studies at UC Berkeley. https://escholarship.org/uc/item/7p8096mh

Barbour, E., & Thoron, N. (2023). *Local Option Sales Taxes, Metropolitan Planning Organizations, and SB 375: A Question of Priorities* (Research Report NCST-UCD-RR-23-27). Institute of Transportation

Studies. https://escholarship.org/uc/item/03x7j4g3

Broniewicz, E., & Ogrodnik, K. (2020). Multi-criteria analysis of transport infrastructure projects. *Transportation Research Part D: Transport and Environment*, *83*.

Brown, A., Lederman, J., Taylor, B. D., & Wachs, M. (2020). Analyzing voter support for California's local option sales taxes for transportation. *Transportation*, *48*, 2103–2125. https://doi.org/10.1007/s11116-020-10123-x

California Air Resources Board. (2022). *2022 Progress Report—California's Sustainable Communities and Climate Protection Act* (p. 70). https://ww2.arb.ca.gov/sites/default/files/2023-05/2022%20SB%20150%20CA%20Sustainable%20Communities%20Report%20ADA.pdf

California Clean Energy Committee. (2019, November 18). *Comments on Final Environmental Impact Report 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*. https://www.sacog.org/sites/main/files/file-attachments/sacog_ccec_letter2.pdf?1574099704

California Department of Housing and Community Development & California Tax Credit Allocation Committee. (2023, January). *Methodology for the 2023 CTCAC/HCD Opportunity Map*. https://www.treasurer.ca.gov/ctcac/opportunity/2023/methodology.pdf

California Department of Transportation. (2021). *California Transportation Plan 2050*. Caltrans. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf

California Department of Transportation. (2024). *CSIS CAPTI Alignment Metrics*. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/division-transportation-planning/csis/2024-capti-alignment-metrics_a11y.pdf

California Office of Environmental Health Hazard Assessment. (2024). *SB 535 Disadvantaged Communities* [Text]. OEHHA. https://oehha.ca.gov/calenviroscreen/sb535

California Office of the Legislative Counsel. (2017, October 12). *Assembly Bill No. 805*. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB805

California Public Utilities Commission. (n.d.). *Disadvantaged Communities*. Retrieved October 5, 2024, from https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/disadvantaged-communities

California State Transportation Agency. (2023, January 29). *CalSTA's Core Four Priorities*. https://calsta.ca.gov/-/media/calsta-media/documents/core-4-priorities-p8-a11y.pdf

California Transportation Commission. (2021, August 18). *State Transportation Improvement Program Guidelines*. https://catc.ca.gov/-/media/ctc-media/documents/programs/stip/2022-stip/2022-stip-guidelines-adopted-aug-2021-a11y.pdf

Caltrans. (n.d.). *Cal-B/C Training Module 6a: Understanding Project Benefits and Costs for Cal-B/C Sketch, Corridor, and PnR*. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/data-analytics-services/transportation-economics/cal-bc/cal-bc-training/pdf/1--sketch/cal-bc-module-6a-a11y.pdf

Deniali, A., Esenther, S., Frisard, C., Bolduc, M., Krevat, D., Goins, K., Christofa, E., Lemon, S., & Pollitt, K. (2022). Incorporating Health-related Criteria for Project Scoring in Massachusetts. *Transportation Research Record*, *2676*(4), 90–106.

Faghri, A., Boyle, P., & Lee, D. (2022). Review of Social Equity and Environment in Urban Transportation. *Current Urban Studies*, *10*(04), 556–574. https://doi.org/10.4236/cus.2022.104033

FHWA scenario planning guidebook (dot:9045). (2011). https://rosap.ntl.bts.gov/view/dot/9045

Fresno Council of Governments. (2020a, March 3). *2020 Fresno COG Public Participation Plan*. https://www.fresnocog.org/wp-content/uploads/2020/03/2020-Fresno_COG_Public_Participation_Plan-Draft.pdf

Fresno Council of Governments. (2020b, August 26). *2022 RTP/SCS Project Scoring Criteria*. https://agendas.fresnocog.org/itemAttachments/597/II_A_2._2022_RTP_Scoring_Criteria_DRAFT_2020-0826_.pdf

Fresno Council of Governments. (2022a, July 28). *2022 Regional Transportation Plan/Sustainable*

Communities Strategy. https://www.planfresno.com/sustainable-communities-strategies-fall-outreach/

Fresno Council of Governments. (2022b, July 28). *2023 Federal Transportation Improvement Program (FTIP)*. https://fresnocog.wpenginepowered.com/wp-content/uploads/2022/09/2023-FTIP-Update-FINAL-9_22.pdf

Fresno Council of Governments. (2022c, August 11). *Appendix D: Public Participation, Review, and Adoption*. https://www.planfresno.com/planfresno/uploads/2022/08/Appendix-D_Public-Participation-Review-and-Adoption_Final_081122.pdf

Gerber, E. R., & Gibson, C. C. (2009). Balancing Regionalism and Localism: How Institutions and Incentives Shape American Transportation Policy. *American Journal of Political Science*, *53*(3). https://doi.org/10.1111/j.1540-5907.2009.00391.x

Gunasekera, K., & Hirshman, I. (2014). *Cross Mode Project Prioritization* (NCHRP 08-36). National Cooperative Highway Research Program. https://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36(112)_FR.pdf

Heminger, S. (2014). *Making a Compelling Case: Performance-Driven Investments in the Post-Interstate Era." Conference presentation to the State Smart Transportation Institute Biannual Meeting.* State Smart Transportation institute Biannual Meeting. https://mtc.ca.gov/sites/default/files/SSTI_Performance.pdf

Heyer, J., Palm, M., & Niemeier, D. (2020). Are we keeping up? Accessibility, equity and air quality in regional planning. *Journal of Transport Geography*, *89*.

Imperial County Transportation Commission. (2021a, September 23). *2022 Call for Projects—CMAQ & STBG - Guidelines, Applications and Instructions*. https://www.imperialctc.org/assets/documents/programs-and-projects/Final--CMAQ-&-STBG-Guidelines--Call-for-Projects-2022.pdf

Imperial County Transportation Commission. (2021b, December). *2022 Regional Transportation*

Improvement Program. https://www.imperialctc.org/assets/documents/programs-and-projects/2022_RTIP_Template_ICTC_Dec_Final.pdf

Karner, A., & Niemeier, D. (2013). Civil rights guidance and equity analysis methods for regional transportation plans: A critical review of literature and practice. *Journal of Transport Geography*, *33*, 126–134. https://doi.org/10.1016/j.jtrangeo.2013.09.017

Kirkeby, M. (2020, June 10). *Housing Element Site Inventory Guidebook Government Code Section 65583.2*. California Department of Housing and Community Development. https://www.hcd.ca.gov/community-development/housing-element/docs/sites_inventory_memo_final06102020.pdf

Kramer, J., Boyd, T., & Dinehart, T. (2023). *Metropolitan Planning Organization (MPO) List of Project Priorities (LOPP) Development Practices in Florida: Literature Review* (Policy, and Processes (TP3) Final Report 47). Transportation Planning, Center for Urban Transportation Research University of South Florida. https://digitalcommons.usf.edu/cutr_tpppfr/47

Kramer, J., Carroll, A., Karimi, B., Bond, A., & Lee, C. (2017). *MPO Staffing and Organizational Structures*. Center for Urban Transportation Research University of South Florida.

Krapp, A., Barajas, J. M., & Wennick, A. (2021). Equity-Oriented Criteria for Project Prioritization in Regional Transportation Planning. *Transportation Research Record*, *2675*(9). https://doi.org/10.1177/03611981211001072

Lempert, R., Popper, S., & Hernandez, C. (2022). *Transportation Planning for Uncertain times: A Practical Guide to Decision Making Under Deep Uncertainty for MPOs* (FHWA-HEP-22-031). https://rosap.ntl.bts.gov/view/dot/64646

Los Angeles County Metropolitan Transportation Authority. (n.d.).

Los Angeles County Metropolitan Transportation Authority. (2021, December). *2022 Regional Transportation Improvement Program*. https://cdn.beta.metro.net/wp-content/uploads/2021/12/17132542/LA-Metro-2022-RTIP-Submittal-final.pdf

Lowe, K. (2014). Bypassing Equity? Transit Investment and Regional Transportation Planning. *Journal of Planning Education and Research*, *30*(1), 30–44. https://doi.org/0.1177/0739456X13519474

Lowe, K., & Sciara, G.-C. (2018). Chasing TIGER: Federal Funding Opportunities and Regional Transportation Planning. *Public Works Management & Policy*, *23*(1), 78–97. http://dx.doi.org/10.1177/1087724X17732583

Martinez, K., & Martinez, Leslie. (2021, January 14). *Letter from the Leadership Council for Justice and Accountability Re: Agenda Item 2A RTP/SCS Strategies*. https://www.planfresno.com/planfresno/uploads/2021/04/FCOG_RTP_SCS_1.15PAC-Letter-LC.pdf

Metropolitan Transportation Commission. (n.d.). *Comments Received on 2021 TIP*. https://mtc.ca.gov/sites/default/files/Comments_Recieved_2021_TIP.pdf

Metropolitan Transportation Commission. (2018). *FY 2018-19 Overall Work Program for the San Francisco Bay Area*. https://mtc.ca.gov/sites/default/files/FY2018-19_OWP.pdf

Metropolitan Transportation Commission. (2019, November 8). *Horizon / Plan Bay Area 2050: Draft Project Performance Assessment Results*. https://www.planbayarea.org/sites/default/files/05-5a_HorizonPBA50_DraftProjectPerformance.pdf

Metropolitan Transportation Commission. (2021a). *Plan Bay Area 2050* [Regional Transportation Plan/Sustainable Communities Strategy]. https://www.planbayarea.org/plan-bay-area-2050

Metropolitan Transportation Commission. (2021b, February). *A Guide to the San Francisco Bay Area's Transportation Improvement Program, or TIP*. https://mtc.ca.gov/sites/default/files/Guide%20to%20the%202021%20TIP_2-21.pdf

Metropolitan Transportation Commission. (2021c, August 6). *2022 State Transportation Improvement Program Guidelines*. https://mtc.ca.gov/sites/default/files/documents/2021-10/August-CTC-GLs.pdf

Metropolitan Transportation Commission. (2023). *MTC Equity Platform*. https://mtc.ca.gov/about-

mtc/what-mtc/equity-platform

Metropolitan Transportation Commission & Association of Bay Area Governments. (2020, November). *The Draft Transportation-Air Quality Conformity Analysis for the Amended Plan Bay Area 2040 and the 2021 Transportation Improvement Program*. https://mtc.ca.gov/sites/default/files/AQ%20Conformity_2021TIP.pdf

Metropolitan Transportation Commission & Association of Bay Area Governments. (2021). *Plan Bay Area 2050 Public Engagement Report*. https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_Public_Engagement_Report_October_2021.pdf

Meyer, M. D. (2016). *Transportation Planning Handbook* (4th ed.). John Wiley & Sons, Inc.

Nam, A. (2024, March 18). *SCAG Comments on UCLA Report* [Personal communication].

Nostikasari, D., & Casey, C. (2020). Institutional Barriers in the Coproduction of Knowledge for Transportation Planning. *Planning Theory & Practice*, *21*(5), 671–691. https://doi.org/10.1080/14649357.2020.1849777

Noyce, D., McCahill, C., & Sundquist, E. (2021). *Modern Project Prioritization For Transportation Investments* (CTEDD 019-19). Center for Transportation, Equity, Decisions and Dollars (CTEDD).

Orange County Transportation Authority. (2021a, August 9). *Comprehensive Transportation Funding Programs Guidelines 2022 Call for Projects*. https://octa.net/pdf/CTFPGuidelines2022.pdf

Orange County Transportation Authority. (2021b, December 15). *2022 Orange County Transportation Authority Regional Transportation Improvement Program*. https://www.octa.net/pdf/2022_RTIP_Template.pdf

Riverside County Transportation Commission. (2021a, February 1). *TDA Article 3 (SB 821) Bicycle and Pedestrian Facilities Biennial Call for Projects Guidelines FY2021/2022*. https://rctc.org/wp-content/uploads/2021/02/SB-821-FY21-Call-for-Projects-Guidelines.pdf

Riverside County Transportation Commission. (2021b, December). *2022 Riverside County Regional*

Transportation Improvement Program. https://www.rctc.org/wp-content/uploads/2021/12/00_2022-STIP-Riverside-County-FINAL.pdf

Rose, E. (2011). *Leveraging a New Law: Reducing greenhouse gas emissions under Senate Bill 375*. University of California Berkeley College of Environmental Design. https://www.ca-ilg.org/sites/main/files/file-attachments/leveraging_a_new_law.pdf

Sacramento Area Council of Governments. (n.d.). *Project Performance Assessment Tools* (Version 2020) [Computer software]. https://www.sacog.org/project-performance-assessment

Sacramento Area Council of Governments. (2013, August). *Outreach: Public Participation Plan*. https://www.sacog.org/sites/main/files/file-attachments/public_participation_plan_2013.pdf?1489089196

Sacramento Area Council of Governments. (2017, December 15). *Final Draft 2018 Regional Transportation Improvement Program*. https://www.sacog.org/sites/main/files/file-attachments/final_2018_rtip_12-11-17.pdf?1513112504

Sacramento Area Council of Governments. (2018a, May). *2020 MTP/SCS Timeline* [Image]. https://www.sacog.org/pod/2020-mtpscs-timeline

Sacramento Area Council of Governments. (2018b, December 6). *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy: Preferred Scenario Framework*. https://www.sacog.org/home/showpublisheddocument/1180/638237235197970000

Sacramento Area Council of Governments. (2019a). *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*. https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy

Sacramento Area Council of Governments. (2019b). *Appendix G: 2020 MTP/SCS Communications and Outreach*. https://www.sacog.org/home/showpublisheddocument/46/638212803220670000

Sacramento Area Council of Governments. (2020a). *2020 Project Performance Assessment: Tool documentation*. https://www.sacog.org/sites/main/files/file-

attachments/2020_project_performance_assessment_tool_documentation_0.pdf?1606180792

Sacramento Area Council of Governments. (2020b, November 11). *2021 Community Design Funding Program Program and Application Guidelines*. https://www.sacog.org/sites/main/files/file-attachments/community_design_program_guidelines.pdf?1605127203

Sacramento Area Council of Governments. (2020c, November 11). *2021 Regional Program Maintenance and Modernization Category Guidelines*. https://www.sacog.org/sites/main/files/file-attachments/maintenance__modernization_guidelines.pdf?1605127517

Sacramento Area Council of Governments. (2020d, November 11). *2021 Regional Program Transformative Category Guidelines*. https://www.sacog.org/sites/main/files/file-attachments/transformative_category-_guidelines.pdf?1607462846

Sacramento Area Council of Governments. (2021). *Public Participation Plan*. https://www.sacog.org/home/showpublisheddocument/1492/638345202378970000

San Bernardino County Transportation Authority. (2021, December 15). *2022 Regional Transportation Improvement Plan*. https://www.gosbcta.com/wp-content/uploads/2021/12/SBCTA-2022-RTIP-Final.pdf

San Diego Association of Governments. (2021a). *2021 Regional Plan Amendment Public Involvement Strategy*. https://www.sandag.org/-/media/SANDAG/Documents/PDF/regional-plan/2021-regional-plan/public-involvement-strategy-amendment-2021-regional-plan.pdf

San Diego Association of Governments. (2021b). *Appendix A: Transportation Projects, Programs, and Phasing*. https://www.sandag.org/-/media/SANDAG/Documents/PDF/regional-plan/2021-regional-plan/final-2021-regional-plan/2021-regional-plan-appendix-a-2021-12-01.pdf

San Diego Association of Governments. (2021c). *Appendix H: Social Equity: Engagement and Analysis*. https://www.sandag.org/-/media/SANDAG/Documents/PDF/regional-plan/2021-regional-plan/final-2021-regional-plan/2021-regional-plan-appendix-h-2021-05-01.pdf

San Diego Association of Governments. (2021d, December). *San Diego Forward: 2021 Regional Plan*.

https://www.sandag.org/regional-plan/2021-regional-plan/final-2021-regional-plan

San Diego Association of Governments. (2022a). *Appendix I: SANDAG Funding and Project Selection Process*. https://www.sandag.org/-/media/SANDAG/Documents/PDF/funding/funding-and-programming/regional-transportation-improvement-program/appendix-i-2023-rtip-2022-11-30.pdf

San Diego Association of Governments. (2022b, November 30). *2023 Regional Transportation Improvement Program*. https://www.sandag.org/-/media/SANDAG/Documents/PDF/funding/funding-and-programming/regional-transportation-improvement-program/final-2023-rtip-2022-11-30.pdf

San Diego Association of Governments. (2023). *Regional Plan Social Equity Working Group* [Dataset]. https://www.sandag.org/meetings-and-events/working-groups/social-equity

San Joaquin Council of Governments. (2016, December 15). *Public Participation Plan*. https://www.sjcog.org/DocumentCenter/View/7080/J-Public-Participation-Plan

San Joaquin Council of Governments. (2021, December 9). *2022 Regional Transportation Improvement Program*. https://www.sjcog.org/DocumentCenter/View/6729/SJCOG-2022-RTIP

San Joaquin Council of Governments. (2022a). *Appendix S: Scenario Development Report*. https://www.sjcog.org/DocumentCenter/View/7312/Appendix-S---Scenario-Development-Report

San Joaquin Council of Governments. (2022b, August 25). *2022 Regional Transportation Plan and Sustainable Communities Strategy*. https://www.sjcog.org/608/Adopted-2022-RTPSCS-Plan

Santa Cruz County Regional Transportation Commission. (2019, December 5). *2020 Santa Cruz County Regional Transportation Improvement Program: State Transportation Improvement Program Proposal*. https://sccrtc.org/wp-content/uploads/2019/12/2020-RTIP-SantaCruzCountyRTC-STIP.pdf

Santa Cruz County Regional Transportation Commission. (2021). *Call for Projects – 2021 Consolidated*

Regional Transportation Grants. https://sccrtc.org/wp-content/uploads/2021/07/Call4Projects2021rtip-combined.pdf.

Sciara, G.-C. (2017). Metropolitan Transportation Planning: Lessons From the Past, Institutions for the Future. *Journal of the American Planning Association*, *83*(3), 262–276. https://doi.org/10.1080/01944363.2017.1322526

Sciara, G.-C. (2020). Implementing regional smart growth without regional authority: The limits of information for nudging local land use. *Cities*, *103*, 102661. https://doi.org/10.1016/j.cities.2020.102661

Sciara, G.-C., & Handy, S. (2017). Regional Transportation Planning. In *The Geography of Urban Transportation* (Fourth, pp. 139–163). The Guilford Press.

Sciara, G.-C., & Handy, S. L. (2013). *Cultivating Cooperation without Control: A Study of California's MPO-Driven Smart Growth Programs* (Scientific Report UCD-ITS-RR-13-07). Institute of Transportation Studies, University of California, Davis. https://itspubs.ucdavis.edu/publication_detail.php?id=1897

Sciara, G.-C., Rahman, M., & Walthall, R. (2021). A seat at the table? Transit representation in U.S. metropolitan planning. *Transport Policy*, *114*, 165–173. https://doi.org/10.1016/j.tranpol.2021.09.011

Sciara, G.-C., & Wachs, M. (2007). Metropolitan Transportation Funding: Prospects, Progress, and Practical Considerations. *Public Works Management & Policy*, *12*(1), 378–394. https://doi.org/10.1177/1087724X07303987

Sinha, K. C., & Labi, S. (2011). *Transportation Decision Making: Principles of Project Evaluation and Programming*. John Wiley & Sons, Inc.

Solof, M. (1998). *History of Metropolitan Planning Organizations*. New Jersey Transportation Planning Authority, Inc.

Southern California Association of Governments. (2020a). *Community Input Public Participation and*

Consultation Appendix 2 Commentsand Responses. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_public-participation-appendix-2.pdf?1606001847

Southern California Association of Governments. (2020b). *Final 2021 Federal Transportation Improvement Program Technical Appendix*. https://scag.ca.gov/sites/main/files/file-attachments/f2021-ftip-technical-appendix.pdf?1614909606

Southern California Association of Governments. (2020c, May 7). *Performance Measures Technical Report*. https://scag.ca.gov/sites/main/files/file-attachments/fconnectsocal_performance-measures.pdf

Southern California Association of Governments. (2020d, September 3). *Connect SoCal*. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176

Southern California Association of Governments. (2020e, September 3). *Final Connect SoCal Environmental Justice Technical Report*. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_environmental-justice.pdf?1606001617

Southern California Association of Governments. (2020f, September 3). *Public Participation and Consultation—Appendix 2: Comments and Responses*. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_public-participation-appendix-2.pdf?1606001847

Southern California Association of Governments. (2021, October). *Final 2023 Federal Transportation Improvement Program Guidelines*. https://scag.ca.gov/sites/main/files/file-attachments/proposed-f2023-ftip-guidelines.pdf

Southern California Association of Governments. (2022a, April 7). *2022 Public Participation Plan*. https://scag.ca.gov/sites/main/files/file-attachments/f-2022-public-participation-plan.pdf

Southern California Association of Governments. (2022b, October 6). *2023 Federal Transportation Improvement Program*. https://scag.ca.gov/2023-ftip

Sperling, E., & Ross, C. (2018). Strategically Aligning Capital Improvement Prioritization to Performance

Goals. *Transportation Research Record: Journal of the Transportation Research Board*, *2672*(51). https://doi.org/10.1177/0361198118787639

Tapase, A. (2019, November 1). *Horizon/Plan Bay Area 2050: Revised Project Performance Assessment Methodology*. Metropolitan Transportation Commission, Association of Bay Area Governments. https://mtc.ca.gov/sites/default/files/ProjectPerformance_Methodology.pdf

Tapase, A. (2022, January). *Horizon/Plan Bay Area 2050: Project Performance Findings*. https://mtc.ca.gov/sites/default/files/ProjectPerformance_FinalFindings_Jan2020.pdf

Taylor, B. D. (2000). When Finance Leads Planning: Urban Planning, Highway Planning, and Metropolitan Freeways in California. *Journal of Planning Education and Research*, *20*(2), 196–214. https://doi.org/10.1177/0739456X0002000

Transportation Agency for Monterey County. (2020, March 25). *2020 Guidelines & Policies for the Administration of Regional Surface Transportation Program Funds*. https://www.tamcmonterey.org/files/f1dbcc212/2020+RSTP+Guidelines++%26+Grant+Application.docx

Transportation Agency for Monterey County. (2021, December 8). *2022 Regional Transportation Improvement Program*. https://www.tamcmonterey.org/files/edfe4e265/2022+Regional+Transportation+Improvement+Program+-+FINAL_2021-12-01+-+signed.pdf

UC Davis Center for Regional Change. (2019). *Transportation Equity and Environmental Justice Advisory Group*. https://regionalchange.ucdavis.edu/projects/transportation-equity-and-environmental-justice-advisory-group-teejag

US Department of Transportation. (2022, August 15). *Southern California Association of Governments Planning Certification Review*. https://scag.ca.gov/sites/main/files/file-attachments/eac110222agn09-rc110322agn19-supplemental.pdf?1666984292

Ventura County Transportation Commission. (2021, December). *Regional Transportation Improvement*

Program Ventura County. https://www.goventura.org/wp-content/uploads/2021/12/2022-RTIP-Template_VCTC_Submittal.pdf

Ventura County Transportation Commission. (2022, July). *Congestion Mitigation and Air Quality Program (CMAQ)/Transportation Development Act (TDA) Article 3 Bicycle & Pedestrian/SB 1 State of Good Repair (SGR) Call for Projects Application Packet*. https://www.goventura.org/wp-content/uploads/2022/07/2022-CombinedCall_CMAQ_TDA_SB1_Application-Packet.pdf

Aligning Metropolitan Transportation Planning and Investments with California's Climate and Equity Goals:

Supplemental Materials

16 October 2024

A Report for the California Air Resources Board

Review Draft – Comments Welcome
Do not cite or distribute.

by

Tamika Butler, JD
Phoebe Chiu
Hao Ding, PhD
John Gahbauer
Mark Garrett, JD, PhD
Juan Matute (Project Manager)
Gian-Claudia Sciara, PhD (Co-PI, University of Texas, Austin)
Brian D. Taylor, PhD, FAICP (Principal Investigator)

UCLA Institute of Transportation Studies
3320 Public Affairs Building
Los Angeles, CA 90095
www.its.ucla.edu

Appendix A: Interview and Focus Group Interview Guide

Obtain Oral Informed Consent

The purpose of this study is to understand how and to what extent California's climate and equity goals are incorporated into the Regional Transportation Plans promulgated by the state's Metropolitan Planning Organizations. Additionally, we seek to understand how these goals might be explicitly and consistently centered in Regional Transportation Plan decision-making. If you have any questions at this point, please do not hesitate to ask me.

1. First, did you review the "Consent to Participate" form? This form explains in detail the purpose of the study.
    a. If yes, proceed with #2
    b. If no, read and screenshare the Consent to Participate
        i. Let me give you a few minutes to read and review the consent form.
2. This interview should take 60-75 minutes to complete.
3. If at any point during the interview you feel uncomfortable or you do not feel like answering a question, that is completely fine. You do not have to answer all of the questions and may choose to decline to answer any questions at any time without any consequences.
4. This research project is voluntary and the information you provide will be confidential. Only summarized group information will be published in reports. Data will be kept on a secure server only accessible by the research staff, and later will be erased.
5. In the consent form, it discusses your rights as a study participant and people at UCLA that you may contact if you have any questions about the study.
6. When the participant is finished reading the consent form, ask:
    a. Do you feel comfortable providing verbal consent?
        i. If yes, proceed with the interview.
        ii. Thank you for consenting to this interview.

Now, we are ready to begin the interview.

- Do you have any questions before we begin?

- If at any point you need me to clarify any questions, please let me know and I will do so.
- **I will now *BEGIN RECORDING***

Participant Introductions

Let's begin with some introductions. For our records, please share:

Your name
Pronouns
Current Professional Role

Research Team Introductions

I'll kick us off.
Researchers introduce themselves and their role in the project and during the interview.

MPO Staff

Questions bank. Draw questions in any order as applicable.

RTP

1. Let's begin with a "big picture" from you about your RTP development process. Could you please briefly describe how the plan comes together, how you begin to solicit projects and then make choices about what to include in the RTP?
2. What share of RTP projects are typically carried over from one planning cycle to the next?
3. What do you see as the primary constraints for including projects in the list? (e.g., financial, political, quantitative)
4. How are previously included projects dropped from future plans? In recent history has the MPO ever "wiped the slate clean" and required all / most projects to re-apply?
5. How much funding is there in the new RTP cycle to entertain projects that were not included last time?
6. How does your agency determine which projects undergo this selection process vs. which are considered "committed?"
7. How do staff determine the initial RTP project list in advance of any Board, Council, or Committee input?
8. For projects in your region that are or will be funded via LOST revenue, how do these projects enter into the development of RTPs and TIPs in your region?

TIP

9. Let's talk about the TIP, too. Could you also describe how projects are reviewed and selected for the TIP? How does that process compare with what your MPO does for the RTP?

10. In making decisions about what projects to fund (for specific funding programs) or what projects to be included in the TIP, what factors do you consider? How are federal, state, and regional goals, state's climate mitigation and equity goals in particular, accounted for?

Climate & Equity

11. Reflecting on the process for RTP development and project selection, perhaps considering the experience with your last RTP, please describe how climate considerations and equity considerations figure in as you move forward.

12. We appreciate hearing how you define equity. Could you please tell us more about that definition – how you would describe how equity is defined in the MPO's work in the region? Has that changed over time? If so, how?

13. We'd like to learn more from you about how different MPO participants pay attention to the climate and equity performance of projects. To what extent are MPO staff, Board or Council members, or Committees concerned with the climate and equity performance of projects?

Project Assessment & Metrics

14. Please describe the process your agency uses for selecting projects, especially via any sort of quantitative and public project performance assessment.

15. To what extent do MPO staff rely on quantitative project performance assessment tools in decision-making?

16. We'd like to learn about the project assessment metrics and or scoring processes your MPO uses. Can you tell us about how those metrics or performance metrics, or assessment tools inform project selection? Where do the metrics come in, and how are they used to prioritize what you can do?

17. How are the scoring rubrics (for various funding programs) developed? Who/what determines which factors to be included, and how much weight to put on each factor? Do the rubrics change for each application cycle?

18. Review and scoring of projects are conducted by scoring committees/working groups/evaluation panels. Who makes up these groups? How are they selected?

19. For projects that apply for federal and state funding programs like CMAQ and STBG, how are projects selected? How much weight does the scoring and ranking produced by the scoring committee/evaluation panel carry in the overall decision?

20. Can you name a project proposal that did not get funded after the evaluation, and explain why it was not selected? Can you also name a project that did not have much political support but was nonetheless selected for funding because of good evaluation outcomes?

21. What quantitative project performance assessment tools do MPO staff use in RTP development?

22. Does your agency do this for a subset of funding sources (e.g., only CMAQ funds) or all funds?

23. Do RTP land use / growth scenarios have unique transportation spending scenarios tailored to that growth pattern and if so, how does the scenario selection process intersect with the project performance assessment work?

24. Could you please provide the full list of project performance assessment criteria?

25. How (if at all) does the COG align the project performance criteria with the performance measures used in selecting RTP scenarios?

26. How are projects from different modes compared to one another, or are they kept separate? If they are kept separate, how do MPO staff determine which mode flexible funding sources will be spent on? If they are compared to one another, what are the assessment metrics that you have found most conducive to fair comparisons across modes?

27. Do MPO staff have suggestions for improving the use of the tools? (Particularly with regard to the quality of climate and equity assessments and the Board/Council/Committee's use of equity and climate assessment results in decision making)

28. How are changes to project lists agreed upon and documented?

29. How do Board, Council, or Committee members influence the initial and final project lists? How do external advocacy groups influence the initial and final project lists? How does the public influence these lists?

30. How is project performance tracked after RTP adoption?

31. How do projects move from the RTP to the MPO's Transportation Improvement Program (TIP)? (see Younger 1998) Are the project performance assessment metrics considered?

32. How is plan performance tracked after RTP adoption?

33. How important are performance measures included in the RTP or appendices to ongoing decision-making by the MPO?

MPO Board

1. What would you say are the top priorities for your MPO's transportation investments?

2. Let's begin generally. I'd like to ask, from your perspective as a board member, to describe the important transportation issues occupying your attention as board members.

3. How does this connect to the top priorities for your MPO in terms of their investments?

4. Can you describe how equity fits into the decisions facing the board and how equity is viewed? For instance, you mentioned ensuring that projects [XXX do XXXX]. Can you provide an example of what equity means in your region, as you see as a board member.

5. How does this compare with how climate considerations and GHG reductions are handled within your MPO? [Probes: So how? How would you compare [x to y]?

6. Tell us about how projects are selected for inclusion in the RTP project list? What is the board's involvement or role in that? Please explain.

7. We'd like to learn about the project assessment metrics and or scoring processes your MPO uses. Can you tell us about how those metrics or performance metrics, or assessment tools inform project selection? Where do the metrics come in, and how are they used to prioritize what you can do?

8. Were there any conflicts over the inclusion or exclusion of a specific project?

9. To what extent do you consider equity and climate implications in project selection?

10. To what extent do you consider input from those outside the MPO staff and fellow board members when selecting projects?

11. Are you aware of any local climate and equity advocates? What power do these individuals or groups wield in the RTP development process?

12. What would you highlight, if anything, as an example of things that are going well, with respect to your MPO's efforts on either equity or climate or related issues?

13. What would you highlight, if anything, as an example of things that are going less well / not so well, with respect to your MPO's efforts on either equity or climate or related issues?

14. What's standing in the way, or what and I don't mean that, you know, to kind of be asking what is seemingly an obvious question… But what are—are there anything… any things that the State or the framework in which you operate could be changed or could change, that would make that easier?

Advocates' Focus Group Questions

1. Can you share about your work, what you/your organization does, and how you engage with local MPO?

    a. If they don't engage with the MPO, ask if they are aware of it and their understanding of what the MPO does.

    b. If they do engage with the MPO, ask who they collaborate with at the MPO, are there specific people they talk to most?

2. What environment would you need to do more equitable work?

3. How does your local MPO define equity and how is that different from how community members or your organization defines it?

    a. Do you think their board is doing it differently than their staff?

    b. If these definitions are different from different groups, does this create tension?

4. How would you describe your MPO's decision-making process?

    a. Follow up specifically about decision-making for the RTP?

5. To what extent do you think your local MPO staff and decision-makers consider equity and climate implications in project selection?
6. Have you or your organization observed MPOs using specific project evaluation tools or scoring rubrics?
7. How important is the MPO to your organization's work?
    a. To the big picture of achieving transportation equity in your region?
8. Were there any projects that you advocated for that were included in the project list?
9. Were there any projects that you advocated against that were excluded from the project list?
10. Outside of the information you were receiving through the public engagement, how would you describe the role of any external organizations or stakeholder groups in informing this shift in your approach to equity?

Concluding Questions for all groups?

- Is there anything else that you'd like to share that we didn't cover that would be helpful for us to know and understand?
- What are other individuals or organizations that you think we should be talking with for this work?

Appendix B: Possible Fields for a Statewide Transportation Project Data Standard

Table B-1. Possible Fields for a Statewide Transportation Project Data Standard

Field Description	Data Type	Sample Values or Logic	Required?
Project ID	Text (single line)	*This value does not change once a project is first identified*	☑
Project Version	Decimal	*This value changes incrementally as a previously identified project is updated*	☑
Project Name	Text (single line)		☑
Parent Project ID	Link (Reference)	*Used if a project is a subcomponent of another project*	☐
Lead Agency	Enum (single select)		☑
Project Description	Text		☑
Project Location (Start)	Lat Long		☑
Project Location (End)	Lat Long		☑
Project Area (GeoJSON)	Text		☐
County	Enum (single select)		☑
Climate Risk Assessment - project falls within boundaries of statewide climate risk assessment	EnumList (multi select)	Project vulnerable to sea level rise, extreme heat based on statewide geospatial assessments	☑
Non-Climate Risk Assessment - project falls within boundaries of statewide non-	EnumList (multi select)	Project vulnerable to flooding, increased seismicity, based on statewide geospatial	☑

Field Description	Data Type	Sample Values or Logic	Required?
climate risk assessment		assessments	
Funding Program(s)	EnumList (multi select)	{CMAQ, STBG, STIP, HUTA, SHOPP, STA, SCCP, ATP, RMRA, Cap and Trade, TDA, Farebox Revenue, Toll Revenue, Mitigation Fees, Local Sales Tax, SB1, FTA Formula, FTA Discretionary, Other - Earned Revenue, Other - Intergovernmental Grant, Other - Tax Revenue}	☑
Project Category	EnumList (multi select)	{Project Category, Road Expansion Components, Road Maintenance Components, Active Transportation Components, Transit Capital, Transit Operations and Maintenance, TDM, TSM, and ITS}	☑
Project Components: Road Expansion Components	EnumList (multi select)	{New Lane, New Ramp, Street Widening, Interchange Modification, Grade Separation}	☐
Project Components: Road Maintenance Components	EnumList (multi select)	{Pavement Resurfacing, New Bike Lane, New Bus, Fixed Route Transit Operations, Traffic Signal Synchronization, Pavement Rehabilitation, New Sidewalk, New Train, Paratransit Operations, Communications	☐

Field Description	Data Type	Sample Values or Logic	Required?
		Equipment, Restriping, New Curb Ramps, New Paratransit Vehicle, Transit Facilities Maintenance, Video Surveillance, New Crosswalk, New Station, Transit Fleet Conversion, Ramp Metering, Wayfinding System, Bus Stop, Speed Cameras, NEV lanes, Bus Stop Improvements, Changeable Message Signs, Bicycle facilities, Managed Lane Conversion, Managed Lane Addition (New)}	
Project Components: Active Transportation Components	EnumList (multi select)	{New Bike Lane, New Sidewalk, New Curb Ramps, New Crosswalk, Wayfinding System, NEV lanes, Bicycle facilities}	□
Project Components: Transit Capital	EnumList (multi select)	{New Bus, Fixed Route Transit Operations, Traffic Signal Synchronization, New Train, Paratransit Operations, Communications Equipment, New Paratransit Vehicle, Transit Facilities Maintenance, Video Surveillance, New Station, Transit Fleet Conversion, Ramp Metering, Bus Stop, Speed Cameras, Bus Stop Improvements, Changeable Message	□

Field Description	Data Type	Sample Values or Logic	Required?
		Signs, Managed Lane Conversion, Managed Lane Addition (New)}	
Project Components: Transit Operations and Maintenance	EnumList (multi select)	{Fixed Route Transit Operations, Traffic Signal Synchronization, Paratransit Operations, Communications Equipment, Transit Facilities Maintenance, Video Surveillance, Transit Fleet Conversion, Ramp Metering, Speed Cameras, Changeable Message Signs, Managed Lane Conversion, Managed Lane Addition (New)}	☐
Project Components: TDM, TSM, and ITS	EnumList (multi select)	{Traffic Signal Synchronization, Communications Equipment, Video Surveillance, Ramp Metering, Speed Cameras, Changeable Message Signs, Managed Lane Conversion, Managed Lane Addition (New)}	☐
Project Components: Other	Text (single line)		☐
Lane miles	Number	*Displays if road expansion selected*	☐
Planning Status	Enum (single select)	Planning, Preliminary Engineering, Engineering, Environmental, Construction, Operation	☐

Field Description	Data Type	Sample Values or Logic	Required?
Approval Status	Enum (single select)	TBD: FHWA, Caltrans, FTA, ETC.	☐
Environmental Status	Enum (single select)	TBD: DEIR, PEIR, EIR, EIS, DEIS, etc.	☐
Percentage of total project cost for road expansion, inclusive of soft costs attributable to road expansion	Percent	*Displays if road expansion selected Can be within 1%*	☐
Total Cost	Currency		☐
Project Start Year	Date		☐
Project Completion Year	Date		☐
Funded Year(s)	EnumList (multi select)	{2023, 2024, 2025 ... }	☐
FTIP exemptible?	True/False		☐
Connects to a regional bike network?	True/False	*Displays if Active Transportation Components selected*	☐
ATP gap closure?	True/False	*Displays if Active Transportation Components selected*	☐

UCLA Institute of Transportation Studies

3320 Public Affairs
Building Los Angeles,
CA 90095-1656
uclaits@ucla.edu
its.ucla.edu