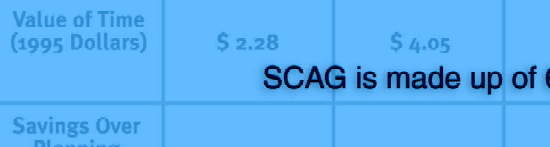
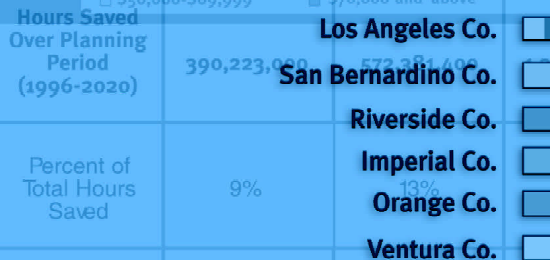
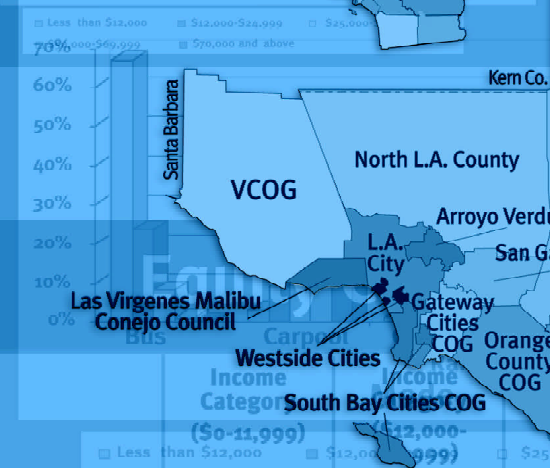
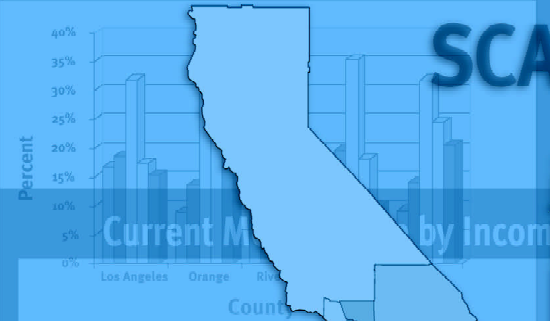


# SCAG Planning Region



SCAG is made up of 6 Counties which are divided into 14 Subregions.

**Data Sources, Analytical Techniques, Benefits and Burdens Assessment, Alternative Dispute Resolution**



have consequences in the form of administrative and legal complaints, public controversy and, ultimately, greater delays and uncertainties in the implementation of future transportation improvement program items.

Title VI of the Civil Rights Act of 1964 provides one very significant means by which the public can seek greater accountability from transportation agencies. Title VI says that “No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Title VI bars intentional discrimination, but also unjustified disparate impact discrimination. Disparate impacts result from policies and practices that are neutral on their face (i.e., there is no evidence of intentional discrimination) but have the *effect* of discrimination on protected groups.

MPOs are required to identify and address the Title VI and the environmental justice implications of their planning processes and investment decisions. They must ensure that their transportation programs, policies, and activities serve all segments of the region without generating disproportionately high and

adverse effects. In their joint October 7<sup>th</sup> memorandum, *Implementing Title VI Requirements in Metropolitan and Statewide Planning*, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) gave a clear message that Title VI and environmental justice are integral throughout the transportation planning process and, by extension, to those who participate in the transportation process. Most notably, FHWA and FTA staff responsible for certification reviews are directed by headquarters to verify the procedures and the analytical basis for the MPO’s self-certification of the Civil Rights Title VI compliance (and for the State DOT’s self-certification as part of the Statewide Transportation Improvement Program findings). Where self-certification cannot be adequately supported, these reviewers are further directed to include a corrective action notice in their certification to report deficiencies. State DOTs also conduct Title VI reviews of cities, counties, consultant contractors, suppliers, universities, colleges, planning agencies including MPOs as well as other recipients of Federal-aid highway funds.

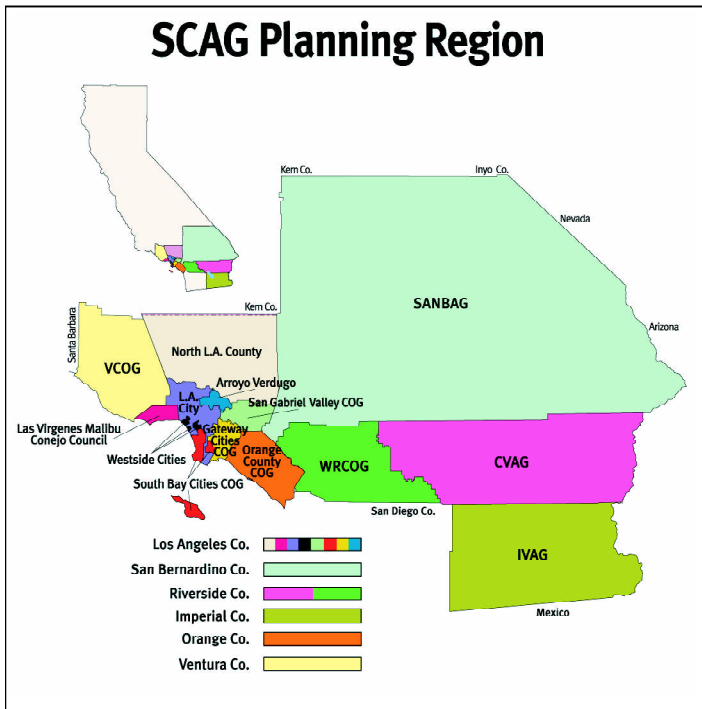
However, Civil Rights Title VI and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* do not prescribe the specific methods and processes for ensuring environmental justice in transportation planning. State and local transportation agencies are free to explore and devise more effective analytical techniques and public involvement approaches to ensure that transportation plans successfully integrate environmental justice into decision making. In its *1998 Regional Transportation Plan*, the Southern California Association of Governments (SCAG) grappled with several important methodological issues in the consideration of equity in transportation planning. These activities occurred before the October 7<sup>th</sup> FHWA/FTA memorandum about Title VI certification reviews, but their research efforts remain instructive for practitioners today.

## The Participants

The RTP was a 3-year planning process that involved:

- Southern California Association of Governments
- 14 SCAG Subregions
- County Transportation Commissions
- Caltrans
- Los Angeles County Metropolitan Transportation Authority
- FTA/FHWA Los Angeles Metropolitan Office
- Regional Transportation Plan Technical Advisory Committee
- Transportation and Communications Committee
- Peer Review Committee
- Public

## SCAG Planning Region



The SCAG region is made up of 6 Counties which are divided into 14 subregions.

SCAG is the designated MPO for a six-county region, covering 38,000 square miles and equal in size to the state of Ohio. As an MPO, SCAG is required to produce a Regional Transportation Plan (RTP) with a minimum 20-year planning horizon, every three years. SCAG also produces a Regional Transportation Improvement Program (RTIP) every two years.

SCAG's 1998 RTP and its working documents stand out as an example of the methods and processes for assessing the benefits and burdens of a regional transportation plan. The SCAG RTP, also known as *CommunityLink 21*, developed and adopted performance indicators that gauge the social and economic effects of transportation investment decisions on the region's minority and low-income populations. The methods adopted for the SCAG RTP gave the transportation community — its modelers, decision-makers, interest groups —

## Metropolitan Transportation Planning Process: Certification

The State and the Metropolitan Planning Organization must annually certify to the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) that their planning process is addressing the major issues facing the area and is being conducted in accordance with all applicable requirements. The self-certification addresses several requirements including adherence to Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each state under 23 U.S.C. 324 and 29 U.S.C. 794.

The FHWA and the FTA jointly review and evaluate the transportation planning process of each Transportation Management Area — typically an urbanized area of greater than 200,000 persons — to determine if the process meets the requirements. The review may take place as appropriate but no less than once every 3 years. The FHWA and FTA have the authority to certify the transportation planning process and/or specify areas where corrective actions may be required by the reviewed transportation agency. They also retain the authority to withhold in whole or in part various highway and transit funds and approvals of certain projects if they determine that the transportation planning process does not substantially meet requirements. Further information can be found at 23 C.F.R. Part 450.334, Metropolitan Transportation Planning Process: Certification.

greater insight about how and to what extent the region's various transportation users receive benefits from the transportation system as well as pay for these system benefits. During the study, SCAG discovered limitations with its equity analysis methodology for translating benefits into monetary terms and responded by taking a closer look at improved accessibility to jobs and other opportunities. By adopting the methods used in the SCAG RTP, the regional transportation community



was afforded an opportunity to wrestle with the issue of fairness in the distribution of transportation system benefits and burdens.

## The Region and the Community

SCAG is comprised of six counties, Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura, and is divided into 14 subregions and includes 184 cities in Southern California. SCAG is served both by an extensive highway network as well as large public bus and commuter rail systems linking the region to the rest of California.

It is the largest and most populous metropolitan planning region in the nation, and includes nearly half of the entire population of California. The SCAG Region includes urban areas and uninhabited mountains and deserts, with the urban areas reflecting a wide variety of land use patterns and conditions. At the center of the urbanized region is Los Angeles, with other urban centers scattered peripherally in Long Beach, Burbank, Glendale, Pasadena, Pomona, Riverside, San Bernardino, Santa Ana, Anaheim, Irvine, Oxnard and Ventura.

A major gateway for immigration from the west and the south, the SCAG Region's ethnic make-up has

### Snapshot of the SCAG Region

**Location:** The SCAG region is equal in size to the state of Ohio and is the largest and most populous metropolitan planning region in the nation with 6 counties and 184 municipalities in Southern California.

**Population:** SCAG's estimated 15.61 million residents in 1994 totaled nearly one-half of the entire California population. SCAG forecasts 6.7 million new residents by 2020, an increase of 43 percent. This scale of growth is equivalent to adding the population of Chicago to the area—twice—within two decades. The highest growth rates are projected in the outlying subregions.

**Racial and Ethnic Composition:** Over the past three decades, the SCAG region has been transformed into a multicultural megalopolis with the growth of Hispanic and Asian American populations. In 1970, Non-Hispanic Whites accounted for 76 percent of the SCAG regional population. By 1999, SCAG's racial and ethnic composition was:

- Non-Hispanic White — 42 percent
- Hispanic — 38 percent
- Asian American — 11 percent
- African American — 8 percent
- Native American — 1 percent

**Employment:** SCAG projects a 61 percent increase in jobs, bringing the total number of jobs in the region to 10.6 million by 2020. The MPO foresees a worsening of the jobs and housing balance, resulting in more and longer commutes.

**Greater Diversity in the Future Workforce:** SCAG forecasts an increase in Hispanic workers from 34.2 percent to 46.5 percent of the total workforce by 2020. African Americans and "Others" racial and ethnic categories will grow in absolute numbers, but decline in their share of the total workforce.

**Households Below Poverty Line:** 13 percent of households earn less than \$12,000 per year and are considered to be living in poverty.

**Spatial Concentration of Minorities and Urban Poverty:** Los Angeles County accounts for 58 percent of the total SCAG region population, but 78 percent of African Americans, 68 percent of Asian Americans and 65 percent of Hispanics. The urban poverty core within the city of Los Angeles is 92 percent people of color, 62 percent Latino, and 38 percent in poverty compared to 18 percent of the county.

Source: 2000 U.S. Census Bureau, Population Estimates for Counties by Race and Hispanic Origin: July 1, 1999; *Community Link 21, 98 Regional Transportation Plan*, Southern California Association of Governments; Environmental Defense Fund, <http://www.environmentaldefense.org/programs/ej/timeline>.

changed considerably over the past three decades becoming increasingly Hispanic and Asian. In 1970, non-Hispanic Whites represented 76 percent of the population, dropping to 50 percent in 1990. The percentage of the region's non-Hispanic Blacks has remained relatively stable at eight percent. Hispanics are the largest ethnic group in four of the 14 subregions: the City of Los Angeles, San Gabriel Valley Council of Governments, Gateway Cities, and Imperial County.

## What Happened

*The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)* and *the Clean Air Act Amendments of 1990* set the stage for an integrated, multi-modal approach to transportation planning. Transportation practitioners and decision makers were asked to adopt goals and objectives and methods capable of setting priorities and investments for an entire integrated system rather than as a collection of competing modes. With ISTEA, MPOs were asked to adopt and periodically update their Regional Transportation Plans (RTP) and, in so doing, explicitly consider and analyze a series of sound planning principles commonly referred to as the ISTEA Planning Factors.

In response to these changing requirements, and following completion of its previous transportation plan in 1994, SCAG initiated a performance-based planning process — an approach intended to provide a more comprehensive framework for decision making. The new approach introduced several new performance indicators into decision making. These new indicators were not prepared by SCAG alone, but rather came after discussions with stakeholders about the proper goals and objectives that should be set for the transportation system. The process engaged the public, interest groups, subregions, County Transportation Commissions and several SCAG committees including a Peer Review Committee formed by SCAG's Transportation and Communications Committee (TCC). The

performance indicators approach has been credited as a means for bringing a “user’s perspective” into transportation decision making, overcoming a limitation of more traditional analyses focused upon measures of vehicle volumes and levels-of-service.

This process culminated in recommendations from the TCC and approval by SCAG of performance indicators for each of the following seven criteria in order to report findings in the Preliminary 1997 RTP:

- Mobility
- Accessibility
- Environment
- Cost Effectiveness
- Reliability
- Safety
- Consumer Satisfaction

This process was also notable because, for the first time, SCAG employed a “bottom-up” approach that drew input from SCAG’s 14 subregions. Each subregion was first given baseline transportation information projecting system performance for each of the seven performance indicators to the year 2020. Each subregion then utilized this information to nominate policies, programs, and projects for possible inclusion in the regional plan.

SCAG’s experience confirmed the merits of performance indicators as a planning tool to evaluate investment alternatives. The indicators provided a broader analytical framework for the decision maker. The traditional emphasis upon mobility was balanced by the introduction of a series of sound planning principles. In general, the approach fostered more input from a wide range of agencies, organizations, and individual stakeholders within the region and was viewed by its proponents as offering a better foundation from which to make cost-effective investment decisions.

## Project Chronology

### March 1994

EDF Report *Efficiency and Fairness on the Road: Unsnarling Southern California's Traffic* outlining a transportation equity methodology is published.

### April 1994

SCAG begins revisions of its Regional Transportation Plan (RTP) and starts to develop a methodology for the RTP.

### September 1994

Class action civil rights lawsuit *Labor/Community Strategy Center v. Los Angeles County Metropolitan Transportation Authority (MTA)* is filed by the NAACP Legal Defense & Education Fund, Inc. (LDF).

### Summer 1995

Eleven “task forces,” including the Peer Review Committee (PRC), are formed. The PRC assisted in the identification of 7 performance indicators including a measure of equity.

### September 1995

SCAG issues a “Performance Indicators White Paper” and approves 7 new performance indicators for RTP.

### October 1996

NAACP Legal Defense & Education Fund entered into a court-ordered Consent Decree with the Los Angeles County Metropolitan Transportation Authority.

### February 1997

Preliminary RTP is issued and includes first performance-based measures findings regarding 3 scenarios.

### Spring 1997

SCAG refines its equity and accessibility measures, among other activities, following an alternative dispute resolution process initiated in response to issues raised by a coalition of advocacy organizations.

### Autumn 1997

PRC reconvenes to comment upon findings including SCAG's refinements to its accessibility measure to further address equity concerns.

### November 1997

Draft 98RTP circulated.

### April 1998

SCAG Regional Council adopted the Regional Transportation Plan, CommunityLink 21.

Although noteworthy, SCAG's initial study findings drew criticism for its inadequate treatment of equity and accessibility issues. In March 1997, a coalition of groups, including the Environmental Defense Fund (EDF), Natural Resources Defense Council, the NAACP and the Bus Riders Union, sent SCAG a letter of intent to sue for their handling of Title VI and environmental justice in the Preliminary RTP released in February 1997. The coalition observed that the Preliminary RTP appeared to offer few benefits to those living below the poverty line. The coalition also criticized SCAG for failing to involve low income and minority communities in the planning process.

SCAG took the threat of a lawsuit very seriously, in part, because Title VI of the Civil Rights Act of 1964 had been recently and successfully raised as an issue against the region's major transit service provider in

the landmark civil rights class action lawsuit, *Labor/Community Strategy Center v. Los Angeles County Metropolitan Transportation Authority (MTA)* in October 1996. The lawsuit, which eventually led to a court-order Consent Decree, charged that the MTA operated separate and unequal bus and rail systems that discriminated against minority and low-income bus riders of Los Angeles.

To avoid the delays and costs of a lawsuit, an alternative dispute resolution (ADR) process was employed to fully understand and explore the positions held by each party. Within 4 weeks of receiving the letter of intent to sue, the first meeting was held between SCAG and the coalition of potential litigants. Several other meetings were held between the parties. During this process, SCAG representatives included elected officials, the chair of the SCAG transportation policy committee, the

## Landmark Civil Rights Class Action Lawsuit About Service Equity

In October 1996, on behalf of 350,000 poor minority bus riders, the NAACP Legal Defense & Education Fund, Inc. (LDF) entered into a court-ordered Consent Decree settling the civil rights class action lawsuit *Labor/Community Strategy Center v. Los Angeles County Metropolitan Transportation Authority (MTA)*, which charged that the MTA operated separate and unequal bus and rail systems that discriminated against minority and low-income bus riders of Los Angeles. Under the terms of the Consent Decree, the MTA agreed to make over one billion dollars in bus system improvements over the next 10 years.

The MTA case was a landmark event because Title VI of the Civil Rights Act of 1964 was successfully invoked by its plaintiffs—the Labor/Community Strategy Center, the Bus Riders Union, the Southern Christian Leadership Conference, the Korean Immigrant Workers Advocates, and individual bus riders—to get a major transportation agency to change its investment and service priorities. The plaintiffs amassed extensive documentation asserting disparate impacts and intentional discrimination over 30 years. MTA’s budget disproportionately allocated resources to rail transit over bus ridership, an expenditure pattern discriminatory to low-income people of color. For example, the plaintiffs concluded that 94 percent of MTA’s ridership were bus riders, but the agency customarily spent 70 percent of its budget on the 6 percent of its ridership that were rail passengers. Other evidence was compiled about disparities in spending on security, subsidies, transit routes and service patterns, overcrowding, and reductions in peak hour bus fleets.

The Consent Decree required MTA to address Title VI with greater service equity for transit-dependent riders and committed the agency to several specific planning

and programming actions. Improvements meeting the needs of transit-dependent populations were to be given priority consistent with MTA’s other statutory responsibilities and obligations. Equally important, the Consent Decree necessitated that MTA continue consultation with the plaintiffs through procedures that retain court jurisdiction over the matter. A court-appointed expert, a *special master*, retained authority to review areas of dispute between the parties on pertinent matters previously the sole province of the MTA. MTA agreed to the following by the Consent Decree settlement:

- Address the needs of the transit-dependent in a specific section of the MTA’s long-range plans, major capital projects, and annual budgets.
- Monitor loading factors and reduce overcrowding by adding new services, additional buses, and special-route bus services to job, education and health centers.
- Develop a comprehensive program to enhance security, improve bus stops, increase user-friendliness, and improve bus service efficiency for transit-dependent riders.
- Facilitate greater consultation with riders in improving bus services to the transit-dependent.
- Freeze Fare levels for 2 years with allowances for inflation afterwards.
- Work with plaintiffs on bus service improvement plans, fare adjustment issues, ridership surveys.
- Abide by the decisions of a court-appointed special master to facilitate the resolution of disputes.
- Pay plaintiff’s reasonable attorney’s fees, costs and expenses for monitoring compliance of the Consent Decree.

president and vice president of SCAG, and representatives from the each of the SCAG counties. SCAG agreed to involve coalition membership in the planning process, and to facilitate a series of public meetings and workshops to solicit greater involvement from low-income and minority communities.

During the ADR process, SCAG affirmed its support and recognition for the Consent Decree by incorporating the following provision into the 1998 RTP:

*“capital improvement planning and programming for MTA shall include attention*



*to all modes of transportation and all areas of the County from which riders are drawn. Improvements meeting the needs of transit dependent populations shall be given priority consistent with MTA's other statutory responsibilities and obligations"*

The RTP recommended a transit restructuring strategy that shifted the focus away from fixed route systems that required significant subsidies and adopted several "cost-effectiveness" performance measures toward that end. The RTP also included specific commitments to low-income and minority community outreach, an endorsement for the development of "Smart Shuttles" — a non-fixed route, demand-responsive system of feeder services to bus and transit systems — and an increase in connections and services for lower-income communities.

The success of these efforts was later recognized by EDF following SCAG's approval of the RTP in an April 17, 1998 news release in which an EDF senior attorney, Robert Garcia, was quoted: "SCAG has brought transportation equity to the planning table and the Environmental Defense Fund is committed to working with SCAG to improve transportation for communities of color and the transit dependent."

For SCAG, the MTA lawsuit and Consent Decree underlined the need for public transportation agencies to consider the fairness and equity of their investment and policy decisions. The Consent Decree spurred action on the part of government to make a greater commitment to understand and address Title VI and environmental justice issues in Southern California.

Revised and updated every three years, *CommunityLink 21* was the first SCAG RTP to include an analysis of transportation "equity" among its performance indicators incorporated into its plan evaluation process. Moreover, another performance indicator — "accessibility" — was examined in greater detail than ever before in order to differentiate and compare this measure by transportation mode,

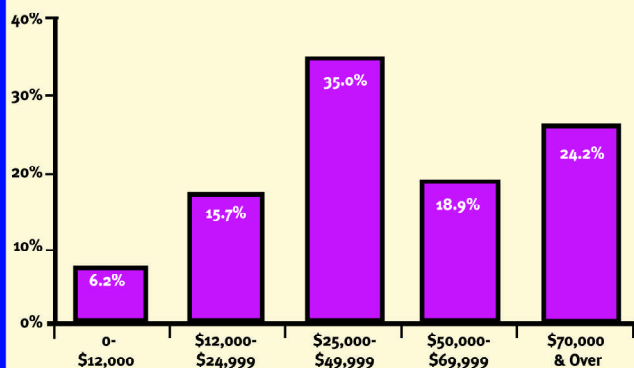
income group and ethnicity. SCAG's research efforts are detailed below:

**Review of Tax Structures.** In its November 1997 issues paper for the RTP, "Equity and Accessibility: Issues and Considerations in Community Link 21", SCAG examined the tax structures and revenue sources used to fund regional transportation projects and investments. The analysis documented the shifting economic base of the SCAG region toward a service-based and information-related economy, concluding that the primary taxation source for transportation investments — the gasoline tax and sales tax — were shrinking in importance relative to the region's growth and infrastructure needs. The report stressed that an overreliance on these revenue sources presented a "gross equity" concern for the well-being of all SCAG region residents and the region's future economic health. Equity, in this specific context, was defined in broad "geographic" terms — whether the entire region was adequately prepared to address its infrastructure requirements.

However, the SCAG report also looked at the tax structure's implications to specific income segments of the SCAG regional population. The issues paper cautioned that the transportation revenue funding sources and structures, basically the fuel tax and the sales tax, were regressive means for funding transportation systems. The paper explained that persons would consume largely the same amount of the taxed good. Thus, persons with limited financial means would pay a larger share of their total income in taxes. For example, SCAG's report asserted that spending on consumption items such as gasoline (as a percentage of income) falls as income rises. The report found such taxes regressive, particularly excise taxes, which are imposed on a narrow band of goods and carry a practical per-person maximum (e.g., one can only use so much gasoline, smoke so many cigars and cigarettes, and drink so much beer or liquor). Typically, wealthy people do not buy more of the product no matter how much money they may have. The tax is on volume rather than price, so financially better off people pay the same absolute

## Transportation Taxes: Who Pays

Annual Federal & State Gasoline Taxes and Local Sales Taxes by Income Class, 1995



Persons in poverty contribute almost 7 percent of all transportation taxes collected.

SCAG compared the total share of transportation funding borne by low-income persons against other income groups.

tax on an expensive product as low-income households may pay for a more generic variety.

The report presented the amount of sales and gasoline taxes paid by five income groups as well as analyzed the total share of sales and gasoline taxes collected by each of the five income groups. The analysis indicated that *tax burdens*, measured as percent of total adjusted income paid for sales and gasoline taxes, were disproportionately high, ranging between 8.6 percent and 10 percent for all income groups except for the top income households who pay just over 3.5 percent of their income to sales and gasoline taxes.

Another measure focused upon the *shares of transportation funding contributed by each income group*. This latter indicator was used to *benchmark* and evaluate whether proposed RTP strategies would bring a similar benefit distribution among different income groups. While accounting for 13 percent of the SCAG's regional population, the lowest income groups (under \$12,000) contributed about 6.2 percent of total tax revenues for transportation

funding. Households with incomes between \$25,000 and \$49,000 contributed the most to sales and gasoline taxes.

**Benefit Assessment.** The RTP developed a benefit assessment method that considered to what extent various socioeconomic groups were receiving value from existing and funded transportation investments. The benefit approach was a fundamental component of the initial performance-based planning approach adopted by SCAG. The benefit method calculated time savings and the value of time saved by income group for various transportation investment programs. Central to the approach was the assumption that an equity measure should monitor the amount of delay in monetary terms (i.e., time means money) and that delay means lost dollars. The approach followed standard benefit assessment conventions and calculates the value of time (half the average hourly wage for an income category) and the total time saved to measure benefits. Table 1 reports the findings from the equity calculation methodology. Using this approach, it was possible to report that fully 13 percent of the region's population lived below the poverty level, but received only 2.3 percent of the existing transportation investment benefits.

These findings raise important questions about the fairness of transportation investments in the region, but considerable caution still must be exercised when findings are presented in monetary rather than travel time terms. The findings clearly point to the fact that the highest income households (i.e., \$70,000 or greater) are expected to benefit the most in terms of *hours saved* and *monetary savings* over the planning horizon, while those in the lowest household income category benefit the least. However, the benefit assessment is complicated by its highly problematic need to assign a defensible "value of time" for households in order to translate the analysis into purely monetary terms. Thus, the middle income household (i.e., \$25,000 to \$49,999) capture a greater share of hours saved than the next highest income (i.e., \$50,000 to \$69,999) household (31

percent versus 22 percent), but due to their lower value of time less monetized time savings (21 percent versus 23 percent).

SCAG took note of this issue in its methodology paper and cautioned that conclusions about “fairness” using a benefits assessment approach should only be made after careful consideration of the underlying reasons for the current distribution of benefits and burdens. Particularly, if the benefit distribution from transportation investments show “uneven” results, the conclusion and policy implication will greatly depend on the “reason” for the “imbalance” or “uneven” distribution. SCAG observed that two factors must be sorted out to make such an evaluation: the *Income Effect* and *Equity Concern*.

1) *The Income Effect*. If the uneven benefit distribution (in monetary terms) by different income categories are caused only by significant variation of time values among income groups, this is reflective of a so-called *income effect*. SCAG concluded that there is *no* equity issue from the income effect; the policy implication is that higher income people should pay more because they have a much higher willingness to pay for the time savings. Thus, policy makers should encourage transportation financing structures or some differential pricing strategy to capture the higher “willingness-to-pay” for transportation improvements from higher income groups.

2) *The Equity Concern*. If the uneven benefit distributions by income groups are caused primarily by an unbalanced distribution of time savings (*in minutes or hours*), then there *is* an equity concern. Transportation planners should look into modified investment strategies to address and correct this inequitable outcome.

This benefits assessment approach drew comments and suggestions at the time of the submission of the Preliminary RTP and eventually precipitated SCAG’s

Equity Calculation Methodology						
	Income Category (\$0-11,999)	Income Category (\$12,000-24,999)	Income Category (\$25,000-49,999)	Income Category (\$50,000-69,999)	Income Category (\$70,000 & above)	Total
Hours Saved Over Planning Period (1996-2020)	390,223,000	572,381,400	1,340,847,200	944,111,300	1,079,053,000	4,326,575,900
Percent of Total Hours Saved	9%	13%	31%	22%	25%	100%
Value of Time (1995 Dollars)	\$ 2.28	\$ 4.05	\$ 6.05	\$ 9.34	\$ 17.37	\$ 7.82
Savings Over Planning Period (1996-2020)	\$894,286,000	\$2,317,367,000	\$8,110,785,200	\$8,818,437,000	\$18,737,235,000	\$38,878,110,200
Percent of Total Savings	2%	6%	21%	23%	48%	100%

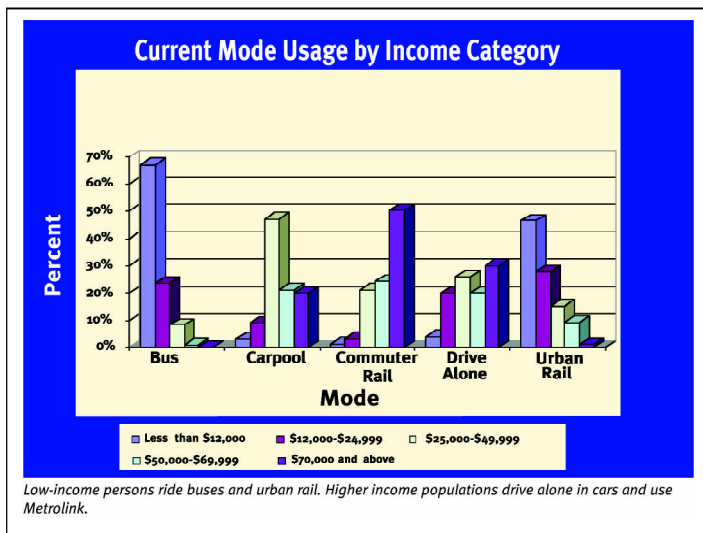
Time means money. Equity calculations consider the value of time saved. Measured by time or money, the highest income group benefits the most.

**Table 1.** SCAG used a benefit assessment methodology that considered the percent of hours and value of time saved by income category.

consideration of other formulations of equity and a closer look at accessibility.

**Accessibility.** *CommunityLink 21*’s issues paper examined the concept of *accessibility* in detail and compared the trip-making ability of households without ready access to automobiles with those of the driving majority. SCAG defined accessibility as the opportunity to reach a given destination within reasonable time and costs and without being impeded by physical, social or economic barriers. Accessibility became an important performance indicator in the RTP and it was defined as *the percent of total workers within 25 minutes travel to their jobs*.

Accessibility is a foundation for social and economic interactions. As an indicator, accessibility is measured by the spatial distribution of potential destinations, the ease of reaching each destination, and the magnitude, quality and character of the activities at the destination sites. Travel costs are central: the lower the costs of travel in time and money terms, the more places that can be reached within a certain budget and, thus, the greater the accessibility. Destination choice is equally crucial: the



The SCAG RTP used Census data to profile mode choice by income category, clarifying who most benefitted from farebox subsidies for bus, urban rail, and Metrolink, a commuter rail operation.

more destinations, and the more varied the destinations, the higher the level of accessibility.

The RTP contrasted accessibility with the traditional emphasis upon *mobility* in transportation planning. Mobility was defined as the ability to travel and the potential for movement. Mobility reflects the spatial structure of the transportation network and the level and quality of its service. Mobility is determined by such characteristics as road capacity and designed speed and, in the case of automobile mobility, by how many people are using the roads. Typical performance measures for mobility consider how vehicles get through the transportation system and report level-of-service, volume-to-capacity ratios, or vehicles miles traveled.

SCAG argued that accessibility had two crucial advantages over mobility measures. First, it allows for comparison of alternative land use and transportation policies and focuses upon the level-of-service of the metropolitan system as a whole, rather than just the transportation system. Thus, policies designed to increase the mixing of land uses can be compared to policies designed to increase capacity

of transportation networks such as intersection improvements. Second, accessibility as a planning goal provides clear direction for policy makers. While increased mobility *may* be a good thing, higher levels of accessibility *are* a good thing.

**Automobile Ownership and Accessibility.** SCAG reviewed the relationship between auto ownership and accessibility. SCAG examined its trip-generation model which details trip-generation rates by trip purposes, housing types and vehicle ownership by counties of the SCAG region. The model shows that households without automobiles make fewer trips than households with automobiles and, therefore, are somewhat more restricted in the exercise of travel for shopping, work and other trip-making opportunities. This phenomenon is sufficiently stark to lead some policy makers and academic researchers to conclude that the best and most efficient way to move people from welfare to the workforce is to provide automobiles to welfare recipients. SCAG reflected on this policy implication, but concluded that it had a limited role to play in promoting auto ownership. Rather, the MPO should narrow the “accessibility gap” through transit investments and transit restructuring strategies for those who prefer transit or who are without access to an automobile.

**Travel Behavior and Transportation System Utilization by Population Segments.** SCAG profiled travel behavior and the modes of transportation (i.e., auto vs. public transit), by income group (i.e., low, middle, high) and by race/ethnicity (i.e., Blacks, Hispanics, all others or region average). The analysis drew heavily upon the Public-Use Microdata Sample (PUMS) data set from the U.S. Census Bureau. The PUMS data set contains records from the long-form census survey — a rich source of travel, housing and socioeconomic data about a cross-section of U.S. households. The microdata sample is a valued tool for demographers, economists, and transportation analysts who wish to perform special tabulations.

## SCAG's Method for Calculation of Job Accessibility Indicator

Several data sources and procedures were used to calculate the job accessibility indicator at the Traffic Analysis Zone (TAZ) level:

### I. Socioeconomic Data

- Census Tract data from the 1990 Census was used to divide the region's population into nine total categories including 3 Race/Ethnicity (Black, Hispanic, Other) and 3 Income (Below \$12,000; \$12,000 to \$25,000; above \$25,000) segments. The census tract level distributions of income/ethnicity were the basis for the assignment of data to the model's 1,527 TAZs.
- SCAG made a future projection of changing racial and ethnic composition, but held income constant in relationship to an existing income distribution. The approach avoids forecasting inflation and future changes in the income distribution of each ethnic group. The income distribution is based on the most recent census data on household income. The approach allows comparisons of estimated benefits and costs across income categories and facilitates comparisons of differences between smaller sub-areas and the region.
- Income/ethnicity ratios after adjustments for future change were applied to SCAG's 2020 data set.

### II. Transportation Modeling

- Work trip travel mode splits between public transit and auto were developed for the base year, baseline future year, and RTP plan by TAZ. The future RTP plan model

results showed a substantial increase in transit usage (i.e., nearly 50 percent increase) and an edging down of commuting trips by auto.

- Trip tables were prepared for auto and transit trips origins to all destinations.
- Travel time matrices were prepared for auto and transit between all TAZs.

### III. Calculation of Job-Related Accessibility Measure

- Each TAZ's auto and transit trips were divided into 9 income/ethnicity combinations according to their share of each TAZ's workers.
- Using trip tables, each origin TAZ's auto and transit trips and their distributions among all destinations were broken down and allocated into the nine income/ethnicity combinations.
- TAZ to TAZ travel time matrices were processed by using a 30-minute travel time criteria for automobile and a 30-minute and a 45-minute travel time limits for transit.
- For each origin TAZ, total auto trips (within 30-minutes) and total transit trips (within 30 and 45 minutes) were summarized by the nine income/ethnicity combinations.
- Accessibility measures were prepared by ethnicity/income segment and by transit and auto. These findings were compared for baseline, baseline future and the future plan.

The RTP analysis revealed that socioeconomic backgrounds did not cause any significant variation in travel times to work within the SCAG region. However travel modes did make large differences in travel time — almost 75 percent of transit users incurred more than 30 minutes travel time to work, while less than 40 percent of auto users spent that much time in work commuting.

Moreover, differences in socioeconomic backgrounds did affect the use and choice of transportation mode.

For example, low-income commuters were four times more likely to take public transportation than high-income commuters. This was also true for specific low-income minority populations. Low-income Hispanics and low-income Blacks were far more likely to use public transit (approximately 20 percent probability) compared to other income and ethnicity combinations. This results in a higher percentage of Black (8 percent) and Hispanic (10 percent) commuters using public transportation compared to other ethnic groups (2 percent).



## SCAG's Method for Calculation of "Opportunity" Accessibility Indicator

SCAG followed similar steps taken to derive job accessibility, but additional processing routines were required to calculate an "Opportunity" accessibility measure:

### I. Socioeconomic Data "Opportunity"

- Measures required estimates of entry-level jobs, essential services and retail stores, but this data was not part of the basic future employment forecast and had to be developed. SCAG obtained the number of entry-level jobs by 4-digit Standard Industrial Classification (SIC) code by county from California's Employment Development Department, Labor Market Information Division. County totals for entry-level jobs were allocated to census tracts in accordance with SCAG's 4-digit employment database.
- Essential services jobs were used as a surrogate for representing accessibility to important services. These jobs included commercial banks and saving institutions, personal services, automotive repair, miscellaneous repair, amusements and recreation, health, education, social, religious, private households, police and fire protection.
- Income/ethnicity ratios after adjustments for future change and the additional employment variables (i.e., entry-level jobs, essential services, and shopping) were applied to SCAG's 2020 data set.

### II. Calculation of "Opportunity" Accessibility Measure

- Jobs, essential services and shopping opportunities for the nine income/ethnicity comparisons in each origin TAZ was obtained by adding appropriate opportunities from all reachable TAZs within 30 minutes (auto) and 30 and 45 minutes (transit). The two lowest income groups were restricted to access only entry-level jobs.
- Opportunity accessibility measurements are expressed as a *percent* of total available opportunities in the region. For example, if a low-income Hispanic in a specific TAZ can reach 50,000 entry-level jobs within a 30-minute bus ride, while the SCAG region has a total of 1 million entry-level jobs, the entry-level job accessibility indicator for a low-income Hispanic in this TAZ is calculated as  $50,000 / 1,000,000 = 5\%$

**Two Accessibility Performance Indicators.** In response to comments on the Preliminary RTP, SCAG expanded upon the aggregate measure of accessibility defined as the *percent of workers who travel 25 minutes or less to work*. First, SCAG differentiated accessibility by various income categories, ethnicity groups and travel modes. Second, SCAG created a measure of accessibility focused upon "opportunities" (i.e., employment, essential services and shopping) available within a reasonable travel time, distance range and costs. This second measure, an "opportunity accessibility indicator", was used to evaluate progress in accessibility from transportation improvement strategies.

This analytical method revealed that "transit restructuring" strategies recommended in the Draft 1998 RTP — consistent with the goals of the Consent Order — would enhance greatly the "ease" of work commuting for transit ridership. For example, while work trips within 30 minutes by automobile were estimated to increase by 3.9 percent, work trips by transit would jump 48 percent and 39 percent for transit trips within 30 and 45 minutes, respectively.

The analysis also detailed the impacts of improved transit accessibility for work by income and ethnicity. The analysis indicated that low-income Hispanic and Black commuters would capture a greater than proportionate share of the benefits from the accessibility improvements in 30-minute and 45-minute commutes. Similarly, the transit restructuring strategy was expected to narrow the gap between the use of private autos and public transportation when providing access-to-opportunities other than jobs. The analysis revealed that low-income Blacks were expected to gain the greatest relative improvements in accessibility to opportunities.

**Performance Results — Evaluation of the Plan.** The 98 RTP concluded with a performance evaluation to compare the goals and objectives of the SCAG Region to the 1994 Base Year, the 2020

Baseline (conditions if no plan were adopted) and the 2020 Plan (performance-based constrained programs and policies). Table 2 presents the findings from SCAG’s Equity Performance Indicator in terms of percent of hours saved and percent of monetary value of hours saved. The Plan showed substantial improvements for low-income persons using either term of measurement. For reference purposes, the Plan also reported *percent of total expenditures* which looks at the raw dollars and compares the amounts spent on low-income and high income persons. This latter analysis found that expenditures on programs and projects that are used by low-income persons exceeded expenditures spent on persons in the high-income category.

The performance evaluation section of the RTP also presented performance indicators that reported equity as measured by increased accessibility. SCAG reported that all groups were expected to benefit from improved access when compared with the 2020 Baseline, although there were variations in the level of these improvements by groups (see Table 3). The performance evaluation found that low-income communities enjoyed appreciable gains in accessibility from transit restructuring.

## Effective Environmental Justice Practices

SCAG’s RTP, *CommunityLink 21*, intensively explored the benefits and burdens of their current and prospective transportation program upon various racial, ethnic and income categories. MPOs and states can observe several effective practices important to integrating the principles of environmental justice into transportation planning.

- **Demographic Profile of Socioeconomic Groups.** SCAG used demographic, income, travel and employment information to consider the travel characteristics and needs of low-income and minority populations covered by Civil Rights Title VI and other laws. This analysis was initially

Equity Measured by Share of Benefits				
EQUITY: Equitable distribution of transportation investment benefits				
Performance Indicators	Goal/Objective	1994 Base Year	2020 Baseline	2020 Plan
Percent of Hours Saved				
	Equitable	n/a		
Low Income (<\$12,000 per household)		n/a	9%	16%
High Income (>\$70,000 per household)		n/a	25%	20%
Percent of the Monetary Value of Hours Saved				
Low Income (<\$12,000 per household)		n/a	2%	4.5%
High Income (>\$70,000 per household)		n/a	48%	42%
Percent of Total Expenditures				
Low Income (<\$12,000 per household)		n/a	26%	28%
High Income (>\$70,000 per household)		n/a	15%	15%

**Table 2.** SCAG compared equity as measured by the changing share of hours saved and percent of monetary value of hours saved between the baseline future and the plan.

Equity Measured by Increased Accessibility		
Performance Indicators	Increased Plan Performance Over 2020 Baseline	
Increased Accessibility (Trips <30 minutes) on TRANSIT with Implementation of the Plan		
	Increased Job Access	Increased Transit Access
Low Income (<—\$12,000 per household)	61.7%	22.7%
Medium Income (—\$12,000—\$25,000 per household)	61.1%	21.2%
High Income (—\$25,000 per household)	55.6%	56.1%
Hispanics	59.6%	55.3%
Blacks	72.5%	10.2%
Others	55.8%	34.6%
Increased Accessibility (Trips <30 minutes) on AUTO with implementation of the Plan		
	Increased Job Access	Increased Auto Access
Low Income (<—\$12,000 per household)	24.2%	14.9%
Medium Income (—\$12,000—\$25,000 per household)	24.8%	17.9%
High Income (—\$25,000 per household)	28.2%	67.3%
Hispanics	25.3%	45.3%
Blacks	22.0%	4.4%
Others	26.9%	50.3%
Accessible Job Opportunities as % of Total Region		

**Table 3.** SCAG disaggregated accessibility impacts by income and ethnicity and reported the Plan’s impact in enhancing access to both convenient jobs and other opportunities by both transit and auto.

compiled at the census tract level and translated to SCAG’s traffic analysis zones for travel forecasting purposes. SCAG used post-census, establishment-based job data (ES-202 data) provided by the California Employment Development Department, Labor Market Information Division in order to develop its two

measures of accessibility — jobs and opportunities. Working in close cooperation with the state labor agency, SCAG created an “entry-level” job definition for its accessibility to opportunities measure and then estimated entry level jobs by census tract. SCAG also made creative use of a commercial data set — the Dun & Bradstreet employment data file to estimate the average number of retail jobs per retail store. Retail stores were used as a surrogate for shopping opportunities.

- **Benefits and Burdens Were Integrated into a Performance-Based Methodology.** SCAG treated the equity issues as an integral indicator in its performance-based plan evaluation and decision-making process. This approach institutionalizes the consideration of social impacts of various transportation investment strategies as part of the priority-setting process. Ultimately, it gives the public and decision makers more information to observe and remedy imbalances in the existing or proposed investment plans.
- **Peer Review Committee Challenged and Informed MPO.** SCAG recognized that its investigation of equity raised new and challenging methodological issues for its staff, decision makers, and the public. The agency recognized that it could benefit from a wider forum in which to build a consensus on best methods and draw upon technical expertise. Thus, SCAG staffers opened themselves up to critical comments at an early stage and were better able to improve their technical products and processes by establishing a Peer Review Committee (PRC). The PRC was comprised of a 10-person committee of experts invited to review and comment on technical issues and processes used during the planning process. SCAG brought together experts familiar with national transportation policy, the region’s transportation system, transportation modeling, and tools and processes for decision making such as performance indicators.

- **Employed Alternative Dispute Resolution Approach.** SCAG understood that Title VI was being successfully employed against the region’s major transit service provider in a lawsuit. SCAG’s planning process further confirmed an imbalance in the stream of benefits and burdens to transit-dependent populations. SCAG determined that engaging in a dispute resolution process could prove less costly and time-consuming than a lawsuit and that there were advantages to exploring areas of mutual gain and common ground with the parties objecting to the Preliminary RTP.

## Drawing Upon Technical Expertise: The Peer Review Committee

The PRC was a sounding board for SCAG staff in the development of meaningful performance indicators for the RTP and to build consensus on how to address various technical issues. The PRC met initially in 1995 and reconvened in 1997 to comment upon the performance indicators including the measures used to address equity. The PRC worked with SCAG’s Forecasting Division staff to analyze the quality of indicators capable of illustrating the tradeoffs of transportation policy and investment decisions upon racial and income categories. The PRC included representatives from the following organizations who were recommended by SCAG staff, SCAG elected officials, and Transportation Research Board conference attendees:

- SCAG
- Southern California academic institutions – USC and UCLA
- State Department of Transportation – Caltrans
- Metropolitan Transit Agency – LACMTA
- Private sector transportation consultants
- FHWA – U.S. headquarters

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*“With the lawsuit going on there was clear recognition that issues of environmental justice had to be taken very seriously...”*

*...In shaping the 98RTP, SCAG opened itself up and invited a group of people who did not necessarily agree with their approach, and they actually listened and were responsive. As a result, they came up with a strong set of performance indicators for their regional transportation plan.....*

*....Involving academics in the shaping of performance measures for the RTP brought a different set of skills to the table. For example, the focus on quantitative measures to evaluate environmental justice objectives was key to coming up with such a strong product.”*

— Genevieve Giuliano  
Peer Review Committee member, commenting on lessons learned in preparing a transportation equity analysis in the SCAG RTP.

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## Alternative Dispute Resolution

In the mid-1990s, the Southern California Association of Governments established partnerships with mediation institutes, established rosters of qualified mediators and facilitators, and promoted the increase use of alternative dispute resolution (ADR) methods for problem solving. SCAG’s initiative came in response to a growing number of disputes involving its programs in air quality, transportation and housing and its concerns about gridlock in the siting of critical public works and infrastructure.

SCAG has identified the need for several distinct ADR systems to best address the full range of disputes encountered by the agency. Each ADR system can be differentiated by typical participants, initial convening processes, the role of SCAG as participant or convenor, the role of outside professional service providers and the actual ADR process administered (e.g., facilitation, mediation, arbitration, factfinding). These systems are described in detail in SCAG’s *Alternative Dispute Resolution Systems*.

SCAG has concluded that compliance procedures for environmental justice in transportation planning should include the fullest possible use of ADR techniques for mediation and consensus-building when disputes arise.

- **Public Involvement Processes and Comments Influenced Methods.** Between the preliminary and final studies, SCAG’s equity analysis was refined in response to comment and further study was given to detailing accessibility by income, race and ethnicity. By comparing percentage changes in transit and auto accessibility (e.g., trips under 30 minutes) for various socioeconomic segments, the subsequent report improved its focus on enhancing job accessibility and other opportunities for minorities and the poor. This approach avoids some problematic issues generated by imputing a monetary value to time. It also places a greater emphasis on the question of whether an accessibility gap is being narrowed by the plan so that various income or race categories enjoy similar opportunities.

## Challenges Ahead

SCAG is moving forward now with their update of the regional transportation plan. Staff and decision makers will be confronted again with the substantial challenges that the region faces to manage growth and finance and deliver transportation infrastructure cost-effectively. The allocation of transportation resources will continue to be vigorously debated by parties with differing values and competing visions for the region. The debate’s outcome will have significant implications for the region’s land use patterns, densities, nodes for growth and development, environmental health, livability, accessibility and equity. Transportation decision makers will have to navigate through political, planning and policy processes in order to devise





SCAG is using videoconferencing and posting audio and video transcripts to its web site to engage people across the region. Community dialogues provide a more informal means of involving those not traditionally involved with SCAG planning processes.

politically workable, technically feasible and legally defensible solutions.

In this new round, SCAG faces the challenge to carry forward its commitment to the methods and processes for considering equity and promoting inclusiveness in planning and decision-making processes. SCAG staff recognize that the 98RTP process was a learning experience and have recently developed procedures to improve internal management of future projects and programs which are reported in SCAG's *Compliance Procedure for Environmental Justice in the Transportation Planning Process*. The document describes public outreach strategies to assure that traditionally underrepresented groups can participate meaningfully in processes as well as analyses that SCAG staff conduct to examine equity. The guidance manual has not yet been formally adopted by SCAG's regional council, but its recommendations have been approved by its Transportation and Communications Committee.

SCAG staff are already practicing many of the recommended procedures for the 2001 RTP update

including an improved public outreach and involvement program. Several outreach practices are noteworthy:

- SCAG has retained communications consultants to facilitate regular meetings and workshops, including “Environmental Justice Community Dialogues” targeting low-income and minority populations. Community dialogues are more informal meetings with groups that have not traditionally been involved with SCAG or the RTP planning process. These dialogues are frequently scheduled for evening hours to allow attendance for those who work during the day. For these audiences, which typically include minority groups and low-income populations, a “tutorial” is offered on SCAG and the RTP which describes the nature of a regional planning organization and its function. The RTP is further explained as the planning document for regional transportation. As the discussion evolves with each group, specific needs and issues are identified and recorded as input for the RTP planning process.
- SCAG now maintains a database of contact information for individuals in low-income and minority populations. The community database is developed through each local subregion in order to adequately reflect the needs and interests of each subregion. In addition, the SCAG communications consultant supplements these lists with its own set of community contacts and conducts a comprehensive search of local community organizations and associations using a community development directory. These individuals are routinely updated on public involvement workshops and discussion sessions through mailings.
- Outreach material is translated into Spanish and other languages as needed by a community area. All outreach material is tailored to match local community needs in terms of content and language.



- Local public affairs shows offer an outlet for local communication, particularly for non-English speaking audiences. Local elected officials are asked to serve as regional spokespersons, as appropriate, for these programs, emphasizing the importance of regional planning and the need for local input.

SCAG developed performance-based indicators to improve decision making. The approach presumes that a firm technical foundation can be established that incorporates the values expressed by the public for the assessment of transportation alternatives. However, the measures need to be continually reviewed for their technical quality and relevance by such entities as the Peer Review Committee as well as an informed public. Similar to other MPOs, SCAG will need to refine its methods as new technologies are developed to manage and display data, as new sources (e.g., 2000 Census) become available and more effective practices are disseminated. SCAG recognized the need for such improvements in its previous issues paper for the 1998 RTP. That report identified several areas in need of research pertaining to SCAG’s modeling including:

- Collecting and analyzing data on travel behavior for non-work trips by income and ethnicity and modes of transport;
- Establishing and building a transit network with capacity (level-of-service) constraints;
- Investigating equity and accessibility conditions for low-income ethnic groups living in suburban and rural areas;
- Examining the value of time — theoretical foundations and its measurement by trip types and by income groups;
- Exploring further research in defining and measuring accessibility;
- Analyzing the trade-off between land use and transportation investments for improving

accessibility. For example, developing methods for measuring accessibility impacts from implementing SCAG’s *Livable Community* strategy promoting transit-oriented developments.

Equally important, SCAG’s performance indicators reflect a broad set of goals and objectives put forward for the region and its transportation system. A major challenge that follows from the development of indicators, including equity and accessibility measures, is its full integration into the culture of decision making and the clear setting of priority funding for projects consistent with these objectives. Developing a credible feedback-loop between the performance measure findings and the priority list of recommended projects is a crucial element of bringing community-based goals and objectives into transportation decision making.

Ultimately, however, SCAG must explain its strategies and commitments in terms of its Title VI obligations. It must demonstrate that its planning processes and methods are responsive to imbalances caused by the existing and potential future spending priorities. A major challenge, therefore, is to commit resources — even when scarce — to programs, projects, activities and services capable of addressing potential discrimination in the distribution of transportation benefits and burdens.

## Lessons Learned

SCAG has taken a leadership role in the development of performance indicators that directly consider the issue of equity and accessibility and the impact of transportation policies on minority and low-income groups. SCAG’s efforts are reproducible and within the capabilities of other MPOs. The SCAG RTP process offers important lessons to MPOs and States:

- **Equity and Efficiency Are Not Mutually Exclusive Goals.** Civil Rights and environmental justice advocates and national and local environmental organizations have joined forces in

places such as Southern California and Atlanta. They have identified the MPO as an important forum for promoting a debate about transportation policy and the conservation of financial and environmental resources. These organizations have identified several alternative strategies to the automobile that can be used to promote transit utilization, land conservation, air quality improvements and also be designed to be cost-neutral or beneficial to low-income and minority communities. These strategies include, but are not limited to: livable communities, location efficient mortgages, greater emphasis on car-pooling for low-income travelers, car-sharing,

transit-dedicated funds for congestion road pricing revenues (i.e., “equitable road pricing”), “smart shuttles”, shared-ride taxis and bicycle and pedestrian facilities. The efficiency and equity impacts of these multi-modal strategies place new analytical demands upon the MPOs and have created the need for a broader set of performance-based measures to consider.

- **Benefits and Burdens Can Be Integrated into a Performance-Based Planning Process.** The development of performance indicators to gauge the social and economic effects of transportation plans on minority and low-income populations

## Performance Indicators — Integrating “Equity” and “Accessibility” into Decision Making

SCAG used performance indicators to consider how well alternate transportation plan investments met the target goals and objectives set out for the SCAG region. Scenarios were prepared for the base year, baseline future representing conditions in the absence of a plan, and a future plan with a financially constrained set of programs and projects. The following performance indicators were used:

**Mobility** — Ease of movement of people, goods and services

- *Measures: Work Trip Travel Time, PM Peak Highway Speed, Percent of PM Peak Travel in Delay*

**Accessibility\*** — Ease of Reaching Opportunities as measured by the percent of commuters who can get to work within 25 minutes

- *Measures: Work opportunities within 25 minutes*

**Environment** — Sustainable development and preservation of the existing system and the environment.

- *Measures: Air Quality Conformity, Environmental Impact Report*

**Reliability** — Reasonably dependable levels of service as measured by percent of on-time arrivals

- *Measures: Transit, Highway*

**Safety** — Transit with minimal risk of accident or injury as measured by reduced accidents

- *Measures: Fatality Per Million Passenger Miles, Injury Accidents*

**Livable Communities** — Access to destinations with minimum travel times

- *Measures: Vehicle Trip Reduction, Vehicle Miles Traveled Reductions*

**Equity** — Equitable distribution of transportation investment benefits (as share of benefits)

- *Measures: Percent of Hours Saved, Percent of the Monetary Value of Hours Saved, Percent of Total Expenditures*

**Cost-Effectiveness** — Maximized return on transportation investments

- *Measures: Net Present Value, Value of \$1 Invested*

\* The RTP took a close look at the concept of “accessibility” as a measure of equity. Accessibility was measured and compared by mode of transportation, by income group, and by ethnicity.

Source: *Community Link 21, 98 Regional Transportation Plan*, Southern California Association of Governments.

## Raising the Bar, Addressing the Challenge

Many MPOs in major metropolitan areas work in an environment where transportation decisions are very carefully scrutinized by an informed public and by “special-interest” organizations including environmental, civil rights and environmental justice groups. In the early 1990s, the Environmental Defense Fund (EDF) closely monitored SCAG’s regional transportation planning methods and decisions with particular attention to air quality. During this period EDF promoted market pricing mechanisms (e.g., VMT tax, incentive toll pricing) to encourage the full-pricing of “externalities” such as air quality impacts. However, concern for the equity impacts of such solutions led to a second EDF report, *Efficiency and Fairness on the Road: Unsnarling Southern California’s Traffic*. Three years in the making, this 1994 report disaggregated travel behavior and mobility by income groups and determined that the lowest income groups were receiving fewer benefits than anyone else. Recognizing that few means existed to quantify these impacts, EDF developed a transportation equity methodology allowing for an assessment of transportation system benefits and costs.

This research was an important technical foundation for advocacy groups working on behalf of the minority poor who challenged the practices and priorities of the Los Angeles County Metropolitan Transportation Agency. This challenge resulted in the landmark Title VI lawsuit and 1996 Consent Decree.

can be a powerful means of assessing the equitable distribution of transportation benefits. Developing and adopting performance indicators appropriate for community, neighborhood, social, economic, and “people” impacts of transportation plans can help MPOs and other transportation agencies address concerns about transportation equity and environmental justice. SCAG’s

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*“The inclusion of transportation equity as a performance indicator really encouraged everyone to be much more open-minded. For the first time we had to look beyond the addition of or discontinuation of a bus line, and really examine the equity issues at stake.”*

— Zahi Faranesh  
SCAG Participant on Peer Review Committee

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integration of equity and accessibility considerations into a performance-measure based method of plan evaluation places these issues on an equal footing with other more traditional considerations in transportation planning. The inclusion of these criteria in plan evaluation and decision making provides an opportunity to identify and address the potential for discrimination when responding to the travel needs of many different populations and communities in the region.

- **Room for Improvement in Public Involvement Processes.** The Transportation Plan is a recurring product within the metropolitan planning process. There are significant advantages in transportation planning from reaching out to all transportation users including minority and low-income individuals to understand the needs and barriers to access and opportunity. SCAG has learned from its previous RTP Plans that they needed to make a greater commitment to building long-term relationships in order to solicit input from minority and low-income communities. They have instituted a series of environmental justice dialogues, retained a public outreach consultant to conduct workshops and regular meetings, and developed databases of interested individuals as part of a proactive strategy to do outreach earlier in the RTP process.

## Benefits from Environmental Justice in Decision Making

### For Low-Income and Minority Populations:

- The RTP assessed the financial burden of a predominantly automobile-based transportation system upon people with limited economic means and considered how the costs of the system as well as the public transit service patterns may influence accessibility for low-income persons.
- The mobility needs, transportation system deficiencies, resource allocation patterns and investment priorities were analyzed in a context in which transportation planners grappled with fairness to low-income and minority populations. The data was presented in a manner that allowed low-income and minority communities to consider how various transportation policies were affecting their lives.
- Analyses revealed that a small portion of the existing transit routes carried the majority of transit trips. The costs and farebox subsidies required to provide fixed rail route and bus service were closely analyzed in light of the different income segment and population categories served by each mode. These findings led to: transit restructuring strategies including redeployment of local fixed route assets; improvements to express bus services; exploration of “smart shuttles”- demand responsive feeder systems to facilitate greater transit and bus usage; and the identification of several transit corridor projects for which transit solutions are to be developed.

### For the Agencies:

- Civil Rights Title VI obligations spurred the agency to assess the equity issues at stake with the addition and discontinuation of transportation services. The adoption of transportation equity as a performance indicator institutionalized a more comprehensive technical approach and a more inclusive public involvement approach to decision making.
- Agency transportation planners, modelers and economists were called upon to extend the state-of-the-practice in transportation planning to assess the benefits and burdens of their current program. They were challenged to use the data and tools at their disposal, devise appropriate new analytical methods, and look more closely at performance measures such as accessibility as well as consider how various income, race and ethnic groups were affected by the resource allocation priorities for investments and services.
- Transportation decision makers were provided with sufficient information and context to compare the distributional impact of various transportation strategies upon minority and low-income populations. The planning process was able to respond to the analyses produced and support remedies to improve access and public transportation services for these populations.

- **Dispute Resolution Processes Offer an Alternative to Litigation.** During the course of the RTP’s development, SCAG faced the threat of a lawsuit and opposition from community based organizations, grass roots and environmental groups, civil rights and environmental justice advocates regarding the priorities embodied in the plan. SCAG worked through an alternative dispute resolution process to develop a better understanding of the positions held by these groups. SCAG reopened its planning processes to solicit greater involvement. These meetings were a learning experience for SCAG staffers and it has altered

SCAG’s approach to conducting public involvement meetings for its upcoming planning process.

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