CHAPTER 8

Equity and Choice

Introduction

SACOG is required by law to conduct an environmental justice and Title VI analysis as part of the MTP/SCS, to determine whether the MTP/SCS benefits low-income and minority communities equitably, whether the Plan’s transportation investments have any disproportionate negative effects on minority and/or low-income populations in the SACOG region, and whether the plan has disparate impacts on the basis of race, color, or national origin. These environmental justice areas will be referred to throughout this chapter as Low Income High Minority (LIHM) Areas.

While Chapter 5 analyzes the general performance of the MTP/SCS, this chapter provides SACOG’s environmental justice and Title VI analysis. The chapter seeks not only to fulfill SACOG’s legal requirements to analyze environmental justice and Title VI impacts of the MTP/SCS, including expanded performance measures from previous MTPs, but also to understand and compare the benefits and effects of the MTP/SCS for the region’s residents, including those who live in more low-income or minority communities.

The chapter includes the following:
- Legal and regulatory requirements for environmental justice analysis
- How Low Income/High Minority (LIHM) Areas are defined for SACOG’s analysis
- Characteristics of LIHM Areas
- Analysis of LIHM Area impacts of the MTP/SC
- FTA guidance and findings for Title VI analysis
- Plan implementation efforts and strategies for enhancing analytical capacity and expertise.

Legal and Regulatory Framework

Planning Process and Required Environmental Justice Analysis

Title VI of the Civil Rights Act, first adopted in 1964, set the initial legal framework for environmental justice analysis, stating that “No person . . . shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Title VI was later amended to include gender, religion, and disability. In 1987, it was further amended to extend non-discrimination requirements for recipients of federal aid to all of their programs and activities, not just those funded with federal funds.

California Government Code Section 11135(a) also addresses discrimination by recipients of state funds: “No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state.”

To implement and ensure compliance with these statutes, federal and state agencies have issued a series of orders, regulations and guidance on environmental justice. In 1994, President Clinton issued Executive Order 12898 on “Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations.” In 1997, the Department of Transportation followed up with an Order on Environmental Justice designed to implement the Executive Order.

In December 1998, the Federal Highway Administration (FHWA) issued its own environmental justice order.

2 http://www.fhwa.dot.gov/environment/environmental_justice/facts/dot_ord.cfm
Chapter 8: Equity and Choice

As a federally designated metropolitan transportation planning organization (MPO), SACOG is required to comply with the rules and policies set forth by FHWA. FHWA outlines three main principles underlying environmental justice:

- 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.
- Ensure full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income groups.

Per FHWA’s guidance on environmental justice:

“MPOs serve as the primary forum where State DOTs, transit providers, local agencies, and the public develop local transportation plans and programs that address a metropolitan area’s needs. MPOs can help local public officials understand how Title VI and environmental justice requirements improve planning and decision making. To certify compliance with Title VI and address environmental justice, MPOs need to:

- Enhance their analytical capabilities to ensure that the long-range transportation plan and the transportation improvement program (TIP) comply with Title VI.
- Identify residential, employment, and transportation patterns of low-income and minority populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.
- Evaluate and - where necessary - improve their public involvement processes to eliminate participation barriers and engage minority and low-income populations in transportation decision making.”

Engagement & Education for the 2016 MTP/SCS

SACOG’s adopted guide for public involvement, the Public Participation Plan (PPP), identifies opportunities for public input for the MTP/SCS planning process. The engagement process provides information on transportation plans, timely public notice, full public access to key decisions, and opportunities for early and continuing involvement in the process for all segments of the region’s population, including low-income and minority communities. The current PPP was adopted in August of 2013.

As part of the development process for the 2016 MTP/SCS, SACOG worked to bring in more members of environmental justice communities as defined by statute, and to reach out to other underrepresented populations including persons with disabilities, youth, seniors, recent immigrants and limited English speakers. The goal of this outreach strategy was to obtain feedback from all segments of the population and to ensure broad participation representative of the region’s demographic profile at the public workshops.

Critical to SACOG’s overall effort to reduce vehicle miles traveled (VMT) and greenhouse gas emissions is understanding the travel choices residents of the region will want and need to make in the future. As such, public input from all segments of the population was critical to the development of this MTP/SCS. Beyond meeting the federal requirement for addressing unique needs of low-income and minority communities, SACOG is sensitive to ensuring that transportation investments set forth in this MTP/SCS help support diverse transportation choices that reflect and meet the travel needs of the region’s residents.

To meet the goal of better engaging with low-income, minority, and underrepresented residents, SACOG not only used the legally required techniques described in Chapter 2: The Planning Process but also sought out underrepresented residents not included in the environmental justice statute.
Key efforts included:

- Ongoing consultation with a stakeholder Sounding Board, including representatives from equity, public health, affordable housing, senior, disabled, and human service groups, described in more detail in Chapter 2.
- Translation of MTP/SCS workshop fliers for all locations into Spanish, the most common non-English language spoken in the region.
- On-site Spanish translation.
- Outreach through transit-accessible and popular local community events, with opportunities for education, one-on-one conversation, and completing preference surveys.
- An on-line version of the public workshop and survey in Spanish and English.
- A scientific telephone poll of 1,600 residents representative of the region's demographic diversity.
- Consideration of findings and recommendations from recent Short Range Transit Plan updates, Unmet Transit Needs hearings, and a 2011 SACOG study assessing the needs of transit-dependent residents in the region to reach essential or "life-line" destinations.  

For more information related specifically to the 2016 MTP/SCS workshops, see Chapter 2: The Planning Process.

Low Income High Minority Area Definition

FHWA requires MPOs’ environmental justice analyses to address persons belonging to any of the following groups:

- Black - a person having origins in any of the black racial groups of Africa.
- Hispanic - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- Asian - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- American Indian and Alaskan Native - a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.
- Low-Income - a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

For more information related specifically to the 2016 MTP/SCS workshops, see Chapter 2: The Planning Process.

The Council on Environmental Quality’s guidance for environmental justice analysis under the National Environmental Policy Act (NEPA) also provides the following definitions for minority individuals and minority populations:

Minority individuals are defined as members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black; or Hispanic.

Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

However, Caltrans’ Desk Guide on Environmental Justice in Transportation Planning and Investments — developed for public agencies, elected officials, community-based organizations, and concerned citizens — cautions that, “while these are the official definitions for NEPA analyses, they may not be appropriate for
assessing environmental justice issues in transportation plans, particularly in a state like California where minority individuals are the majority of residents.\textsuperscript{4}

In 2011, SACOG received a three-year Regional Planning for Sustainable Development grant from the U.S. Department of Housing and Urban Development for regional planning to complete a Regional Plan for Sustainable Development and accelerate transit-oriented development (TOD) to support implementation of the Blueprint Vision and MTP/SCS. As part of this grant work, SACOG had the opportunity to work with faculty and students of the UC Davis Center for Regional Change (CRC) on enhanced equity indicators and performance measures to inform SACOG’s equity analyses for the MTP/SCS. CRC’s work included assistance on defining low-income, minority and vulnerable areas to reflect the growing diversity of the six-county region.

Population data from the 2010 Census Survey showed that the Sacramento region had significantly increased in diversity since the prior Census. Between 2000 and 2010, the Black/African-American population in the region grew by 21 percent, the population of two or more races grew by 29 percent, Hispanic and Asian populations both grew by 56 percent, and the Native Hawaiian/Other Pacific Islander population grew by 93 percent, compared with 5 percent total growth in the Caucasian/White population. New five-year (2009-2013) data for the Sacramento region recently became available from the American Community Survey (ACS), which provides more detailed data at the Census block group level. As shown in Table 8.1, the “minority” population has grown to half or more of the population in Sacramento, Sutter and Yolo counties, and 45 percent of the region’s population.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>El Dorado</td>
<td>15%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Placer</td>
<td>17%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>42%</td>
<td>52%</td>
<td>52%</td>
</tr>
<tr>
<td>Sutter</td>
<td>40%</td>
<td>50%</td>
<td>50%</td>
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<tr>
<td>Yolo</td>
<td>42%</td>
<td>50%</td>
<td>51%</td>
</tr>
<tr>
<td>Yuba</td>
<td>35%</td>
<td>41%</td>
<td>42%</td>
</tr>
<tr>
<td>Region</td>
<td>36%</td>
<td>44%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Data

SACOG staff worked with the stakeholder Sounding Board to confirm the following definitions for Low Income High Minority (LIHM) Areas for this equity analysis, using the newer 2009-13 ACS block group data available since the last plan:

- **Low-Income Communities:** Census Block Groups where 45 percent or more of the population earns 200 percent or less of the federal poverty level. Block groups meeting this threshold include about 29 percent of the region’s population.
- **Minority Communities:** Census Block Groups where 70 percent or more of the population is Asian Pacific Islander, African American, Hispanic, Native American or other Non-White ethnic group. Block groups meeting this threshold include about 8 percent of the region’s population.
- **Vulnerable Communities:** Block groups in the region that, when compared with the regional average, are in the top quintile on at least four of these five vulnerability measures:
  - Housing cost burden: percent of renter- and owner-occupied housing units paying more

than 50 percent of household income in housing costs.

- Single parent households: percent of family households with their own children under age 18 with a single householder.
- Older population: percentage of population aged 75 and older.
- Educational attainment: percentage of population 25 years and older with less than a high school degree.
- Linguistic isolation: percent of households where English is not the primary language and is not spoken very well.

This third criterion adds to the LIHM Areas three block groups totaling about 6,000 people. Combined, the total population of the resulting LIHM Areas is about 32 percent of the total regional population.

A more in-depth technical review of the methodology used to identify LIHM Areas is contained in Appendix C-5 – Low Income and High Minority Areas Methodology.

LIHM Area Characteristics

Of the 1,427 block groups in the region, 426 make up the region's LIHM Areas. A total of 350 block groups meet low-income criteria alone and 44 meet both low-income and minority criteria, totaling 89 percent of the LIHM Area population. Another 25 block groups meet minority community criteria alone, with 10 percent of the LIHM Area population. Seven block groups meet vulnerability criteria alone, with 0.8 percent of the population. Figure 8.1 illustrates where block groups meet only a single threshold compared with block groups that meet both low-income and minority thresholds.

While all of these areas, shown in Figure 8.1, are included for purposes of this analysis, it is interesting to note that there are a number of block groups defined as LIHM Areas that are ethnically diverse, but without the low-income or vulnerability characteristics that tend to predict greater needs for public transportation or other services due to income, age, household status, or transit-dependency.

It is also important to note that:

- Whether areas qualify as “LIHM” or “Non-LIHM” depends on thresholds for block groups that quantify the residents of an area, but they are not monolithic. There are residents who do not have low incomes and/or who are not from minority groups who reside in LIHM Areas. There are also low-income and minority residents who live in Non-LIHM Areas.
- Although increasing proportions of Hispanic and Asian residents are forecasted for the region, with its current analytical tools, SACOG is not able to predict where future minority populations – or low-income populations – will locate in future. As a result, for purposes of this analysis, SACOG assumes that the areas in the 2012 base year that qualify as LIHM Areas will be the same in 2036. This means that SACOG analyzes performance measures for all residents of the same LIHM and Non-LIHM geographies in 2012 and 2036, but cannot meaningfully say whether the residents of those areas will continue to have the same minority, income and/or vulnerability characteristics in 2036 as in 2012. Since projections are that the Sacramento region will continue to become
more diverse, the populations living in what are now defined as LIHM or Non-LIHM Areas will likely be different in 2036. This continued diversification, combined with the MTP/SCS commitment to provide a full range of housing choices in sub-areas throughout the region—reinforced by state Regional Housing Needs Allocation requirements—means that some of the MTP/SCS LIHM Area analysis for later years may understate benefits or overstate impacts for future minority and/or low-income populations.

- Senior and disabled populations are not included in the FHWA low-income and minority definitions, and were consequently not specifically included in the demographic analysis in this chapter. However, the transportation needs and opportunities to improve transportation services for these groups were also considered in developing the MTP/SCS recommendations.

- Youth are also not specifically included in the FHWA definitions, but have their own transportation needs. The Healthy Youth/Healthy Regions study for the area, commissioned by Sierra Health Foundation with additional funding provided by The California Endowment and conducted by the UC Davis Center for Regional Change found that, “Vulnerable youth often perceive the physical infrastructure of the Capital Region as an obstacle to their well-being. Young people bemoan the lack of sidewalks or bike lanes on routes they must travel to study, work and shop, inadequate and expensive public transportation and the absence of areas designated for teen gathering and recreation.” The MTP/SCS considered improvements to meet youth transportation needs as well.

5 Center for Regional Change, Healthy Youth/Healthy Regions: Informing Action for the 9 County Capital Region and its Youth, July 2011, p. 19
Figure 8.1
Map of LIHM Areas Showing Block Groups Meeting Single or Multiple Thresholds

- **200% of U.S. Poverty**: Areas where 40% or more of people are living at 200% or less of the federal poverty level
- **70% Minority**: Areas where 70% or more of people are Non-White and/or Hispanic

Other Vulnerability
- City Boundaries
- County Boundaries

Source:
* 2010 Census/2005-2009 ACS
** 2010 Census
## Table 8.2
Demographic Information for LIHM vs. Non-LIHM Areas

<table>
<thead>
<tr>
<th>Region</th>
<th>Persons per Household</th>
<th>Persons living in households earning less than 200% of federal poverty level</th>
<th>White</th>
<th>Black</th>
<th>American Indian/Alaskan Native</th>
<th>Asian</th>
<th>Native Hawaiian/Other Pacific Islander</th>
<th>Other Race</th>
<th>Two or More races</th>
<th>Hispanic or Latino</th>
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<td><strong>El Dorado County</strong></td>
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<td></td>
</tr>
<tr>
<td>LIHM Analysis Areas</td>
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<td>50%</td>
<td>72%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
<td>21%</td>
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<td>19%</td>
<td>83%</td>
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<td>1%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>9%</td>
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<td><strong>Placer County</strong></td>
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<tr>
<td>LIHM Analysis Areas</td>
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<td>63%</td>
<td>1%</td>
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<td>2%</td>
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<td>7%</td>
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<tr>
<td>LIHM Analysis Areas</td>
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<td>33%</td>
<td>14%</td>
<td>1%</td>
<td>16%</td>
<td>1%</td>
<td>0%</td>
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<td><strong>Sutter County</strong></td>
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<td>14%</td>
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<td><strong>Yuba County</strong></td>
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<td>0%</td>
<td>4%</td>
<td>31%</td>
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<tr>
<td>Non-LIHM Areas</td>
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<td>64%</td>
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<td>11%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2009-2013 American Community Survey (ACS)

* Does not include Lake Tahoe portions of either county.
Key characteristics of LIHM analysis areas include:

- About 32 percent of the region’s population lives in the defined LIHM Areas. With the five-year ACS data that became available between the 2012 MTP/SCS and this plan, El Dorado County and Placer County now have defined LIHM Areas because of income data available at the Census Block Group level, described more fully in Appendix C-5. As a result of this block group detail, communities with low-income residents are now observed within the context of larger census tracts that do not meet the thresholds.

- People in the LIHM Areas are more than twice as likely to be classified as low income as people in other areas.

- Between the 2012 plan and this plan update, the number of block groups increased from 386 to 426 where 45 percent or more of the population earns 200 percent or less of the federal poverty level. This likely reflects both the more detailed data from the ACS and the effects of the recession on many households’ income.

- The number of block groups in the region meeting both low-income and minority criteria decreased from 112 to 44, and the number meeting the 70 percent minority threshold alone decreased from 106 to 25 block groups, highlighting the increasing diversification of the region discussed later in this section.

- Households in LIHM Areas tend to use transit, walking and bicycling at significantly higher rates than Non-LIHM households – more than twice the rate for transit use and a 55 percent greater rate for walking and bicycling region-wide. Table 8.3 shows regional mode shares from SACOG’s travel demand model for both LIHM and Non-LIHM Areas. This also indicates that, while less than Non-LIHM Areas, the large majority of LIHM Area residents use personal vehicles for transportation.

### Table 8.3

**Comparison of Non-Auto Mode Shares between LIHM and Non-LIHM Areas, 2012**

<table>
<thead>
<tr>
<th>Area Type</th>
<th>Transit</th>
<th>Bicycle &amp; Walk</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIHM Areas</td>
<td>2.0%</td>
<td>13.2%</td>
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<tr>
<td>Non-LIHM Areas</td>
<td>0.9%</td>
<td>7.5%</td>
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</table>
Analysis of LIHM Area Impacts

Chapters 5A, 5B, and 5C provide an in-depth discussion of the overall MTP/SCS performance and access and mobility improvements over the plan period. This chapter analyzes MTP/SCS performance and impacts specifically on LIHM Areas compared with Non-LIHM Areas.

Location and Housing Choice

Community Types
Chapter 3 discusses in more detail the Community Types developed as part of the land use framework for the MTP/SCS. The MTP/SCS projects significant growth in both housing and employment in Center and Corridor Communities and Established Communities, with these infill areas also supported by a greater mix of uses and transportation options.

In 2012, nearly one-fifth of the population of LIHM Areas lived in Centers and Corridors and over three-quarters in Established Communities. By 2036 over 223,000 more people in LIHM Areas and 588,000 people in Non-LIHM Areas will live in these Community Types, where land uses and housing and employment densities are planned to better support transit services and other mode choices for access to home, work, daily needs and services. By the end of the plan period, about 27 percent of the LIHM Area population and 8 percent of the Non-LIHM Area population will be in Centers and Corridors and about two-thirds of both LIHM and Non-LIHM Area population will be in Established Communities.

Table 8.4 shows these shifts between 2012 and 2036. The other major increase of Non-LIHM Area population will be in Centers and Corridors and about two-thirds of both LIHM and Non-LIHM Area population will be in Established Communities.

<table>
<thead>
<tr>
<th>Community Type</th>
<th>Percent of LIHM Area population in 2012</th>
<th>Percent of LIHM Area population in 2036</th>
<th>Percent of Non-LIHM Area population in 2012</th>
<th>Percent of Non-LIHM Area population in 2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center/Corridor</td>
<td>19%</td>
<td>27%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Established</td>
<td>77%</td>
<td>67%</td>
<td>78%</td>
<td>66%</td>
</tr>
<tr>
<td>Developing</td>
<td>2%</td>
<td>5%</td>
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<td>17%</td>
</tr>
<tr>
<td>Rural Residential</td>
<td>2%</td>
<td>1%</td>
<td>10%</td>
<td>9%</td>
</tr>
</tbody>
</table>
Population in Transit Priority Areas

MTP/SCS transit investments are especially focused on supporting high-quality transit in Transit Priority Areas slated for greater housing and employment growth, as described in more detail in Chapters 3 and 4. The MTP/SCS identifies Transit Priority Areas (TPAs) within a half-mile of quality transit service in Placer, Sacramento and Yolo counties. As shown in Table 8.5, 36 percent of Placer County’s LIHM Area residents, and over 60 percent of Sacramento and Yolo county’s LIHM Area residents lived in TPAs in 2012.

By 2036, LIHM Area population in Placer, Sacramento and Yolo counties is expected to grow by 32 percent overall, but with a 40 percent increase in the population and 38 percent increase in the jobs within TPAs in those counties. This provides minority, low-income, or other residents of LIHM Areas with greater opportunities to live and/or work near quality transit.

The population and employment growth in TPAs also benefits Non-LIHM Areas, where population overall is expected to grow by 37 percent, with an 18 percent increase in the population and 40 percent increase in jobs in TPAs in the three counties. This should provide new opportunities for residents who live in Non-LIHM Areas to live and/or work near transit as well, including minority or low-income individuals.

### Table 8.5
Comparison of LIHM and Non-LIHM Areas with Transit Priority Areas, 2012 and 2036

| County | 2012 | | 2036 | | |
|---|---|---|---|---|
| | LIHM Area % in TPA | Non-LIHM Area % in TPA | LIHM Area % in TPA | Non-LIHM Area % in TPA |
| El Dorado | 0% | 0% | 0% | 0% |
| Placer | 36% | 9% | 44% | 33% |
| Sacramento | 62% | 31% | 80% | 54% |
| Sutter | 0% | 0% | 0% | 0% |
| Yolo | 61% | 44% | 56% | 48% |
| Yuba | 0% | 0% | 0% | 0% |
| Region | 54% | 23% | 67% | 43% |
| El Dorado | 0% | 0% | 0% | 0% |
| Placer | 37% | 7% | 46% | 27% |
| Sacramento | 64% | 29% | 78% | 49% |
| Sutter | 0% | 0% | 0% | 0% |
| Yolo | 68% | 44% | 62% | 51% |
| Yuba | 0% | 0% | 0% | 0% |
| Region | 57% | 21% | 68% | 38% |
Chapter 8: Equity and Choice

Demographic Shifts
As noted earlier, SACOG does not forecast future locations of low-income and minority populations, so our analysis is limited to what is expected to happen concerning the population growth in identified geographic locations in the region, but not the demographic make-up of the population in these locations. However, it is likely that there will be a greater demographic and income mix in the various Community Types and TPAs over the planning period.

Dowell Myers, Director of the Population Dynamics Research Group in the University of Southern California’s School of Policy, Planning and Development, notes that in California, “An earlier generation—predominantly white and now aging—is being replaced by a new generation comprising immigrants and their children, who are a mix of U.S.-born young of all ethnicities.”6 Myers’s research has found upward mobility in terms of education, English proficiency, income, and homeownership among long-term first generation Latino and other immigrants, their second-generation children and third-generation grandchildren. A 2013 report by Dowell Myers and Michael Pitkin for the Research Institute for Housing America and Mortgage Bankers Association, found that between 2000 and 2010, immigrants accounted for 82 percent of the growth in homeownership in California. This reinforces the likelihood of increasing demographic diversification across the region’s current LIHM and non-LIHM Areas and Community Types over the planning period. Additionally, SB 375 requires COGs to “identify areas within the region sufficient to house 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 [and to] identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region.” Additionally, SB 375 requires that a COG’s regional housing need allocation (RHNA) to individual cities and counties be consistent with the SCS (provided that the aggregate regional RHNA is maintained and that every jurisdiction receives an allocation of housing need for very low- and low-income households). Changing housing demand plus California’s unique law, with its emphasis on housing for all income groups as one of its factors and the requirement that the SCS and RHNA must be consistent with each other, may also mean more increasing income diversity in what are currently LIHM and non-LIHM Areas.

Housing Product Mix
As discussed in more detail in Chapter 3, the MTP/SCS land use plan projects significant housing and employment growth in more central areas of the region. Consistent with the Blueprint Vision, this growth provides a greater range of housing and transportation options for both existing and new households.

The MTP/SCS projects nearly 165,000 new homes and over 367,000 new jobs in Center and Corridor and Established Communities, where LIHM Area populations are expected to increase significantly, as well as nearly 115,000 homes and 69,000 jobs in Developing Communities. The MTP/SCS projects 37 percent of new housing units and 42 percent of new employees will be in Transit Priority Areas, within a half-mile of quality transit service. This means that a significant portion of new homes will be close to employment, and in areas with a mix of uses and transportation mode alternatives. The increased accessibility provided within TPAs is discussed in more detail later in this chapter.

In addition, the MTP/SCS projects an increasing diversity of housing types in the region, providing more choices and a greater range of housing prices. In 2012, 64 percent of the region’s housing stock was large-lot single family, with 11 percent small-lot single family homes, and 25 percent attached – such as condominiums, townhomes, apartments, and lofts. In 2014, SACOG updated its Trends in the Housing Market, which can be found in Appendix E:3 - Land Use Forecasting Background Documentation. The report identifies several major factors that will likely change the demand for these housing types in the region over the plan period:

- The two largest age cohorts are the Baby Boomer generation (born between 1946 and 1964) and

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Chapter 8: Equity and Choice

the Millennial generation (born between 1981 and 1999). According to 2012 projections for California's population made by John Pitkin and Dowell Myers of USC's Population Dynamics Research Group, those age 65 and over will increase from 11 percent of California's population in 2010 to 15 percent in 2020 and 20 percent in 2035.

• Housing surveys show growing preferences among older adults for downsizing, small lot single family homes and attached products, transit, walking and biking options, proximity to shopping, parks, and services, and renting rather than owning.

• The majority of the region's population growth will come from immigrants and their offspring. Hispanic and Asian residents will be the largest growth groups, continuing the trends since 2000. Pitkin and Myers project that Hispanic residents will increase from 38 percent of California's population in 2010 to 55 percent in 2020 and 56 percent in 2035, while Asian/Pacific Islander residents will increase from 14 percent of California's population in 2010 to 17 percent in 2020 and 22 percent by 2035.

• Asian, Hispanic, and African-American residents tend to form fewer households because of a higher prevalence of intergenerational living. In 2012, about 25 percent of Hispanic and African-American residents and 27 percent of Asian-Americans lived in households with at least two adult generations, compared with 14 percent of Caucasians.

• Household formation rates are lower for younger age groups. In 2012, 36 percent of the nation's millennials were living with their parents, the highest proportion in 40 years. The median age of first marriage is rising and women are delaying having children.

• One-person households will likely continue to grow over the next several decades, particularly among older adult households.

These population shifts suggest that demand for housing in the region will be influenced particularly by the choices of older residents to stay in their homes or downsize, and by younger households, and that that demand for smaller homes and rentals will increase for both groups, due to smaller household sizes and affordability to more households.

As shown in Table 8.6, by 2036, the MTP/SCS plans for these demographic shifts by increasing the proportion of small-lot and attached homes to 62 percent of the new housing stock in LIHM Areas, and 37 percent of the new housing options in Non-LIHM Areas.

| TABLE 8.6 |
| Housing Product Mix, 2012 and 2036 by LIHM and Non-LIHM Area |

<table>
<thead>
<tr>
<th>LIHM AREAS</th>
<th>Rural Residential</th>
<th>Large-Lot Single Family</th>
<th>Small-Lot Single Family</th>
<th>Attached</th>
<th>Small Lot Plus Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of LiHM Area homes by type, 2012</td>
<td>2%</td>
<td>44%</td>
<td>13%</td>
<td>41%</td>
<td>54%</td>
</tr>
<tr>
<td>Share of total homes in LiHM Areas by type, 2036</td>
<td>1%</td>
<td>36%</td>
<td>15%</td>
<td>48%</td>
<td>62%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Non-LIHM Area homes by type, 2012</td>
<td>11%</td>
<td>61%</td>
<td>11%</td>
<td>18%</td>
<td>29%</td>
</tr>
<tr>
<td>Share of total homes in Non-LIHM Areas by type, 2036</td>
<td>9%</td>
<td>55%</td>
<td>15%</td>
<td>22%</td>
<td>37%</td>
</tr>
</tbody>
</table>
SACOG cannot project the rental or sales prices of new development in particular communities, but smaller lot and attached housing types generally cost less to own or rent than large-lot homes. Chapter 3 notes that attached homes generally include a higher proportion of rentals than detached homes. The growth in these options is expected to increase housing choices and affordability for lower income, minority and other households throughout the region. Chapter 3 contains more detail on these housing types and their growth in the different Community Types over the plan period.

**Transportation and Accessibility**

The MTP/SCS complements planned land use changes with improvements in transportation options that increase residents’ access to key destinations. This section analyzes a series of transportation performance measures used to assess the plan’s benefits for LIHM and Non-LIHM Area residents, including accessibility from LIHM and Non-LIHM Areas by both transit and driving to such key destinations as jobs, medical facilities, higher education and parks.

The analysis uses a weighted average for the jobs, higher education enrollments, and park acres that can be accessed by transit or car in the region. These weighted averages make it possible to assess changes in accessibility for the average resident in the region, given that the number of origins and destinations varies over time for each county. Both transit and auto accessibility performance measures use 30 minutes for travel time to allow some comparisons.

**Transit Service in the MTP/SCS**

Between 2008 and 2012, transit revenues dropped, which required transit funding adjustments in the 2012 MTP/SCS. Because LIHM Area residents tend to be more reliant upon transit service than other segments of the population, scenarios that add transit services have been consistently high priorities in community workshops and focus groups. Despite revenue constraints, the MTP/SCS seeks to optimize the provision of transit services in the region and invest in transit improvements that serve LIHM Areas.

Although the 2012 MTP/SCS contained a 17 percent reduction (10 percent per capita) in transit expenditures from the 2008 MTP, it still nearly doubled vehicle service hours regionwide compared with the 2008 base year. With the fix-it-first orientation of this plan update, transit capital investments increase by 6 percent to address needs for keeping transit vehicles and facilities in a state of good repair. Expenditures for transit operations remain consistent with the 2012 plan. Service hours on buses serving LIHM Areas still increase by 111 percent; service hours on rail and bus routes that serve LIHM Areas increase by 108 percent. Transit investments in the MTP/SCS allow service frequencies to improve on existing and new routes and provide new transit options. Figure 8.2 shows the expanded transit network by 2036.

For shorter trips, the increase in shuttle services can improve access to longer distance bus and rail options. New shuttle services benefit all residents, but the greatest benefit for LIHM Area residents comes from improved service targeting local trips to shopping, medical facilities, and other public services.

For longer distance trips, extensions of light rail south to Cosumnes River College and north to Natomas, along with a network of bus rapid transit (BRT)/enhanced bus corridors in the MTP/SCS, benefit LIHM as well as non-LIHM Areas. BRT services are limited-stop buses that run frequently all day to connect major activity centers. Many higher-density areas become “activity centers” by 2036 that contain a large share of the new jobs, shopping and medical facilities. The MTP/SCS connects existing and new activity centers with numerous proposed bus rapid transit corridors. While routes provide regionwide benefits, corridors directly serving LIHM Areas include new bus rapid transit routes planned for Florin Road, Stockton Blvd., Watt Ave., El Camino Ave., and Auburn Blvd. that will help improve cross-town travel speeds and connect activity centers to neighborhoods with poor connections today.
Figure 8.2
2036 Transit Network Compared with LIHM and Non-LIHM Areas

- **200% of U.S. Poverty**
  - Areas where 40% or more of people are living at 200% or less of the federal poverty level
- **70% Minority**
  - Areas where 70% or more of people are Non-White and/or Hispanic
- Minority and Poverty
- Other Vulnerability
Reducing transfers is also important to transit-dependent and choice riders who seek a trip that is comparable to the time it would take to drive. The number of transfers will continue to largely depend on the distance traveled, but with the new land use pattern in 2036 changing to better reflect Blueprint principles, many trips will be shorter because of compact and mixed land uses. For longer transit trips that do require a transfer, the increased frequency of service along many routes results in improved “timed transfers” (shorter waiting times), and ultimately a faster transit trip. Additionally, Connect Card, the region’s new transit smart card fare collection system, is planned to roll out on nine transit agencies in 2016. It will offer customers easier connections between transit vehicles and systems, as well as free card registration and balance protection in case of loss or theft.

Chapter 4 provides additional detail on transit investments in the plan. Chapter 10 and Appendix B-1—Financial Plan discuss some of the ongoing transit funding challenges facing the region.

Transit Accessibility

LIHM Areas already tend to have higher concentrations of jobs and housing. As detailed in Chapter 3, the MTP/SCS projects significant future housing and employment growth in Centers and Corridor and Established Communities. The combination of this land use pattern with the transit investments in the MTP/SCS is expected to improve transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas. This section assesses changes in transit access to a variety of destinations over the plan period for residents of both LIHM and Non-LIHM Areas.

As noted previously, SACOG uses weighted regional averages for 2012 and 2036 for each measure (jobs, higher education, etc.). The two weighted averages are then compared to calculate the percentage increase in accessibility over the plan period. However, these weighted averages should not be read as the total numbers of jobs, enrollments or park acres that residents in the region can access, which vary from county to county. As a weighted average, the numbers instead provide an indication of the average number of jobs or other destinations that the average resident in the region can reach via transit (or auto later in the chapter), rather than total access for individuals living in LIHM or Non-LIHM Areas in a particular county.

Job Access

Transit access to jobs between 2012 and 2036 improves for both LIHM and Non-LIHM Areas. Regionwide between 2012 and 2036, as shown in Figure 8.3, jobs accessible within 30 minutes via transit increase by 64 percent from LIHM Areas, and 71 percent from Non-LIHM Areas, using the weighted average methodology described above.

Access by transit to retail jobs also improves for LIHM and Non-LIHM Areas. Projections of retail job growth are developed starting with a regional estimate of retail demand. That regional demand is then allocated to local land use plans, based on a methodology described in more detail in Appendix E-3. Retail job access is included as a performance measure in this analysis both to measure access to jobs which tend to be entry-level, lower-wage employment opportunities and to measure access to necessary retail services.

As shown in Figure 8.3, between 2012 and 2036, retail jobs accessible by transit from LIHM Areas increase by 47 percent and from Non-LIHM Areas by 45 percent.
FIGURE 8.3
Increase in Jobs Accessible within 30-Minute Transit Travel Time

Transit Access to Jobs

Increase in Jobs Accessible by Transit

Transit Access to Retail Jobs

Increase in Retail Jobs Accessible by Transit
Access to Medical Care

Access by transit to medical services as measured by access to medical-related jobs also improves by 50 percent from LIHM Areas and 62 percent from non-LIHM Areas between 2012 and 2036 as illustrated in Figure 8.4.

SACOG defines medically-related services broadly: doctors, dentists, chiropractors, radiologists, mental health professionals, laboratories, imaging centers, etc. These services are provided throughout the region in a multitude of settings, including public and private hospitals and clinics, medical and dental complexes, and individual practitioners’ offices. The most effective way that SACOG has found to date to assess transit access to “medical services” is to measure access to “medical jobs” as defined above. The current number and location of these medical jobs is derived from SACOG’s parcel-based employment inventory described in Appendix E-3. SACOG then forecasts the growth in medical jobs to 2036. Figure 8.5 shows the location of medical jobs throughout the region in 2012.

SACOG does recognize limitations with this measure. The measure used in this LIHM analysis is of transit access to medical jobs, rather than to medical services. It is currently not possible to measure or forecast each resident’s access to medical services due to the range of providers available, the fact that residents may or may not have an applicable health or dental insurance plan for a nearby facility, or be able to afford co-pays or direct fees for service.
Figure 8.5
Medical Jobs in the Sacramento Region

Medical Jobs
Hospitals
City Boundary

Source:
*2010 Census/2005-2009 ACS
**2010 Census
Access to Higher Education

Higher education is an important stepping stone to careers and employment for many of the region’s LIHM and Non-LIHM Area residents. For this analysis, higher education is defined as public and private universities and colleges, including all of the region’s community colleges and satellite campuses (but not adult schools, GED, remediation or vocational training programs that serve targeted populations).

Similar to the previous measure, the most accurate measure in SACOG’s current toolbox is transit access to enrollments at colleges and universities in the region. This serves as a proxy for all of the institutions of higher education that the average student in an LIHM or Non-LIHM Area can reach via transit. Enrollments are projected to 2036 based on current enrollments, enrollment growth projected by individual colleges and universities, planned campus sites, and expected population growth.

Access to higher education improves with investments made in the MTP/SCS, as demonstrated in Figure 8.6. Regionwide between 2012 and 2036, the number of enrollments accessible via transit within 30 minutes increases by 44 percent from LIHM Areas, as well as 37 percent from Non-LIHM Areas. These increases are due both to improved transit service, as well as a 36 percent projected growth over the plan period in higher education capacity in the region, particularly in more central areas.

No transit accessibility measure can address which colleges or universities offer the training or degree programs sought by LIHM or Non-LIHM Area residents or whether student applicants will be accepted for admission, but SACOG recognizes limitations even with its current methodology. Assessing transit access to enrollment levels may understate or overstate transit access from LIHM Areas to the variety of higher education institutions in the region. This is another performance measure for which SACOG intends to search for more comprehensive data sources for use in future plan updates.

FIGURE 8.6
Transit Access to Higher Education
Increase in Higher Education Enrollments Accessible within 30-Minute Transit Travel Time

Transit Access to Higher Education

Increase in Higher Education Accessible by Transit
Access to Parks

Access to parks is important for youth and adult physical activity, health and recreation opportunities.

Access to parks in this analysis is defined as access to park acres. Future park acreage is projected through 2036 using a standard park ratio of 5 acres per 1,000 population for areas with new growth. As shown in Figure 8.7, by this measure park acres accessible within 30 minutes by transit increase by 47 percent from LIHM Areas and by 63 percent from Non-LIHM Areas. LIHM Area residents also have transit access to more park acres on average than Non-LIHM Area residents, likely due to the greater availability of transit services in more central areas.

Parks vary from small neighborhood playgrounds to large regional parks, and in park conditions, such as the presence of a community or recreational center in the park, or problems with vandalism or crime that deter use. SACOG’s methodology measures access to the number of park acres, rather than the number or types of parks the average person in LIHM and Non-LIHM Areas can access via transit. SACOG plans to explore new methodologies that can better capture transit access to parks from LIHM and Non-LIHM Areas, taking into account the significant variation in parks across the region, as well as proximity for walk or bike access.

Transit Mode Share

As a result of the land use pattern and transit projects and expenditures in the MTP/SCS, transit use increases as a mode share. Table 8.7 shows transit mode share increases in the region between 2012 and 2036. Although transit use remains limited, in most counties transit mode share more than doubles for both LIHM and Non-LIHM Areas.

SACOG also analyzed the percentage of trips made by transit based on household income. As indicated in Table 8.8, households of all income levels increase the proportion of their trips made by transit as a result of the land use pattern and transit investments in the plan, with those in the lowest income brackets using transit the most.
Chapter 8: Equity and Choice

### Table 8.8

<table>
<thead>
<tr>
<th>Household Income Level</th>
<th>Percent of All Travel by Transit, 2012</th>
<th>Percent of All Travel by Transit, 2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $15,000</td>
<td>4.4%</td>
<td>9.2%</td>
</tr>
<tr>
<td>$15,000 - $30,000</td>
<td>1.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>$30,000 - $50,000</td>
<td>1.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td>$50,000 - $75,000</td>
<td>0.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>More than $75,000</td>
<td>0.6%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

**Active Transportation**

A new metric for plan performance is the proportion of the LIHM and non-LIHM Area population achieving over 30 minutes of physical activity via their transportation. On most days, nearly half of all adults in California do not meet the recommended level of 30 minutes of moderate physical activity, a widely accepted standard developed by the Centers for Disease Control and Prevention as part of their physical activity guidelines. This lack of physical activity increases risk factors for many chronic diseases and contributes to rising medical care costs. Indeed, work by the California Center for Public Health Advocacy found the economic costs associated with physical inactivity in the six-county Sacramento region to be over $1.1 billion in 2006. Overall, adults from LIHM income levels and minority groups (except American Indians and Alaskan Natives) are less likely to meet recommended physical activity levels, and thus more likely to incur increased medical care costs. However, the region’s transportation system can help support increased physical activity and its associated health benefits, in addition to providing access to jobs, education and other opportunities.

For this active transportation indicator, SACOG assessed the number of people in the region who get at least 30 minutes of physical activity from active modes of transportation, defined as bike trips, walk trips, and the walk component of transit trips (i.e., walking to and from the transit station/stop on either end of the trip). This assessment was performed using SACOG’s regional travel demand model. The measure only looks at physical activity from transportation itself, and does not capture other ways residents may reach the recommended 30-minute threshold, such as going to a gym, participating in organized sports, recreational walking or biking, or doing household chores or yardwork.

The plan anticipates that by 2036 over a quarter of the LIHM Area population will be in Centers and Corridors and about two-thirds of both LIHM and Non-LIHM Area population will live in Established Communities. This active transportation measure shows that these land use patterns combined with plan investments in transit and bicycle/pedestrian infrastructure result in increases in use of active transportation modes and minutes of physical activity that outpace population growth. This increase in active transportation is especially apparent in LIHM areas: by the horizon year of the plan, residents of LIHM areas who meet recommended physical activity levels just by how they commute and travel through the region increase by 79 percent, while the population of these same areas rises by only a third. By 2036, through using active transportation modes, over 14 percent of all people living in LIHM areas surpass the threshold of 30 minutes of physical activity most days, and 8 percent of individuals in non-LIHM areas, as shown in Table 8.9.
Table 8.9
Increases in Individuals with over 30 Minutes of Daily Active Transportation, 2012 & 2036

<table>
<thead>
<tr>
<th></th>
<th>LiHM Areas</th>
<th>Non-LiHM Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2036</td>
</tr>
<tr>
<td>Population</td>
<td>692,002</td>
<td>914,893</td>
</tr>
<tr>
<td>People with over 30 mins. of active transportation</td>
<td>69,360</td>
<td>124,017</td>
</tr>
<tr>
<td>% with over 30 mins. of active transportation</td>
<td>10%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Auto Accessibility

As noted earlier, a majority of LIHM Area residents travel by personal vehicle to their destinations, as do a majority of Non-LIHM Area residents. For this reason, this analysis also examines the effect of the MTP/SCS on access by auto from both LIHM and Non-LIHM Areas to key destinations. It is important to note that SACOG uses the same methodology for assessing auto accessibility as for transit accessibility, so the explanations and caveats for performance measures found in the transit accessibility section apply to measurements of auto accessibility as well.

As noted previously, this analysis uses a weighted average for the jobs, higher education enrollments, and park acres that can be accessed by car. Auto travel time is calculated as the time spent driving from home to destination, including time to park.

SACOG has also assessed a number of other health-related measures and models with support from the Strategic Growth Council. SACOG is continuing to explore additional potential health metrics for projecting and monitoring public health outcomes in the next plan cycle. Appendix C-6 – Active Transportation/Health Metrics Research details SACOG’s work to date.
Job Access by Car
As shown in Figure 8.8, access to jobs within a 30-minute drive increases. Jobs that can be accessed increase by 41 percent from LIHM Areas and 36 percent from Non-LIHM Areas between 2012 and 2036. Auto access also increases to retail jobs, 23 percent from LIHM Areas and 17 percent from Non-LIHM areas, although the total job base is lower.

Access to Medical Jobs
Figure 8.9 illustrates the 36-37 percent increase in medical jobs that can be accessed within a 30-minute drive from both LIHM and Non-LIHM areas across the region. As with the transit access measure, SACOG is using medical jobs as the best currently available proxy for access to medical services.
Chapter 8: Equity and Choice

Higher Education Access
Auto access to higher education also improves by 27 percent for residents of LIHM Areas and 21 percent from Non-LIHM Areas in the region. Figure 8.10 shows these increases in auto access within 30 minutes to higher education enrollments.

Figure 8.10
Auto Access to Higher Education, 2012-2036
Increase in Higher Education Enrollments Accessible within 30 Minutes by Car

Access to Parks
Lastly, SACOG measured the improvement in auto access to parks between 2012 and 2036. By 2036, as shown in Figure 8.11, park acres accessible by car increase by 12 percent from both LIHM Areas and Non-LIHM Areas.

Figure 8.11
Auto Access to Parks, 2012-2036
Increase in Park Acreage Accessible within 30 Minutes by Car
SACOG also conducted a regional analysis comparing transit and driving access within 30 minutes from LIHM and Non-LIHM Areas. Table 8.10 shows the change over the plan period in the percentage of the region’s total jobs, higher education enrollments, and park acreage that can be accessed by transit and car from LIHM and Non-LIHM Areas within 30 minutes. The table also uses a weighted average for the jobs, higher education enrollments, and park acres that can be accessed by transit or driving.

Table 8.10 indicates that regionally, transit accessibility within 30 minutes to jobs, medical jobs, and higher education is projected to improve for residents of LIHM Areas, but auto accessibility from LIHM and non-LIHM Areas to jobs declines slightly when viewed from a region-wide perspective. This can likely be explained by the MTP/SCS’s emphasis on employment growth and transit improvements particularly in Centers and Corridors and Established Communities. While transit access improves for these areas over the plan period, driving to these infill areas in 2036 may take longer for more outlying residents, slightly reducing the number of destinations that can be reached within a 30-minute drive.

However, not surprisingly for our region, driving will continue to provide greater access than transit. By 2036 from LIHM areas, close to 50 percent of the region’s jobs and medical jobs, and over 60 percent of higher education enrollments will be accessible within 30 minutes by car, compared with around 11 percent of jobs and 17 percent of higher education enrollments that are accessible within 30 minutes by transit. This is not unexpected, given that transit often takes longer for similar trips due to routing, stops, and transfers, and does not serve all locations.

From Non-LIHM Areas, about a third of the region’s jobs and medical jobs and 43 percent of higher education enrollments will be accessible within 30 minutes by car and about 6 to 8 percent by transit. This difference is likely because Non-LIHM Areas include more Developing and Rural Residential Communities with less local employment, fewer college campuses, lower levels of transit service, and from which workers and students tend to commute longer distances by car.

For park access, by 2036 residents of LIHM Areas are expected to have access to about 25 percent of the region’s park acres by car but only 4 percent by transit within 30 minutes. Residents of Non-LIHM Areas are projected to have access to 20 percent of the region’s park acres by car vs. 3 percent by transit within 30 minutes. As discussed previously, SACOG plans to continue refining these performance measures over time.

**Table 8.10**

**Comparison of Transit and Driving Accessibility within 30 Minutes from LIHM and Non-LIHM Areas**

<table>
<thead>
<tr>
<th>Type of Accessibility</th>
<th>Percent of Regional Total Accessible within 30 Minutes by Transit</th>
<th>Percent of Regional Total Accessible within 30 Minutes by Car</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>from LIHM Area</td>
<td>from Non-LIHM Area</td>
</tr>
<tr>
<td><strong>Jobs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>2036</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Medical Jobs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>2036</td>
<td>12%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Higher Education Enrollments</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>16%</td>
<td>8%</td>
</tr>
<tr>
<td>2036</td>
<td>17%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Park Acres</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>2036</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Toxic Air Contaminants

The California Air Resources Board in 2005 developed guidance stating that “sensitive receptors” (homes, schools, day care centers, parks, hospitals, etc.) be located outside a 500-foot buffer of major roadways, defined as freeways or urban roads with traffic volumes of 100,000 or more vehicles per day or rural roads with 50,000 or more vehicles per day.

Table 8.11 shows the percent of the population within and outside this 500-foot buffer in LIHM and Non-LIHM Areas in the region. In both 2012 and 2036, the percentage of total LIHM Area population exceeds the percentage of total Non-LIHM Area population within the buffer zone by about 2:1; however combined, the proportion of both LIHM and Non-LIHM Area population within the buffer zone increase only slightly between 2012 and 2036, from 2.7 to 3.1 percent of the entire region’s population.

<table>
<thead>
<tr>
<th>County</th>
<th>% of total LIHM Area Population</th>
<th>% of total Non-LIHM Area Population</th>
<th>% of total LIHM Area Population</th>
<th>% of total Non-LIHM Area Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Dorado</td>
<td>0.6%</td>
<td>0.7%</td>
<td>99.4%</td>
<td>99.3%</td>
</tr>
<tr>
<td>Placer</td>
<td>3.6%</td>
<td>1.8%</td>
<td>96.4%</td>
<td>98.2%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>4.5%</td>
<td>2.3%</td>
<td>95.5%</td>
<td>97.7%</td>
</tr>
<tr>
<td>Sutter</td>
<td>1.4%</td>
<td>2.1%</td>
<td>98.6%</td>
<td>97.9%</td>
</tr>
<tr>
<td>Yolo</td>
<td>5.4%</td>
<td>2.4%</td>
<td>94.6%</td>
<td>97.6%</td>
</tr>
<tr>
<td>Yuba</td>
<td>4.0%</td>
<td>0.6%</td>
<td>96.0%</td>
<td>99.4%</td>
</tr>
<tr>
<td><strong>Region Total</strong></td>
<td><strong>4.4%</strong></td>
<td><strong>2.0%</strong></td>
<td><strong>95.6%</strong></td>
<td><strong>98.0%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County</th>
<th>% of total LIHM Area Population</th>
<th>% of total Non-LIHM Area Population</th>
<th>% of total LIHM Area Population</th>
<th>% of total Non-LIHM Area Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Dorado</td>
<td>2.8%</td>
<td>0.9%</td>
<td>97.2%</td>
<td>99.1%</td>
</tr>
<tr>
<td>Placer</td>
<td>4.3%</td>
<td>1.6%</td>
<td>95.7%</td>
<td>98.4%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>5.0%</td>
<td>2.9%</td>
<td>95.0%</td>
<td>97.1%</td>
</tr>
<tr>
<td>Sutter</td>
<td>1.7%</td>
<td>1.5%</td>
<td>98.3%</td>
<td>98.5%</td>
</tr>
<tr>
<td>Yolo</td>
<td>7.6%</td>
<td>2.2%</td>
<td>92.4%</td>
<td>97.8%</td>
</tr>
<tr>
<td>Yuba</td>
<td>4.0%</td>
<td>0.5%</td>
<td>96.0%</td>
<td>99.5%</td>
</tr>
<tr>
<td><strong>Region Total</strong></td>
<td><strong>5.1%</strong></td>
<td><strong>2.2%</strong></td>
<td><strong>94.9%</strong></td>
<td><strong>97.8%</strong></td>
</tr>
</tbody>
</table>
The science behind such environmental hazards analysis is continuing to evolve. In 2005, the California Air Resources Board issued its Air Quality and Land Use Handbook: A Community Health Perspective. The Handbook sought to provide guidance concerning potential health impacts associated with proximity to air pollution sources, while stating, “with careful evaluation, infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.” In 2009, the California Air Pollution Control Officers Association (CAPCOA), expanding on the ARB Handbook, released a Health Risk Assessments for Proposed Land Use Projects Guidance Document. The CAPCOA Guide outlined recommended procedures to identify when a project should undergo further risk evaluation, how to conduct a health risk assessment, and mitigation measures appropriate for various land use projects.

Building on the ARB and CAPCOA guidance, SMAQMD developed its Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways. The Protocol was most recently updated in January 2011. According to SMAQMD, risk is highly site-specific. The height of nearby freeways, prevailing winds, and other factors can make a significant difference in whether potential development sites pose elevated risks or not. Risks are also different for children, seniors and those with certain health conditions than for healthy adults. The SMAQMD Protocol recommends incorporating best practices to reduce pollutant exposure for projects contemplated within 500 feet of a freeway or major roadway, and defines when a site-specific health risk assessment is necessary and the methodology for conducting one.

In February 2015, the Office of Environmental Health Hazard Assessment (OEHHA) issued a new Guidance Manual for air districts on evaluating toxic air contaminants. SMAQMD and other air districts will be working to update their own programs to reflect the new Guidance Manual. While none of these guidance documents are regulatory, they do provide information, methodologies, and best practices for land use decision makers to make informed land use decisions on siting new residential projects and other sensitive land uses in proximity to freeways and major roadways, and to consider public health along with other priorities such as housing and transportation needs, and the benefits of urban infill and community economic development.

At the same time, a statewide discussion has been taking place among affordable homebuilders, equity interests, and public health experts seeking to better understand the relationship between infill development and public health. Through discussions with SMAQMD, academics and these interests, SACOG has identified a number of considerations for assessing exposure to high-volume roadway toxic air contaminants:

- SACOG does not have the capacity to assess every individual site within the buffer zone for potential variations in risk, but SMAQMD asks developers to conduct health risk assessments on a project-by-project basis to assess risk for planned residents or users, and provides guidance and methodologies for conducting such assessments.
- There are tradeoffs between the health benefits and risks of siting new residential development in infill areas near transit, which often runs on major roadway corridors. Risks of exposure to toxic air contaminants from proximity to freeways and major roadways may need to be weighed along with such benefits as better transit access to health care, lower transportation costs that leave more money for medical care, and new higher quality housing and increased physical activity for residents that can help improve health.
- State and federal agencies provide points in competitive housing funding programs for affordable home developments near frequent transit, recognizing that lower income residents tend to be more transit-dependent.
- Increasingly cleaner vehicles are reducing some of the health risks from air contaminants. Best practices also exist to mitigate risks, such as sitting residences and sensitive receptors furthest away from the roadway, reducing windows facing the freeway or major roadway, installing HVAC systems and planting trees that filter out air contaminants, etc.
Given the site-specific nature of exposure risk and available mitigation strategies, it is likely that the population that may experience exposure risk is even less than the 3 percent of the population in SACOG’s analysis. In addition, of the small number of residents within the buffer zone in LIHM and Non-LIHM Areas, it is likely that the population is diverse in ethnicity and income level, especially by 2036. Trends will likely continue to geographically decentralize the concentrations of LIHM populations compared to today; the inherent limitations in estimating impacts on LIHM compared with Non-LIHM populations in 2036, together with SACOG’s inability to project the location of the new population within these two categories, likely mean that these data over-state the differences between LIHM and Non-LIHM populations for exposure to air contaminants. SACOG still has no way of further quantifying these effects at this time.

Freeway and major roadway exposure as a performance measure is a step towards identifying the effects on LIHM and Non-LIHM Areas of environmental hazards. The Air Resources Board has also developed guidance for siting sensitive receptors near other permitted sources of toxic air contaminants, such as chrome plating operations, dry cleaners using perchloroethylene, petroleum refineries, and large gasoline dispensing facilities. SACOG is also seeking to identify these uses in the region and the potential for exposure. SACOG plans to expand its capacity to analyze environmental hazards and infill tradeoffs in future MTP/SCS.

**Roads and Related Improvements**

Road projects in the MTP/SCS are located throughout the region and are not disproportionately concentrated in LIHM Areas. Figure 8.12 illustrates the key road projects overlaid on LIHM and non-LIHM Areas. Due to funding shortfalls, the MTP/SCS reduces funds for road capacity investments by 9 percent per capita from the level in the 2012 MTP, while increasing road maintenance/rehabilitation and bicycle/pedestrian funding by 20 and 12 percent, respectively. It is important to note that because a portion of funds are categorical, not all projects that will be funded over the life of the plan can be mapped.

The MTP/SCS supports complete streets and investments in bicycle and pedestrian facilities. As discussed in Chapter 4, bike and pedestrian improvements are funded both directly and indirectly in the MTP/SCS. While $2.8 billion is included specifically for bicycle and pedestrian improvements, including bicycle trails, sidewalks, ADA retrofits, and supporting facilities, SACOG encourages member agencies to consider all users in the planning, construction, operation, and maintenance of any transportation projects contained in the plan.

Sample MTP/SCS road projects that benefit LIHM Areas include:

**City of Citrus Heights**
Rehabilitation and complete street improvement of Antelope Road, Auburn Blvd., and Greenback Lane, including ADA, pedestrian, bicycle, and transit facilities.

**City of Elk Grove**
Implementation of Project AWARE (Advancing Walk and Roll Environments) to identify needed roadway improvements to support students walking and biking safely to multiple schools in the city.

**City of Lincoln**
Improvements to Lincoln Boulevard, the city’s main street, between First St. and McBean Park Dr. to provide a more pedestrian, bicycle- and Neighborhood Electric Vehicle (NEV)-friendly environment, including wider sidewalks, crosswalks, intersection bulb-outs, and Class 2 bike/NEV lanes.

**City of Live Oak**
Numerous road rehabilitation and streetscape improvement projects to support community redevelopment, including drainage, curb and gutter, sidewalks, and bike lanes.

**City of Marysville**
Planning and infrastructure projects to improve safe bicycle and pedestrian routes to various local schools.
City of Sacramento

- Improvements to Meadowview Rd. from the light rail station to I-5 and along 24th St from Meadowview Rd. to Florin Rd., including medians, sidewalk treatments, and crosswalks.
- Improvements to North 12th Street between Richards Blvd. and North B Street to support the Twin Rivers Choice Neighborhood plan, including sidewalk widening, drainage and safety improvements, and Regional Transit planning for a new Blue Line light rail station at North 12th Street and Richards Blvd.

Sacramento County

Complete street improvements such as sidewalk and intersection improvements and bike lanes on Fulton Avenue from Arden Way to Auburn Blvd., Cottage Way between Cortez Ln. and Watt Ave., and Fair Oaks Blvd. from Marconi to Engle Rd. including along the frontage of Carmichael Park.

City of Woodland

Streetscape improvements on East Main Street, including sidewalks, 10-foot off-street bike path, landscaping, class II bike lanes and bus turnouts.

Yuba City

Replacement of the two-lane 5th Street Bridge across the Feather River with an upgraded four-lane bridge, including pedestrian/bicycle improvements to facilitate travel between Yuba City and Marysville.

Yuba County

Complete street improvements to North Beale Road in the area of Yuba Community College in Linda, and to Olivehurst Ave. from 7th Ave. to McGowan Pkwy, and a roundabout at the intersection of Olivehurst Ave. and Powerline Rd., with lighting, refuge islands, and widened sidewalks to facilitate pedestrian and bicycle travel.
Figure 8.12
Map of MTP/SCS Projects Compared with LIHM and Non-LIHM Areas

- Transit Projects
- Roadway Projects
- LIHM Areas

Source: USGS, Esri, TANA
A complete list of projects is in Appendix A-1 – Project List.

As a result of the MTP/SCS land use pattern and roadway, bike and pedestrian facility investments, walking and bicycling are expected to increase as a mode share in the region in both LIHM and Non-LIHM Areas, as shown in Table 8.12.

<table>
<thead>
<tr>
<th>Area</th>
<th>2012 Bicycle and Walk Mode Share</th>
<th>2036 Bicycle and Walk Mode Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIHM Areas</td>
<td>13.2%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Non-LIHM Areas</td>
<td>7.5%</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

**Table 8.12**

**Bike and Walk Mode Share in the SACOG Region, 2012 & 2036**

Title VI Analysis

While environmental justice is a principle for federal agencies to ensure their programs and activities do not disproportionately burden low-income and minority populations, Title VI provides legal protection from discrimination in federal programs on the basis of race, color, or national origin.

Following the adoption of the 2012 MTP/SCS, the Federal Transit Administration (FTA) issued a new Title VI Circular, Circular 4702.1B, in October 2012. The Circular provides guidance to metropolitan planning organizations (MPOs) such as SACOG and other recipients of federal Department of Transportation (DOT) funding to ensure that their programs, policies, and activities comply with DOT’s Title VI regulations. Every three years, SACOG and other MPOs must submit a Title VI Program report providing information and analysis on their compliance with Title VI regarding nondiscriminatory delivery of services and benefits under federally-funded programs or activities. The Circular further states:

In its regional transportation planning capacity, the MPO shall submit to the State as the primary recipient, and also to FTA:

1. All general requirements) set out in section 4 of Chapter III of this Circular;
2. A demographic profile of the metropolitan area that includes identification of the locations of minority populations in the aggregate;
3. A description of the procedures by which the mobility needs of minority populations are identified and considered within the planning process;
4. Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data, at 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;
5. An analysis of impacts identified in paragraph (4) that identifies any disparate impacts on the basis of race, color, or national origin, and, if so, determines 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.

SACOG conducted a Title VI analysis per FTA guidance, and did not identify disparate impacts based on race, color or national origin. Detail on the analysis may be found in Appendix C-5.
Strategies

Chapter 6: Policies and Strategies, contains a number of policies and strategies SACOG intends to pursue to help implement the MTP/SCS consistent with the Blueprint Principles and Rural-Urban Connections Strategy (RUCS), support local governments with data, tools, analysis and technical assistance, and address roadway, transit, goods movement, bicycle/pedestrian, and other transportation needs in the region.

SACOG is committed to deepening its ability to analyze and address performance considerations in its planning activities. Since the adoption of the 2012 MTP/SCS, SACOG has undertaken a number of efforts designed to help implement the plan and Blueprint vision for the region. These efforts include:

**Technical Assistance**

Through funding from the Strategic Growth Council's third grant round, SACOG is working with Portland State University's Urban Sustainability Accelerator (USA) Program to provide technical assistance to cities and counties in the region on specific priority local projects that will help intensify/revitalize a Center, Corridor, or Established Community. SACOG is also beginning a program of technical assistance to cities, counties, developers, public health staff, advisory councils/neighborhood groups, and other stakeholders on addressing older commercial corridors and advancing healthy communities through active design/transportation policies, plans and implementation.

**Community Revitalization and Capacity-Building in Disadvantaged Communities**

In a project funded by the Strategic Growth Council, Sierra Health Foundation and The California Endowment, SACOG is working with Portland State University’s Center for Public Interest Design, community organizations and residents to investigate and complete feasibility studies for reuse/revitalization efforts in disadvantaged areas of South Sacramento and Del Paso Heights.

**Regional Bicycle, Pedestrian and Trails Master Plan**

SACOG updated the regional Master Plan for bicycle, pedestrian and trails improvements in Spring 2015, with help from member jurisdictions and the Bicycle and Pedestrian Advisory Committee. The plan can be found in Appendix H-1 - Regional Bicycle, Pedestrian and Trails Master Plan.

**Safe Routes to School Education and Encouragement Project**

With partner organizations, staff has been creating trainings and tools to help sustain new and continuing Safe Routes to School programs in the region.

**Regional Bike/Ped Data Collection**

SACOG is developing a pilot bicycle/pedestrian counter data collection program to help inform bicycle infrastructure planning, and bicycle/pedestrian project evaluation standards to help guide future regional funding rounds.

**Bikeshare Pilot Project**

SACOG is leading an effort to plan, install and operate a pilot system of bikeshare stations serving the cities of Sacramento, West Sacramento, and Davis, including addressing access for residents of disadvantaged communities.
Connectivity Study of Transportation Services to Improve Health Care Access

Funded through a Caltrans discretionary planning grant, this regional study implements a recommendation of SACOG’s Lifeline Transit Study to identify and analyze needs and alternatives to improve transportation access to health and mental health care.

Rural Ride-Sharing Alternatives Planning Study

Through a Caltrans grant, SACOG staff will lead a planning study of ridesharing alternatives to serve seniors, persons with disabilities and low-income families living in very rural portions of the region where public transit is costly, limited or non-existent.

Housing Element Assistance

As part of HUD-grant funded work to explore housing programs and requirements across the region, SACOG staff developed regional data sets to support member jurisdictions’ work on required updates of their housing elements.

Access to Local Food

Through the RUCS project, described in more detail in Chapter 7: Environmental Sustainability and Appendix E2 – Rural-Urban Connections Strategy, SACOG is continuing to conduct studies and analyses to support rural and urban agricultural production and greater access to local, healthy food in the region.

Specific areas where SACOG hopes to build future analytical capacity and expertise for MTP/SCS and planning efforts include:

- Jobs-Housing Fit and Housing plus Transportation Cost measures. SACOG is continuing its efforts to develop consistent, data-supported methodologies that help to increase the understanding of SACOG and its members of local housing costs and their relationship to local wages paid and transportation costs, to help support housing and transportation planning efforts.
- Refinement of MTP/SCS projections of the location of future populations, housing and employment, and of performance measures such as medical, higher education, and park access.
- Environmental hazard measures to reflect evolving science and address evolving legal requirements for environmental analysis.
- Measures of public health benefits of planning efforts, such as access to food, walkability, etc.
- Measures of benefits to older adults, as the region ages.
- Measures of benefits to youth as the future residents of the region.

SACOG is also continuing to explore combined and individual indicators that would broaden SACOG’s biannual monitoring report and help deepen the region’s understanding of progress made in implementing the MTP/SCS and Blueprint vision.