SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

# THE STATE OF THE REGION 2006

*Measuring Regional Progress*






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# THE STATE OF THE REGION 2006

*MEASURING REGIONAL PROGRESS*

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# PREFACE

The Southern California Association of Governments (SCAG) is the largest regional planning organization in the nation. For the past four decades, SCAG has been working collaboratively with local governments, stakeholders and partners in developing a shared regional vision and resolving regional challenges. SCAG has served as a regional forum where ideas for a better future are cultivated, discussed and consensus is developed.

The SCAG region, also referred to as Southern California in this report, includes six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 187 cities. Currently, the region ranks 10th among the world economies. It is also one of the top global gateway regions serving both the nation and the global community. Hence, the performance of Southern California will not only impact the quality of life of its own residents but also carry national and global implications.

*The State of the Region 2006,* through the use of a set of performance indicators, tracks Southern California's progress in achieving the goals in SCAG's *Regional Comprehensive Plan and Guide*. It compares the recent performance of our region with its own previous record and that of the other large U.S. metropolitan regions. The report is intended to raise public awareness, focus policy deliberations and shape collective actions on vital issues affecting our shared future.

The report also includes three guest essays on critical regional issues from different perspectives. The first essay furnishes an in-depth look at demographic dynamics and their implications for the region. The second essay explores residents' opinions on quality of life in the region in contrast to the report's findings from outcome-based indicators. Recognizing the growing significance of energy issues for Southern California and beyond, the third essay focuses on the challenges facing local governments with respect to energy. In addition, a new section on energy has been included in this report.

Preparation for the 2006 Report was guided by SCAG's Benchmarks Task Force, consisting of local elected officials and regional issue experts in Southern California. A companion piece, the State of the Region Report Card, includes grades for selected issue areas developed by the Benchmarks Task Force. The complete 2006 State of the Region Report and Report Card along with reports from previous years have been posted on the SCAG website at *www.scag.ca.gov.*

# EXECUTIVE SUMMARY

*The State of the Region 2006* focuses on the performance of Southern California since 2000, particularly in 2005. As documented in the previous State of the Region Reports, the SCAG region lost significant ground during the 1990s relative to the other large metropolitan regions particularly in the areas of employment, income and educational attainment. For example, among the 17 largest metropolitan regions in the nation, Southern California's per capita income ranking dropped from 7th highest in 1990 to 16th in 2000. This was primarily due to the economic and demographic transformations occurring in the region. They included the 1991-1994 recession, the most severe one since the Great Depression accompanied by record levels of residents leaving Southern California as well as influx of immigrants. Nevertheless, during the same decade, the region was able to achieve significant progress in improving air quality and reducing violent crimes.

Since the 2001 national recession, the SCAG region did not achieve any meaningful growth in employment and per capita income until 2004, nevertheless, it performed somewhat better than the rest of the nation between 2001 and 2004. The 2001 recession, which centered on the high tech industries, impacted other large metropolitan regions more severely than the SCAG region. Since 2005, the rest of the nation has achieved full recovery and entered into an expansion stage following the SCAG region.

Also since 2001, the dynamics in the housing and energy markets generated broad impacts on the performance of the region. Between 2001 and 2005, median home prices across the region generally doubled, while gasoline prices increased by almost 60 percent, from $1.60 to $2.50 per gallon. While housing price surges provided stimulus to economic growth, energy price increases, particularly since 2004, have begun to constrain growth as evidenced by, for example, the slowing growth in taxable sales.

During 2005, the region experienced mixed performance in most issue areas addressed in the report including, for example,

employment, income, and air quality. For example, with respect to job market performance, benefits from the job base expansion and unemployment rate reductions were offset by declining job quality measured in average payroll per job. In addition, slight improvements in per capita income were tempered by the slight decline in the median household income. In 2005, steep increases in energy prices and the resulting higher cost of living limited economic growth, but also helped to stabilize the impacts of growth (e.g. traffic congestion and air pollution).

Highlights of the findings are summarized below, and discussed in depth in the main report.

**1. Population growth in the region has been slowing since reaching its largest annual increase in 2001. Nevertheless, the increase of 222,000 residents in 2005 in the region still accounted for about 8 and 50 percent of the growth in the nation and the state respectively. The region also continued the demographic transformation in its ethnic composition, longer settlement of the foreign-born population, growing population share of immigrants' second-generation descendants, and the aging of the overall population.**

Since 2000, population in the region has increased by almost 1.5 million or about 300,000 per year, matching the region's highest average annual increase during the 1980s. After reaching its largest annual increase in 2001 of approximately 350,000, population growth in the SCAG region slowed to 222,000 in 2005. A major factor behind the slowing growth was the recent turnaround from net domestic in-migration to net domestic outmigration, i.e. there were more people moving out of Southern California to the rest

of the nation than vice versa. This could be due to the widening gap of the cost of living, particularly with respect to housing, between the region and the rest of the nation, and the overall economic recovery in the rest of the nation. Between 2001 and 2005, overall cost of living as measured by the consumer prices index increased by almost 14 percent in the region compared to the national average of 10 percent.

By the end of 2005, the total population in the region reached over 18.2 million and would continue to rank fourth among all states following California, Texas and New York, and ahead of Florida. In 2005, the Inland Empire (Riverside and San Bernardino counties) captured almost half (48 percent)

of the total population growth in the region. As to the sources of population growth between 2000 and 2005, over half (53 percent) was due to natural increase, 42 percent was from net foreign immigration and 5 percent from net domestic migration.

There are four important demographic dynamics at work in Southern California. They include the continuing change in the ethnic composition, longer settlement of the foreign-born population, a growing share of second-generation immigrants and the aging of the overall population. All four dynamics continued through 2005. They are interrelated and together have significant implications for the future performance potential of Southern California. As to the transformation in ethnic composition, the share of the Hispanic population reached 44 percent in 2005, about a 4 percent increase from 2000 and a dramatic increase from only 10 percent in 1960. Immigrants' second-generation descendants are much younger than the rest of the population, with more than half being children under 18 years of age. The growing share of second-generation immigrants contributed to a slower pace of aging in Southern California than in the rest of the nation. Among the nine largest metropolitan regions in the nation, the SCAG region continued to be the second youngest in terms of median age (33.5) in 2005, following the Dallas region (33.2) with Boston the oldest (38.1).

**2. The region achieved the lowest unemployment rate (5 percent) since 1988 with the job market continuing to expand, adding almost 120,000 jobs (1.7 percent) in 2005. However, real per capita income growth was estimated to be reduced by at least a half from 2004 to 1 percent or less, partly due to the sharp increases in energy prices and declining real average payroll per job. Real median household income declined slightly, while poverty rates remained higher than the rest of the state and the nation.**

The regional job market continued to show a broad-based expansion. After gaining about 100,000 jobs (or 1.5 percent) in 2004, total wage and salary jobs in the region increased by almost 120,000 (1.7 percent) during 2005 and fared a little better than the national average (1.5 percent). The increase in 2005 was the highest since 2000 in terms of the growth rate and number of jobs, and every county in the region achieved job increases.

The top three job generators in 2005 included professional and business services, construction and retail trade sectors. The Inland Empire (Riverside and San Bernardino counties) continued to be the leading job generator, accounting for 48 percent of the job increases in the region.

In 2005, the region achieved its lowest unemployment rate (5 percent) since 1988, and a slightly lower unemployment rate than the national average, the first time since 1990. However, based on preliminary data, average payroll per job in the region was $44,390, a decline of 1.6 percent from 2004 after adjusting for inflation. This was the first decline after two consecutive years of improvements. Constrained by the higher cost of living partly due to the steep increases in energy and housing prices, real per capita income in the region in 2005 was estimated to increase up to 1 percent or half of the growth rate in 2004, to reach $34,990. Among the 17 largest metropolitan regions in the nation, the SCAG region continued to rank last in per capita income in 2004 and is estimated to remain there in 2005. Over the past three decades, the SCAG region's per capita income ranking dropped from 4$^{th}$ highest in 1970 to 7$^{th}$ in 1990 to 16$^{th}$ in 2000.

Real median household income in the region declined slightly by 0.5 percent from 2004 to reach $52,069 in 2005, following a 2.6 percent gain during the previous period. Between 2000 and 2005, real median household income increased by only 2 percent. In 2005, about 14 percent of residents lived in poverty, a slight decrease from 2004 (14.3 percent) though continuing to be higher than the national average (12.6 percent). Among the nine largest metropolitan regions in the nation, the SCAG region continued to have the highest poverty rate for all people. In addition, about 20 percent of children under 18 were below the poverty line in 2005, changing little from 2000.

**3. In 2005, the region had the second highest number of residential building permits issued since 1989, though slightly lower than the 2004 level. The decrease in building permits was concentrated in multi-family housing. Since 2000, homeownership rates have increased by**

**about 2 percentage points. However, with record high housing prices and significant rent increases in 2005, the region experienced record low housing affordability.**

Total number of building permits issued in 2005 reached 91,000 units, declining slightly from the 93,200 units in the previous year, yet it was still the second highest since 1989. Notably, the decline was only within the multi-family sector in which the number of permits decreased by 22 percent (or 6,800 units) in one year and its share of total permits declined to 27 percent. Permits for single-family units achieved a modest 7 percent (or 4,600 units) increase. The Inland Empire counties accounted for about 58 percent of the total permits issued in 2005. Total valuation of permits in 2005 also increased by $3.8 billion to reach over $20 billion.

Since 2000, homeownership in the region increased by about 2 percentage points to reach over 56 percent, though continuing to be significantly below the national average of 67 percent. Homeownership in Riverside County reached over 70 percent in 2005, the highest in the region and followed by Ventura County with 69 percent. Los Angeles County, though its homeownership increased from 46.9 percent in 2000 to over 49 percent in 2005, continued to have the lowest homeownership in the region. Among the nine largest metropolitan regions in the nation, the SCAG region continued to have the second lowest homeownership, just above the New York region (53 percent).

With record high housing prices and significant rent increases, housing affordability continued to decline across the region and reached a record low in 2005. Between 2001 and 2005, median home prices generally doubled partly because of lower mortgage interest rates and continuing population growth. In the three coastal counties (Los Angeles, Orange and Ventura), the share of households able to afford a median-priced home dropped below 15 percent in 2005, the lowest since 1989. Over the last few years, the sharpest decline of affordability occurred in the traditionally more affordable Inland Empire where the share of households able to afford a median-priced home dropped 30 percent, from 48 percent in 2001 to only 18 percent in 2005. While about half of the nation's households could afford a median-priced home in 2005, less than 15 percent of the region's households could achieve the same.

Over 48 percent of owner households and 53 percent of rental households had monthly costs at or greater than 30 percent of household incomes in 2005, up by 9 and 5 percentage points respectively since 2000. Among the nine largest metropolitan regions in the nation, the SCAG region had the highest percentage of rental households and the second highest percentage of owner households with housing cost at or greater than 30 percent of household income.

**4. In 2005, the region experienced a decrease in drive-alone share and an increase in carpool share of commuting, both reversing recent trends. These trend reversals were partly due to the steep increases in gasoline prices. Nevertheless, carpool share in 2005 was still well below the 2000 level. Total transit boardings also registered the first increase in two years, more than recovering the previous losses from labor strikes. Congestion and average travel time to work appeared to stabilize in 2005 particularly in Los Angeles/Orange counties, while it continued to increase in the Inland Empire.**

For the past few decades, Southern California has been consistently experiencing very high levels of congestion. The SCAG region (particularly Los Angeles and Orange counties) regularly ranks as the most congested metropolitan region in the nation. Contributing factors include large population and physical extent of the region, significant population growth, high automobile dependence, low levels of transit usage, and a maturing regional highway system with limited options for expansion.

In 2005, gasoline price reaching $2.50 was the highest during the last three decades and began to have some impacts on commuters' mode choices and total vehicle miles traveled. From 2004 to 2005, the share of drive-alone commuting decreased from 76.7 percent to 74.7 percent, reversing the trend of a steady increase since 2000. During the same period, there was an increase in the region's carpool share of commuting from 11.4 percent to 12.6 percent, reversing the trend of a steady decline since 2000. It should be noted that the carpooling share in 2005, though increased from 2004, was still well below the 2000 level of 14.3 percent. These trend reversals also occurred across the nation, partly due to steep increases in gasoline prices. In addition, total vehicle miles traveled (VMT) in the region declined very slightly (less than 1 percent), the first time since 2000.

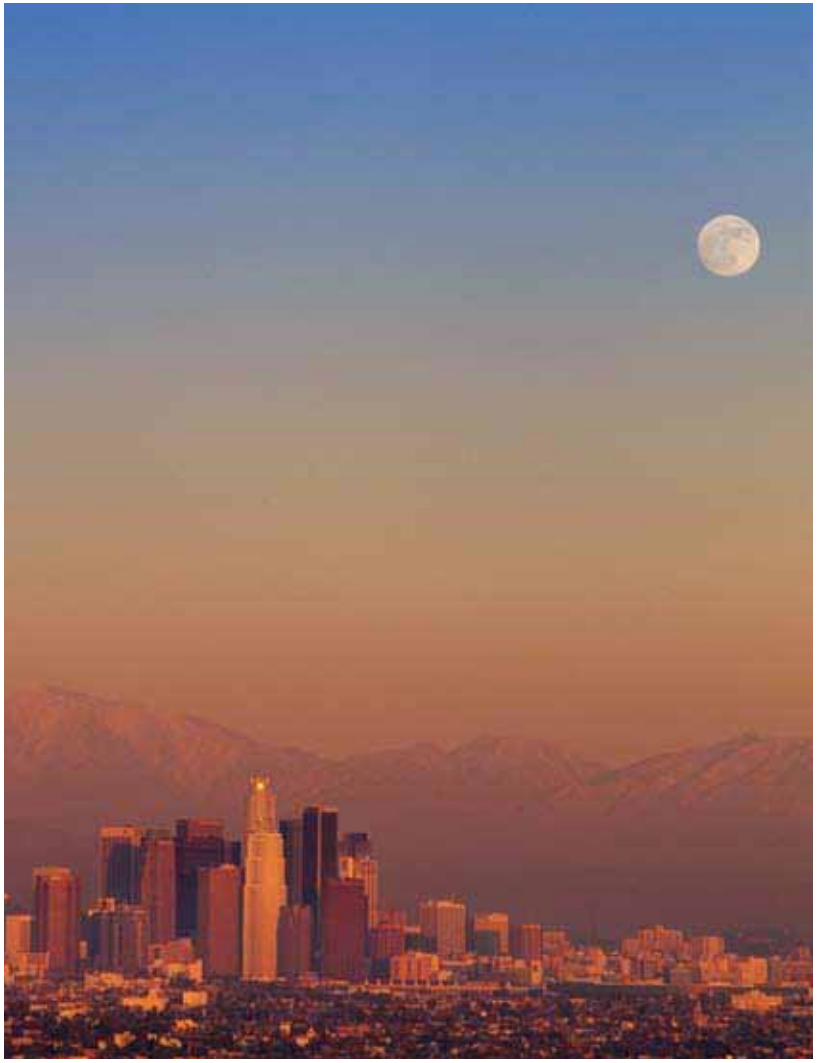
The slight shift away from drive-alone commuting along with the stabilization of the total VMT in 2005 contributed to the stabilization of the overall congestion level, particularly in Los Angeles/Orange counties. However, freeway congestion continued to increase in the Inland Empire because of the significantly faster pace of growth in population and employment than in the coastal counties. This is also generally consistent with the slight decrease in the average travel time to work between 2004 and 2005 in Los Angeles and Orange counties and continuing increase in the Inland Empire.

In 2005, motor vehicle crashes in the region resulted in 1,824 fatalities (about 5 deaths per day), almost the same as that in the past two years. In 2005, the region's highway accident fatality rate at 1.18 persons per 100 million vehicle miles, though reduced by 30 percent below the 1991 level, was still significantly higher than the national average for urban areas (0.94 persons per 100 million vehicle miles traveled).

Total transit boardings in the region in FY 2005 (from July 2004 to June 2005) increased by 16 percent, from 617 million to a record high of 672 million. This was primarily due to the recovery of the MTA transit system from the labor strikes during the previous two fiscal years. It was also facilitated by the surge in gasoline prices that resulted in some shift from private auto to transit use.

**5. Air quality in the region achieved some improvements in 2005 in $PM_{10}$ and $PM_{2.5}$, though continuing to exceed the federal standards. Ozone pollution showed mixed results including an increase of the number of days for health advisories in the South Coast Air Basin. The region also continued to meet the federal standards for carbon monoxide.**

In 2005, ozone pollution improved slightly in the South Coast Air Basin and Ventura County but worsened somewhat in the Mojave Desert and Salton Sea air basins. In the most populous South Coast Air Basin, the number of days exceeding the federal eight-hour ozone standard decreased slightly



from 88 days in 2004 to 84 days in 2005, continuing the long-term trend of improvement. However, the number of days for health advisories in the South Coast Air Basin increased from 4 to 11 days between 2004 and 2005. Within the region, the Central San Bernardino Mountain area surpassed the federal eight-hour ozone standard for a total of 69 days in 2005 followed by the Santa Clarita Valley (47 days) and Banning Airport area in Riverside County (39 days).

Between 2004 and 2005, the annual average concentration of $PM_{10}$ pollution declined in the Salton Sea and South Coast air basins, though continuing to exceed the federal standards. Specifically, the annual average of $PM_{10}$ dropped from 22 percent to 6 percent above the federal standard in the Salton Sea, while it dropped from 8 to 4 percent above the standard in the South Coast Air Basin. As to the federal 24-hour standard for $PM_{10}$, between 2004 and 2005, neither the South Coast nor Mojave Desert air basins experienced exceedance while the Salton Sea Air Basin experienced a decrease from 8 to 6 days of exceedance. California state standards for $PM_{10}$ are significantly more stringent than federal standards due to greater consideration given to potential health impacts. In 2005, both the Salton Sea and South Coast continued to significantly exceed the state annual average standards.

With regard to $PM_{2.5}$, while the annual average concentration in the South Coast Air Basin declined from 22.1 ug/$m^3$ in 2004 to 21 ug/$m^3$ in 2005, it continued to exceed the federal standards of 15 ug/$m^3$. Specifically, 12 of the 19 monitoring stations in the basin showed exceedance, ranging from coastal cities to inland valleys. In 2005, the South Coast Air Basin exceeded the

federal 24-hour standard for $PM_{2.5}$ on 6 days sampled, a slight decrease from 7 days sampled in 2004. In 2005, the region also continued to meet the federal standard for carbon monoxide (CO).

**6. The region has continued to rely on fossil fuels and is increasingly dependent on imports. Reliance on fossil fuels contributes significantly to regional air pollution and global warming that poses a serious threat to the economic well-being, public health, and the environment of Southern California and beyond. Strong dependence on foreign imports greatly reduces the reliability and security of this vital resource.**

Energy use in California and the region are predominantly fossil-fuel based (i.e. petroleum, natural gas and coal). Since 1990, the share of fossil fuels of total energy consumption in the state and the region has remained relatively constant around 85 percent. California obtains nearly two-thirds of its energy from outside its borders, including 63 percent of petroleum, 84 percent of natural gas and 22 percent of electricity. The share of foreign petroleum imports has been increasing rapidly, from below 10 percent in 1995 to over 40 percent in 2005. The transportation sector is the largest energy user at 39 percent, followed by the industrial sector at 24 percent.

The use of fossil fuels generated significant impacts on regional air quality including ozone pollution. For example, the burning of fossil fuels for mobile sources in the region is responsible for more than 85 percent of its total NOx emissions, a precursor of ozone pollution. In addition, the combustion of fossil fuels to release their energy creates carbon dioxide ($CO_2$) emissions, the most significant greenhouse gas that affects global climate change and specifically global warming.

In 2000, California generated 473 million metric tons ($CO_2$ equivalent) emissions, and is projected to reach over 600 million metric tons by 2020. Among the climate change pollutants for California, 81 percent are $CO_2$ emissions from fossil fuel combustion. In terms of total $CO_2$ emissions, California is second only to Texas in the nation and is the 12th largest source of climate

change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is also a major contributor to the global warming problem.

**7. Since 2000, the region has made noticeable progress in educational attainment among residents, consistent with the national trend. While Los Angeles County achieved noticeable reductions in high school dropout rates, San Bernardino County has experienced continuous increases in its dropout rates since 2000 reaching 20 percent in 2005, the highest in the region. There continues to be significant disparities in educational performance among different racial and ethnic groups.**

In 2005, there were slight improvements in math scores for 7th graders in the region. However, the region continued to perform below the national median in reading and math test scores, except in Orange and Ventura counties. While Los Angeles County achieved noticeable reductions in high school dropout rates, San Bernardino County saw its dropout rates increase from 12 percent in 2000 to 20 percent in 2005, the highest in the region. African American and Hispanic high school students across the region, when compared with their White and Asian peers, had significantly higher dropout rates.

In 2005, every county in the region had less than 40 percent of high school graduates completing courses required for University of California (UC) or California State University (CSU) entrance, representing little change from 2000. When compared with other states, California has one of the lowest percentages of high school seniors enrolling in 4-year colleges.

Between 2000 and 2005, there were more noticeable improvements in educational attainment in the region consistent with the national trend. During this period, the percentage of adults with at least a high school degree increased from 74 to 77 percent while the percentage of adults with at least a bachelor's degree increased from 25 to 27 percent. Nevertheless, among the nine largest metropolitan regions, the SCAG region remained in last place

in the percentage of adults (77 percent) with at least a high school diploma or at least a Bachelor's degree (27 percent). San Francisco Bay Area had the highest percentage (41 percent) of adults with at least a bachelor's degree.

**8. Violent crime rates have continued to decline since 1992. However, the juvenile felony arrest rate and the number of hate crime incidences rose slightly in 2005 in contrast to the recent trend of continuous decline.**

In 2005, the violent crime rate in the region declined by about 11 percent from 2004, larger than the 5 percent reduction at the state level. The violent crime rate in 2005 was less than 40 percent of the peak 1992 level. The reduction was most significant in Los Angeles County (-14 percent). Ventura and Orange counties consistently had the lowest rates in violent crimes in the region.

From 2004 to 2005, the juvenile felony arrest rate in the region increased by about 3 percent following the 2 percent increase in the previous period, in contrast to the trend of continuous decline between 1990 and 2003. At the state level, the juvenile felony arrest rate in 2005 increased slightly by 1 percent from the previous year. Since 2000, Los Angeles, Riverside and San Bernardino counties have had higher rates in juvenile felony arrest than the other three counties. Between 2004 and 2005, the number of hate crime events and victims in the region increased slightly by 4 percent and 2 percent respectively, contrary to the declining trend between 2001 and 2004.

## Report Card Summary

Based on the performance indicator information as contained in this Executive Summary and discussed in further detail in the remainder of the report, SCAG's Benchmarks Task Force developed the Report Card for 2005 for selected issue areas as shown below. *It should be noted that the grades in the State of the Region Report Card represent the regional average while an individual county's performance may vary from the regional average.*

Overall, the grades for 2005 remained the same as for 2004 for all seven selected issues areas. However, as reflected in the Executive Summary, the region experienced a mixed performance in most of the issue areas during 2005. Currently, not all the issues covered in this report were graded. The Benchmarks Task Force is in the process of evaluating the potential inclusion of additional issue categories into the Report Card.

### The State of the Region Report Card Summary

Grade **A**: excellent **B**: moderately well **C**: average **D**: potential failure **F**: failing

| SECTOR | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Employment | B | B- | B | B | B |
| Income | C | C- | C- | C | C |
| Housing | D+ | D+ | D | D | D |
| Mobility | D | D- | D- | F | F |
| Air Quality | B- | C | C- | C | C |
| Education | D | D | D | D | D |
| Safety | B | B | B | B | B |

**A complete copy of the State of the Region Report Card can be accessed at www.scag.ca.gov*

## The Path Forward

Since 2000, the SCAG region has not lost additional ground relative to the other largest metropolitan regions in the nation in terms of the basic socioeconomic well-being. Nevertheless, the standing of the SCAG region in 2005 among the nine largest metropolitan regions remained essentially the same as in 2000 with respect to the basic socioeconomic well-being. Specifically, the region continued to rank last in average payroll per job, per capita income, housing affordability and educational attainment (for at least a high school completion or bachelor's degree). In addition, the projected population growth of another 5 million in the region in the next 25 years is expected to continue straining its infrastructure and adding more pressure to the natural environment. These socioeconomic and growth challenges are interrelated and demand a comprehensive strategy involving collaborative efforts across public, private and non-profit sectors. The comprehensive strategy to meet these challenges needs to address the physical, economic, environmental and human capital dimensions. They also require intraregional as well as interregional collaboration.

For the past few years, SCAG, in collaboration with local governments and stakeholders, has been developing and facilitating the implementation of various elements of a comprehensive strategy. For example, the Compass Blueprint (2% Strategy) is aimed at focusing future development and redevelopment in strategic transit corridors and urban centers and hence reducing the region's dependence on the automobile and associated fossil fuels.[1] The Regional Strategy for Goods Movement is aimed at, among other objectives, enhancing economic competitiveness, fostering upward mobility and improving air quality.[2] The Southwest Alliance initiative is pursuing interregional collaboration with neighboring regions including Mexico to develop an economic development plan for the larger region. Finally, a Regional Comprehensive Plan, currently under development, will serve to guide implementation activities on the full range of resource, infrastructure and urban development issues.

"The growing share of the second-generation immigrants contributed to a slower pace of aging in Southern California than in the rest of the nation."

# POPULATION

## Growth Characteristics

Since 2000, population in the region has increased by almost 1.5 million or about 300,000 per year, matching its highest level of average annual increase during the 1980s. *However, after reaching its largest annual increase in 2001 of approximately 350,000, population growth in the region has been slowing.* During *the year 2005, the SCAG region added 222,000 residents, close to 9 percent of the total growth in the nation.* By the end of 2005, the total population in the region reached over 18.2 million, representing 6.1 percent of the population in the nation and close to half in the state (Figure 1). Among the 50 states, the region would rank fourth in total population following California, Texas and New York, and ahead of Florida.

Figure 1

### Population Increase: 2004 and 2005 (Thousands)

| | | | | 2004 Increase | | 2005 Increase | |
|---|---|---|---|---|---|---|---|
| COUNTY | 1/1/2004 | 1/1/2005 | 1/1/2006 | Number | Percent | Number | Percent |
| Imperial | 157.0 | 161.6 | 166.6 | 4.6 | 2.9% | 5.0 | 3.1% |
| Los Angeles | 10,088.9 | 10,166.4 | 10,245.6 | 77.5 | 0.8% | 79.2 | 0.8% |
| Orange | 3,019.9 | 3,047.1 | 3,072.3 | 27.2 | 0.9% | 25.3 | 0.8% |
| Riverside | 1,807.6 | 1,888.3 | 1,953.3 | 80.7 | 4.5% | 65.0 | 3.4% |
| San Bernardino | 1,897.7 | 1,950.8 | 1,991.8 | 53.1 | 2.8% | 41.0 | 2.1% |
| Ventura | 803.9 | 810.8 | 817.3 | 6.9 | 0.9% | 6.6 | 0.8% |
| **REGION** | **17,775.0** | **18,025.0** | **18,247.0** | **250.0** | **1.4%** | **222.0** | **1.2%** |
| Rest of California | 18,470.0 | 18,703.2 | 18,925.0 | 233.2 | 1.3% | 221.8 | 1.2% |
| California | 36,245.0 | 36,728.2 | 37,172.0 | 483.2 | 1.3% | 443.8 | 1.2% |
| U.S. | 292,302.8 | 295,107.7 | 297,821.2 | 2,804.9 | 1.0% | 2,713.5 | 0.9% |

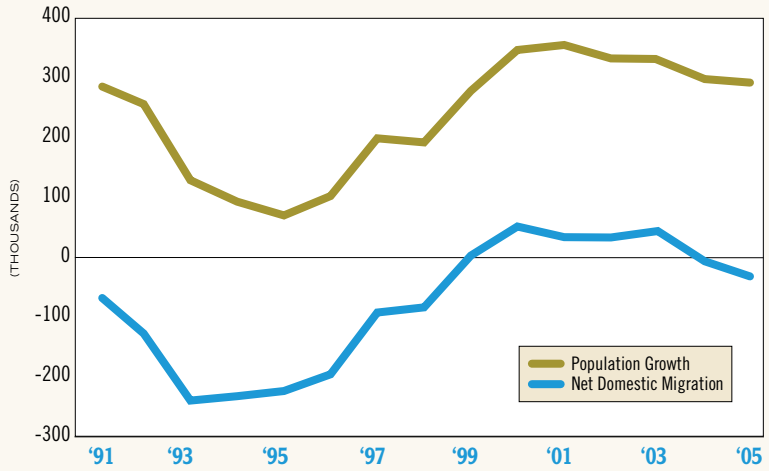
*Source: California Department of Finance and U.S. Census Bureau annual January 1st estimates, including revision of estimates for previous years.*

Since 1990, annual population growth in the region has varied significantly (Figure 2).[1] Since 2001, despite a generally stable natural increase (births over deaths) of approximately 164,000 per year, total population growth in the region has been reduced from about 350,000 (over 2 percent growth rate) to about 222,000 (1.2 percent) per year. Specifically, between 2001 and 2005, the net foreign immigration into the region dropped from about 157,000 to 115,000. This is consistent with the trend that recent immigrants are becoming a little more dispersed throughout the nation and are increasingly less concentrated in historical gateway regions particularly Southern California. During the same period, domestic migration also decreased from about 32,000 net in-migration in 2001 to 24,000 net outmigation in 2005, i.e. there were 24,000 more people moving out of Southern California to the rest of the nation in 2005 than vice versa.

The reversal in domestic migration occurred when the job market in the region was actually improving and performing a little better than that in the rest of the nation (as discussed in the Employment Section). The turnaround in domestic migration could be due to the widening gap of the cost of living between the region and the rest of the nation, and the overall economic recovery in the rest of the nation. For example, between 2001 and 2005, overall cost of living as measured by the consumer prices index increased by almost 14 percent in the region compared to the national average of 10 percent.[2] An important factor contributing to the widening gap of cost of living is the relatively higher housing prices in the region. Between 2001 and 2005, median housing prices increased by 114 percent in the region, almost tripled the national rate (see Figure 11 page 42).

Figure 2

**Population Growth vs. Net Domestic Migration**




*Source: California Department of Finance annual July 1st estimates*

*In 2005, population growth in the region of 1.2 percent was the same as that of the rest of the state, in contrast to the previous track record of faster growth.* Though the region as a whole continued to grow faster than the nation, its three coastal counties (Los Angeles, Orange and Ventura) grew at slightly lower rates than the national averages for the past two years. The three inland counties (Riverside, San Bernardino and Imperial), however, continued to grow two to three times faster than the nation. Among the nine largest metropolitan regions in the nation, Southern California experienced the second highest growth rate following only the Dallas region between 2000 and 2005 (see Figure 82 page 150).

Population growth in the region in 2005 accounted for half of the total increase in the state. *Four of the top five California counties experiencing population increase were in the SCAG region, including Los Angeles, Riverside, San Bernardino and Orange counties.* Two neighboring counties of the SCAG region also made it into the top ten, San Diego (4th) and Kern (6th). Another neighboring county, Santa Barbara, only increased 3,600 people during 2005.

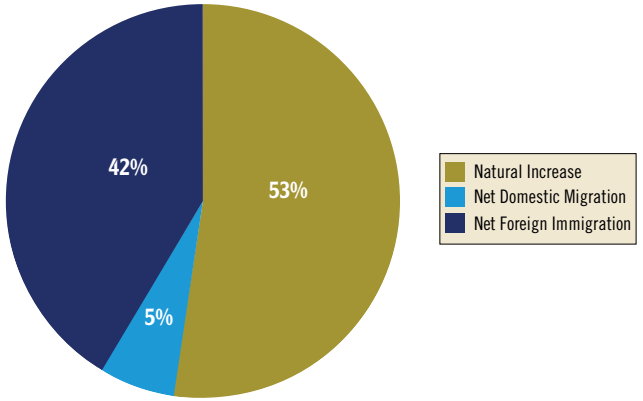
As to the rate of growth within the region in 2005, the three inland counties achieved significantly higher growth rates than the rest of the state (1.2 percent). Specifically, Riverside County achieved the second highest growth rate of 3.4 percent in the state, just behind Yuba County (3.6 percent) with less than 70,000 total population. Among the top ten fastest growing cities in the state in 2005, three were from the SCAG region and all three were in Riverside County including Temecula (15 percent), Coachella (14 percent) and Desert Hot Springs (13 percent).[3] In addition, Imperial and San Bernardino counties had the 3rd (3.1 percent) and 11th (2.1 percent) highest rates respectively. The neighboring Kern County also achieved the 4th (2.9 percent) highest growth rate. In contrast, for three consecutive years, the three coastal counties (Los Angeles, Orange and Ventura) all grew at lower rates than the rest of the state.

In 2005, the Inland Empire (Riverside and San Bernardino counties) captured almost half (48 percent) of the total population growth in the region, significantly higher than their share of only 22 percent of the region's total population. Another 36 percent of the total growth in the region in 2005 took place in Los Angeles County, lower than its population share of 56 percent.

*As to the sources of population growth in the region between 2000 and 2005, over half (53 percent) was due to natural increase, 42 percent was from net foreign immigration and 5 percent from net domestic migration (Figure 3).* Within the region, natural increase, foreign immigration and domestic migration contributed differently to the population growth among different counties. *Overall, natural increase and net foreign immigration contributed much more significantly to the growth in the three coastal counties (Los Angeles, Orange and Ventura) and Imperial than the Inland Empire (Riverside and San Bernardino) where net domestic in-migration played a more significant role (Figure 4).*

Figure 3

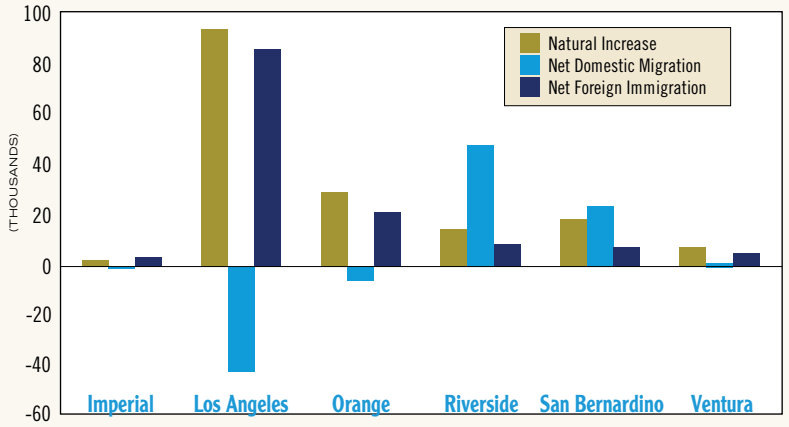
**Population Growth by Types of Source 2000-2005**




*Source: California Department of Finance*

Figure 4

**Population Growth**
**Types of Source by County, 2000-2005** (Annual Average)




*Source: California Department of Finance*

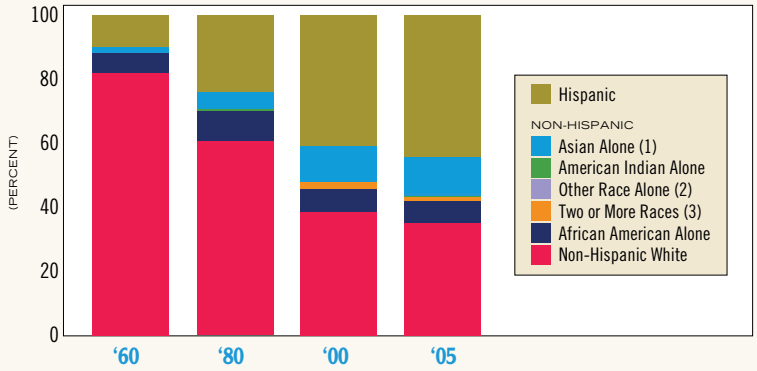
## Demographic Dynamics

*There are four important demographic dynamics at work in Southern California. They include the continuing change in the ethnic composition, longer settlement of the foreign-born population, a growing share of second-generation immigrants and the aging of the overall population. These four dynamics are interrelated and together they have significant implications for the future performance potential of Southern California. All four dynamics continued through 2005.* The following provides a summary of the demographic dynamics that were discussed in further detail in the last year's Report and the guest essay after the Population Section.[4]

As to the transformation in ethnic composition, the share of the Hispanic population reached 44 percent in 2005, about a 4 percent increase from 2000 and a dramatic increase from only 10 percent in 1960 (Figure 5). The share of the Asian population increased from 2 percent in 1960 to over 11 percent in 2005.[5] Since 1960, the share of the non-Hispanic White population declined from about 80 to 39 percent in 2000 and 36 percent in 2005. The share of African American population in the region was just below 7 percent in 2005. Since 2000, the vast majority (80 percent) of the growth in the region were Hispanics.

Figure 5

## Population by Race and Ethnicity




*Notes:*

*(1) "Asian Alone" also includes Pacific Islander.*

*(2) "Other Race Alone" is too small to be shown.*

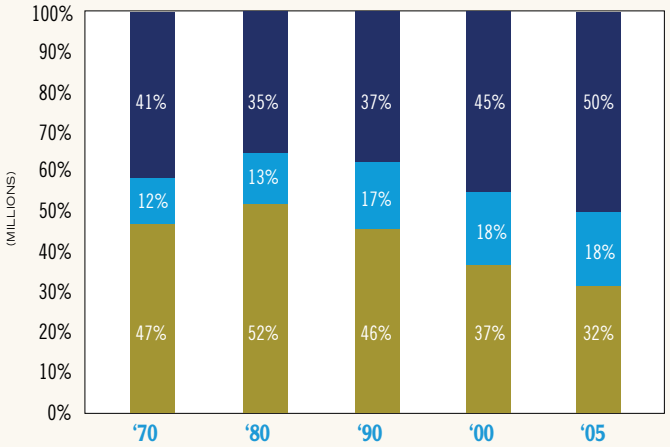
*(3) Only the 2000 and 2005 data included the "Two or More Races" category to which people may choose to belong.*

*Source: U.S. Census Bureau. Data in 1960 was estimated by James Allen and Eugene Turner. 2002. Changing Faces, Changing Places.*

*The second important demographic dynamic is that the region's immigrant population has achieved longer settlement which has important implications for its overall level of socioeconomic well-being.* In 2005, about 31 percent (5.4 million) of the region's total population were foreign-born. They represented about 15 percent of the immigrants in the nation. Recent immigrants to the U.S. have increasingly pursued economic opportunities in areas where fewer immigrants had lived previously. As a result, California's share of immigrant arrivals dropped from 38 percent to 21 percent between 1990 and 2005, the largest decline (17 percentage points) among all states. In addition, the region's share of the new immigrant population (arrived U.S. within the last 10 years) in the state also declined from 65 percent in 1980 to 50 percent in 2005 (Figure 6). This was primarily due to the sharp decline of the share of Los Angeles County alone, from 52 percent in 1980 to 33 percent in 2005. Since 1990, the region's share of immigrant arrivals in the nation fell sharply from about 22 percent to below 11 percent.

Figure 6

## Share of New Immigrant Population in California




*Note: New immigrants are those immigrants who arrived in the U.S. within the last ten years (except for 2005 data that represents those who arrived in the U.S. in 2000 or later). Rest of California = California less the SCAG Region*

*Source: U.S. Census Bureau*

As to the share of the total population in the region, new immigrants increased from 4 percent in 1970 to 14 percent in 1990 then decreased to 11 percent in 2000, while the share of the settled immigrant population (arrived U.S. more than 10 years ago) increased continuously from just below 6 percent in 1970 to 20 percent in 2000. The level of socioeconomic well-being (e.g. educational attainment, household income, poverty rate, homeownership rate, etc.) of the immigrant population improves noticeably with the length of settlement.[6]

The maturing settlement of the immigrant population could bring positive performance outcomes for the region's future, particularly with supportive public policies.

*The growing share of settled immigrants also results in a growing share of the immigrants' second generation in the region, i.e. U.S-born residents with at least one foreign-born parent.* Currently, about 23 percent (or 4.3 million) of the population in the region belongs to the immigrants' second generation.[7] Among the total child population in the region, more than 45 percent belongs to the immigrants' second generation. Accordingly, the educational and occupational attainment of immigrants' second-generation, particularly children, will significantly impact the region's future performance.

*Finally, the median age of the population in the region continued to rise over time as in the rest of the nation.* Median age increased from 30.7 in 1990 to 32.2 in 2000 and 33.5 in 2005.[8] In 2005, the region continued to be younger than the state (34.4) and the nation (36.6). Among the nine largest metropolitan regions in the nation, the SCAG region continued to be the second youngest in terms of median age, following the Dallas region (33.2) with Boston the oldest (38.1). The growing share of the immigrants' second generation contributed to the slower pace of aging process in Southern California than in the rest of the nation. The share of people 65 years and over in the region increased slightly from 9.6 percent to 9.8 percent between 2000 and 2005. However, over the next 25 years, with the aging of the baby boomer generation, population 65 years or older in the region are expected to increase from 1.72 million (less than 10 percent) in 2005 to 3.9 million (almost 17 percent) in 2030.[9]

# DEMOGRAPHIC CHANGE IN THE SCAG REGION, 1970-2005

## BY JOHN PITKIN

Waves of immigration, births, and domestic migration during the past third of a century have dramatically shifted the demographic composition of the SCAG region and reshaped the context for a broad range of regional planning and policy decisions. Specifically, as recently as 1980, the demographic mix in the region was more nearly similar to the nation's. However, by 2005, the region has a distinctive demographic mix from the rest of the nation. While the general dimensions of the changes in race and ethnicity are widely recognized, the changes in age structure and nativity of the population are less well understood and as significant as those in race and ethnicity.

This essay will first contrast the similarity and differences between the region and the rest of the nation in 1980 and 2005. It will then explain the three interrelated demographic waves that took place in Southern California during the past few decades. Finally, implications for our future are explored.

The large generation of the Baby Boom is now well outnumbered by other nativity cohorts in the SCAG region. In 2005 the native born Under 20 generation comprised 27 % of the region's population, and the New Immigrants, of all ages, who had arrived in the U.S. since 1980 comprised 23 %. With 15 % of the total population, the native born Baby Boomers, then age 40 to 59, are now the third largest nativity cohort in the region.

Exhibit 1 shows the age and nativity mix of the population, with the New Immigrants on the left, shaded purple, and to the right of the vertical axis the native born Under 20 generation outlined at the bottom and the Baby Boom above it.

This mix of generations and nativity groups is very unlike that in much of the rest of the United States, and the differences can be clearly seen from Exhibit 2, which shows the mix in the U.S. excluding the SCAG region. There, the Baby Boom cohort looms much larger, comprising almost a quarter (24%) of the total population, the New Immigrants are relatively less numerous, just 9% of the total, and the Under 20 cohort (26%) makes up almost the same share as in the SCAG region.

The differences in the composition of the population mean that the demographic underpinnings of planning decisions in many areas, from education, housing, and social services to labor force and economic development, are very different in the SCAG region than in most of the nation.

This is a relatively new development. As recently as 1980 the demographic mix in the region was more nearly similar to the nation's, and the Baby Boom generation the dominant cohort. The total population was 11.6 million, two-thirds what it is today. The Baby Boom generation, then age 15 to 34, ac-

counted for 28 % of the total, against 15 % today, and the foreign born population 18 %. Compared with the present, the age-nativity pyramid for that year, shown in Exhibit 3, is skewed much more toward the native born, on the right, and young adults, rather than young children. (The graphs for the two years can be visually compared by pulling back this page.)

Although the mix of nativity and generations in The SCAG region had diverged from the national pattern, the differences were much less than they have since become. In the rest of the U.S. the Baby Boom generation made up even more of the total population than in the SCAG region (5 % more), and the foreign-born were less than a third the share in region.

In Exhibit 4, the age-nativity pyramid for the U.S. in 1980 (excluding the SCAG region) more nearly resembles that for the SCAG region, at a larger scale, than it did in 2005. In fact, if we were to look back ten more years to 1970, we would find that the only substantial difference between the age-nativity pyramids for the SCAG region and the rest of the nation was the difference in scale. For practical purposes, the population of the SCAG region in 1970 was a microcosm of the nation.

How did the population of the SCAG region evolve so rapidly from being dominated by the Baby Boom generation to what it is today? How did it diverge from the rest of the nation, where the aging Baby Boom cohort is still such a large part of the picture? Immigration and births played major roles, but what part was played by *domestic* migration? How did these changes play out over time and how did they interact? To what extent did they feed each other or did one off-set another?

Exhibit 1

**SCAG Region, 2005**

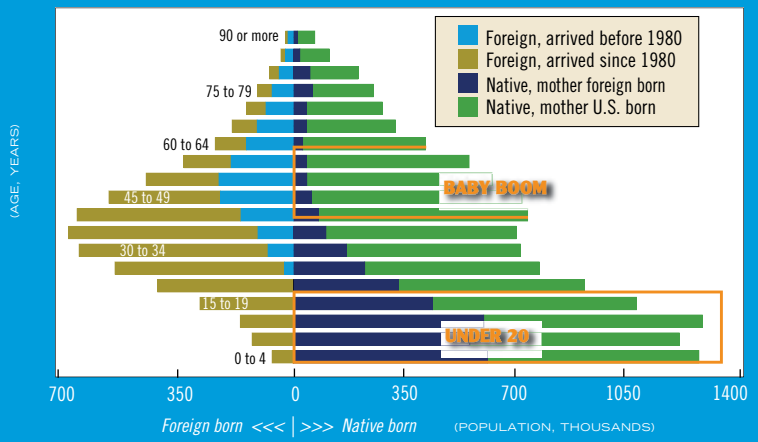
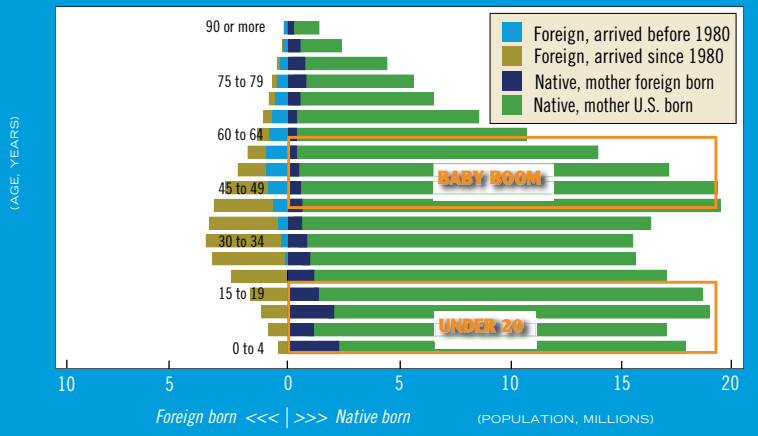



Exhibit 2

**United States excluding SCAG Region, 2005**



These questions are interesting in themselves. Also the answers to them will give new perspectives on the outlook for future population changes and the likelihood that past trends will continue, accelerate or decelerate. These answers can also inform the planning and decisions continually being made to meet the future needs.

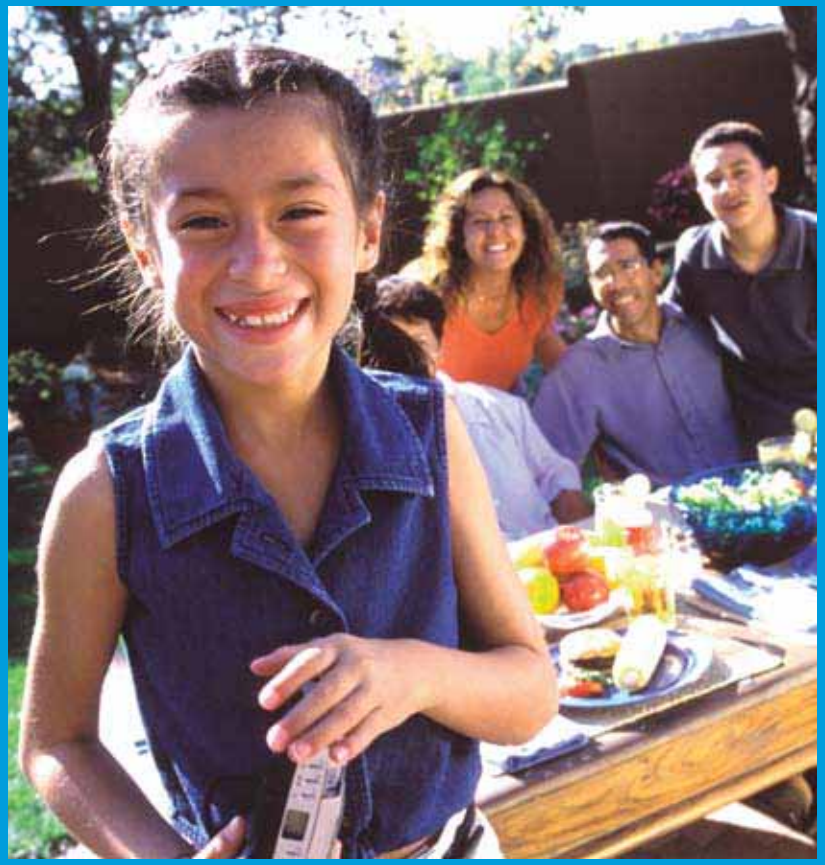
The answers to these questions come from an analysis of detailed census and vital statistics data since 1970 and the start of the "new immigration." In this analysis data from Census 2000 is especially useful for two reasons. First, it is estimated to be more complete than previous censuses and have a lower net undercount. Second, it is the only census to record the exact years in which foreign born persons entered the United States, and this data can be used to estimate annual immigration for earlier years with much greater precision than was previously possible. These new estimates include most undocumented immigrants. The methods used greatly mitigate the effects of undercounts on the estimates of past immigration and domestic migration.

The new estimates give a more complete and detailed picture of the dynamics of population changes in the SCAG region than existing estimates. In important respects the new estimates are also quite different.

## The Wave of Immigration

Between 1970 and 2000 an estimated 7.66 million immigrants came to the SCAG region and 4.54 million still lived in the region as of the 2000 Census after reductions due to immigration, domestic out-migration, and deaths.[1]

The annual estimates, which are seen in Exhibit 5, reveal that a long wave in immigration reached its crest in 1989. The wave started from 1970 with



[1]The estimates are made by working backward from the populations counted in Census 2000 using estimated rates of emigration, domestic migration, and mortality. Adjustments are also made for the marked tendency for years of immigration reported in the census to be rounded to years ending in 0 or 5. Technical details of the methods can be found in the author's "Three Demographic Waves and the Transformation of the Los Angeles Region, 1970-2000" at www.usc.edu/schools/sppd/research/popdynamics.

Exhibit 3

**SCAG Region, 1980**

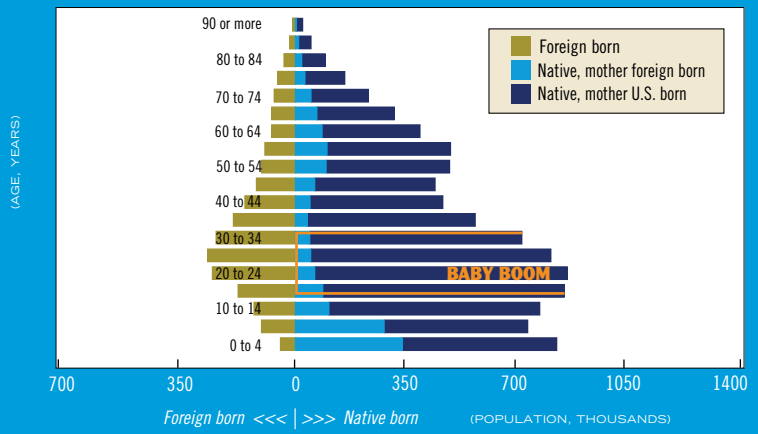
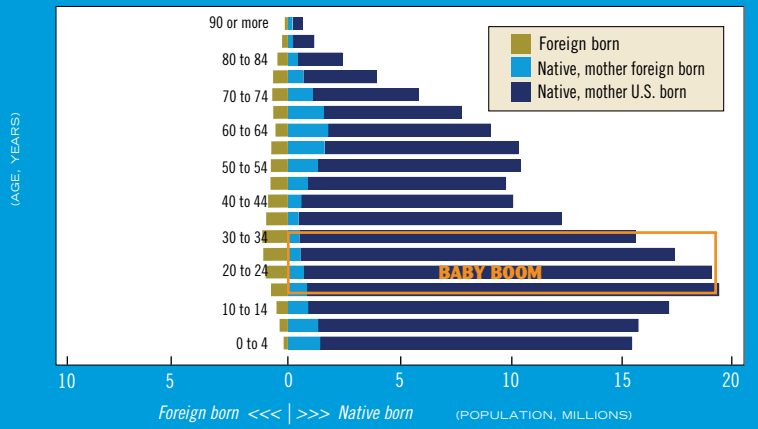



Exhibit 4

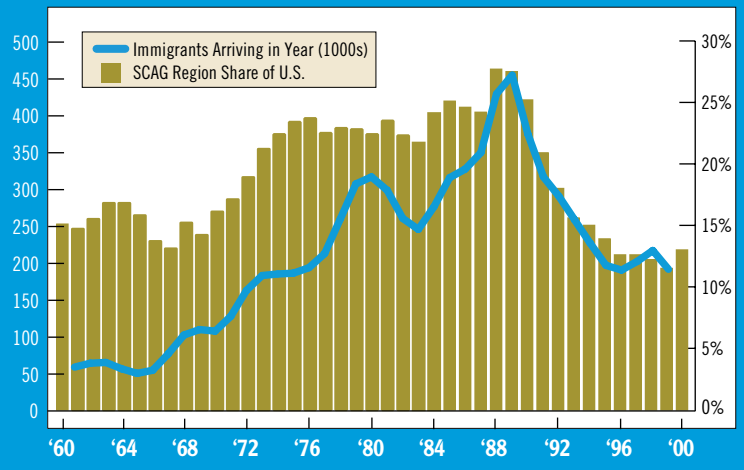
**United States excluding SCAG Region, 1980**



a rapid increase to an inflow of 313 thousand in 1980. Over the next three years immigration fell 21 percent but then increased rapidly to 419 thousand in 1988, after which it rose another 24 thousand to its peak in 1989. It then plummeted by 56 %, to 194 thousand in 1996 and, by 1998, rebounded to 219 thousand.

Exhibit 5

**New Immigrants by Year of Arrival in U.S. and SCAG Region Share of U.S.**




The onset and crest of the wave both followed major changes in immigration laws. The wave began soon after passage of the Immigration and Nationality Act Amendments of 1965 (Hart-Celler Act), which eliminated national quotas on immigrant admissions, and reached its apex following the Immigration Reform and Control Act of 1986 (IRCA). It can be inferred that a large share of all the 2.6 million immigrants legalized under the provisions of IRCA between 1988 and 1991 lived in the SCAG region, since over half are known to have lived in California (State of California, Department of Finance, 1997).

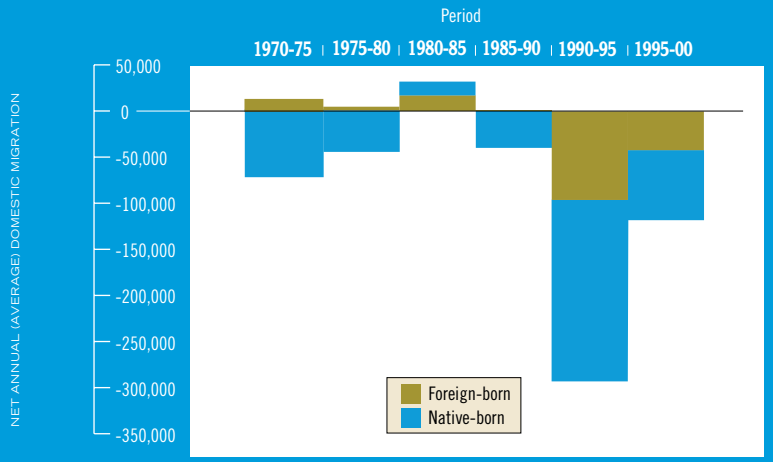
## The Reversal of Domestic Migration

Accurate estimates of domestic migration during the 1970-2000 period can only be made for intervals of five years. These are made using data from the decennial censuses on both current location and place of residence five years earlier.

For most of the 20th century, the SCAG region had been a destination for domestic migration from other states but by the early 1970s the region was sending an annual average of 60 thousand more migrants to other parts of the country than it was receiving. Net domestic migration rose through the early 1980s, when there were small net inflows to the region (Exhibit 6). It reversed direction in the late 1980s and then plummeted in 1990-1995 to a net loss of almost 300 thousand *per year* on average between 1990 and 1995. This wave of out-migration abated to a net outflow of 118 thousand a year on average between 1995 and 2000, still well above pre-1990 flows.


Exhibit 6

**Net Domestic Migration, SCAG Region, 1970-2000**




In all, the region lost a net total of 2.05 million domestic migrants, or 14 % of its population between 1990 and the 2000, 1.46 million in the first five years alone. To put this in perspective, 2.05 million equaled more than the entire 2000 population of Nevada or the Cincinnati metropolitan area.

At the same time as the surge of domestic out-migration, the nativity composition of domestic migration also shifted. Until 1990 net domestic out-migration had occurred only among the native-born population and there were actually small net inflows of foreign born population (SCAG region

portion of Exhibit 6); the largest movement of foreign-born population during this period was an influx of an average 15 thousand per year between 1980 and 1985. After 1990, however, there was substantial out-migration of the foreign-born, between 1990 and 1995 a net total of 479 thousand and another 209 thousand in the next five years.

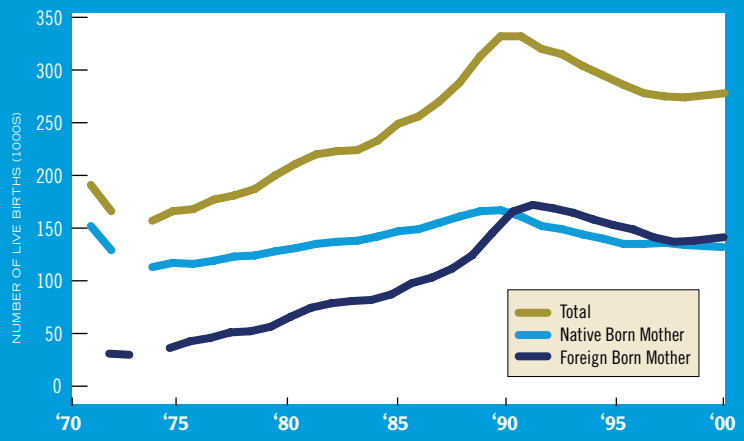
Population movements before 1990 indicate that the SCAG region was the destination of choice for much of the foreign born population. From 1970 to 1975, as the region's native-born population declined by 4 % through domestic migration its foreign-born population *grew* by 4 % through domestic migration, and the region's share of national immigration was rising. After 1990 the emergence of net domestic out-migration among the foreign-born, 12 % between 1990 and 1995 and another 4 % from 1995 to 2000, coincided with the decline in the region's share of national immigration. The SCAG region had lost much of its attraction for both new and old immigrants.[2]

## A Regional Boom in Births

A boom in births in the SCAG region[3] followed the surge of immigration, starting in the early 1970s and reaching its peak in 1991. From a low of 157 thousand[4] in 1973, the annual numbers of births rose steadily through 1983 and then much more rapidly to 333 thousand in 1991; the number then fell each year, to 274 thousand in 1999 (Total line in Exhibit 7).

Exhibit 7

**Number of Births, SCAG Region**




*Note: Birth data for 1972 are missing.*

[2] Current estimates of annual domestic migration made during the 1990s by the State of California Department of Finance (2005) and U.S. Census Bureau (1999) show sharp peaks in out-migration in 1993 and 1994. For the entire decade these estimates fall well short of the 2000 Census-based estimate of 2.05 million out-migration; the State's estimate was 1.21 million, and the Census Bureau's 1.59 million. The differences are due to more complete coverage of foreign-born migrants in the new estimate, which is based on the 2000 Census, than in the earlier estimates, which relied on changes of address on driver's licenses and federal income tax returns, respectively, to measure migration.

[3] From Natality Detail Public Use Files (U.S. National Center for Health Statistics, 1969-2000) by mother's nativity, based on country of birth.

[4] Births for April 1 – March 31 of following year, to match date of decennial census.

Although a boom in births also occurred in other parts of California, this was a regional and not a national phenomenon. Due to the "Echo Boom" of children born to the Baby Boom generation national births also grew to a peak in 1991, but the increase was less than a third of the 113 % in the SCAG region.

It was not a coincidence that the scale and timing of the region's birth boom closely resembled the wave of immigration. Immigration raised total births in two ways. First, it added to the population of women of child-bearing age. Second, the fertility rate among foreign-born women has consistently been much higher than among native-born, in 1990 by an average of 1.66 children per woman (81 %).[5] As a result, the fertility rate for all women in the SCAG region, which differed little from the national rate in 1970, was 6 % higher in 1980 and 25 % higher in 1990. Of the 7.25 million births in the thirty years starting in 1970, 43 percent (3.10 million) were to foreign-born women.

From the low year of 1973 the number of births to native born women increased 47 % to their peak in 1990 (Native Born Mother line, Exhibit 7). This increase was far exceeded by the 291 percent rise in births to foreign-born women. In 1970, births to native born women had outnumbered those to foreign born by 4 to 1. By 1991, for the first time, there were more births to foreign born women than native born women.

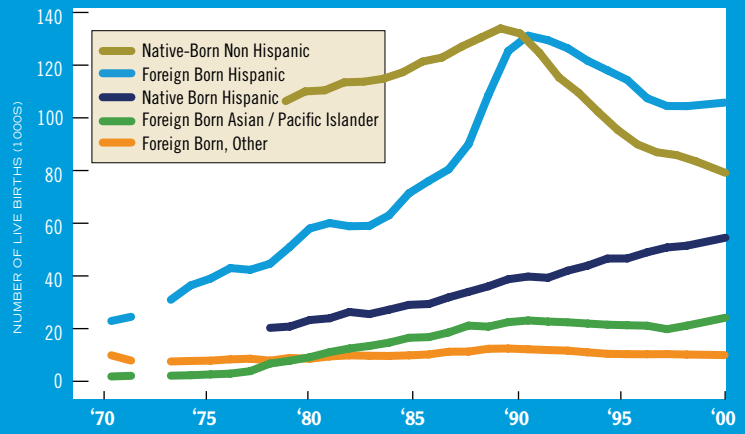
After reaching peaks within a year of each other, births to native and foreign born women fell in parallel to 1999, by 16 and 18 percent, respectively, and by 2000, the region's fertility rate was only 4 % higher than the national rate. The rate for foreign born women was down by a fourth from 1990 and was well outside the range of earlier years.[6]

[5] From Natality Detail Public Use Files (U.S. National Center for Health Statistics, 1969-2000) by mother's nativity, based on country of birth.

[6] Births for April 1 – March 31 of following year, to match date of decennial census.

Exhibit 8

**Number of Births, SCAG Region, by Nativity, Ethnicity, and Race of Mother**




*Note: Birth data for 1972 are missing.*

Exhibit 8 shows the numbers of births in the SCAG region by major origin and race as well as nativity. (Data to break out all births by Hispanic origin and race only became available in 1978.) It is striking that births for all but one major group reached their peaks in 1990 or 1991, to native-born non-Hispanics and foreign-born Latinas, Asian or Pacific Islanders, and other non-Hispanics. The lone exception is native-born Latinas, for whom births rose without interruption. As we have seen, this decline in births occurred in the context of falling immigration and accelerating losses of migrants to the rest of the nation. Just as rising foreign and domestic in-migration had tended to raise the births in the region before 1991, falling immigration and rapid domestic out-migration afterward worked to lower them.

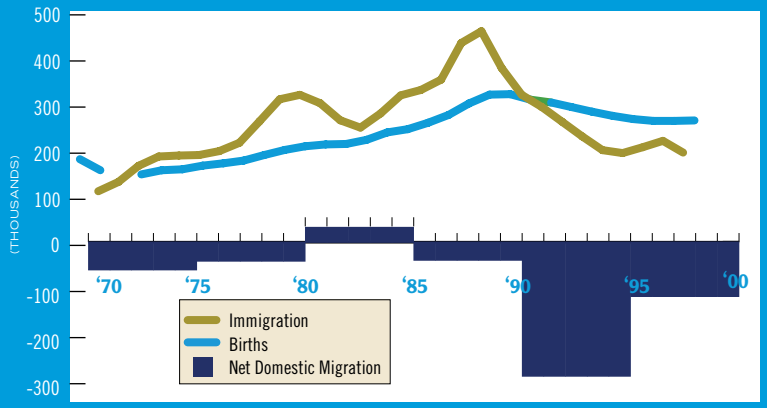
## Connections between Trends

Besides these direct effects of immigration on births, how are the size and timing of the demographic changes in the SCAG region linked?

The simultaneous timing of downturns in immigration, domestic migration, and births in the early 1990s is best explained by the 1991-1994 recession, the most severe economic contraction the SCAG region had experienced since the Great Depression (see Exhibit 9). The effects of a national recession were compounded by large losses of defense-related jobs in the region following the end of the Cold War. The region lost 573 thousand jobs; the unemployment rate averaged over 9 percent[7] in 1992 and 1993. The unusual severity and length of the recession in the region pushed job-seekers to pursue better employment opportunities that were to be found in other states. New immigrants who had previously favored Los Angeles and the SCAG region went elsewhere, and many job-seekers brought families. The resulting losses of women of child-bearing age can account for the simultaneous downturn in births for different nativity-origin groups after 1991. It is also possible that the sour economy played a role in lowering fertility rates among the population that remained in the SCAG region, however this connection is more speculative.

Exhibit 9

**Immigration, Births, and Domestic Migration, SCAG Region, 1970-2000**




The parallel long-term increases in immigration and domestic migration from the early 1970s through the mid-1980s are also best understood as responses to general changes in the economy.

Although immigrants were impacted as much as the native born by the competition for limited employment opportunities and housing, and other effects of the regional recession, two additional factors may have played a role in causing the abrupt onset of large-scale domestic out-migration by the foreign-born after 1990. First, the cumulative geographic expansion of immigrant "networks" eased dispersal to new destinations. Second, the provision through IRCA of legal documentation to large numbers of immigrants who previously lacked it may have in effect freed a population of many hundreds of thousands to leave the security of a regional haven they no longer needed. Whatever the causes of this new pattern of foreign-born migration, its continuation in the second half of the decade proved that it was not a fluke. Further, it suggests that in the future immigrants will migrate domestically from the SCAG region at rates more like those of their native-born peers than previously.

[7] From Natality Detail Public Use Files (U.S. National Center for Health Statistics, 1969-2000) by mother's nativity, based on country of birth.

## Future Implications

In summary, this essay describes the size and timing of three large demographic waves that occurred in the SCAG region during the last thirty years of the 20th century and that have shaped the current demographic context for regional planning, forecasting, and decision-making. New estimates of past changes provide greater detail than existing ones and reveal the temporal relationships among the flows of immigration, domestic migration, and births. The new estimates of immigration provide the first detailed, consistent chronology of immigration to the region to include undocumented immigrants.

Probably the most important finding from these estimates is the surprisingly large amount of flux in the SCAG region's population. Signs of this change are the arrival of 7.66 million immigrants between 1970 and 2000, the departure (or death) of 41% of these by 2000, and the net loss of over 2 million domestic migrants in a single decade. The relative stability of the size of the

population combined with earlier, lower estimates of foreign and domestic migration had masked the high rate of turnover of the population.

Though not confined to the SCAG region, similar waves of immigration and births occurred in only a few other regions of the U.S. during this period and their scale was greatest here. Relative to the population of the region, these flows dwarfed those in the rest of the United States. It is a result of these flows that the nativity and ethnic composition and age structure of the population of the region today diverge so widely from that of the nation.

What are the implications for the region's future?

In light of the large fluctuations in demographic flows during the last third of a century, the possibility of future variations makes the projection of the composition of the population three decades forward at best an approximate guide for planning and decision-making. Nonetheless, the age-nativity structure of today's population, seen in Exhibit 1, has implications that must be weighed when making decisions that are oriented to the future needs or resources of the population.

- Over the next two decades 4.85 million current members of the Under 20 generation in the region will complete their education, most will enter the labor market, and many will be starting families and forming households.

- Over the next two decades, the 4.13 million current New Immigrants in the region (median age 29.8 years) will be in their peak earning years, looking to trade up to better housing, and a growing number will reach retirement.

- Over the next two decades, most of the current 2.63 million members of the Baby Boom generation in the region will also reach retirement age and leave the labor force and many will trade down to less expensive or retirement housing.

Uncertainties hang over all projections of these transitions. These cohorts may choose different career paths or living arrangements or retire later or earlier than their predecessors. In addition, we must wonder how stable and predictable the populations of these cohorts are. Decision-makers would be right to wonder if one of the three large age-nativity cohorts might again transform the region's population by leaving in large numbers, perhaps to be outnumbered by a large new cohort of immigrants. Of the three large nativity-age cohorts in the SCAG region, the future size of the native-born Under 20 generation is probably least certain. This generation will be entering their young adult years when mobility rates are typically high, and substantial numbers could leave the area if they have difficulty finding good jobs or housing.

However, regional population forecasters and the decision-makers who rely on their forecasts can find some assurance in the signs that major demographic flows have stabilized since 1995. Much of the past turnover of the population occurred during the ten-year span from 1985 to 1995, which saw both 30-year peaks and declines in immigration, domestic migration, and births, and there are growing indications that this was a highly exceptional period.

Most significantly, the possibility of a new surge of immigration to the SCAG region nearly as large as came in 1988-1990 seems increasingly remote.

In order for immigration to the region to rise substantially from recent levels, one of two things would have to occur. Either immigration to the U.S. or the fraction of these immigrants coming to the region would have to increase.

The current direction of immigration policy seems unlikely to lead to large increases in national immigration in the near future.

After having been above 20 percent for 19 years (1972-1990), the share of new U.S. immigrants that locate in the region remained below 14 percent from 1994 through 2000. The stability of this ratio over long periods shows that there is considerable inertia in the geographic distribution of new immigrants. Established networks of immigrants support new immigrants and lead to chain migration along established paths. Now that the SCAG region's dominance as the main destination for new immigrants from major sending countries has been broken, with powerful assistance by the 1991-1994 recession, it seems unlikely to be restored in the near future. For these reasons, the possibility of a large increase in immigration to Southern California should be considered remote.

As we have seen, the surge in immigration in turn fueled the regional baby boom during the same period. Absent a resurgence of immigration, future trends in births will be determined largely by the fertility rates and population of the cohorts of U.S.-born girls that reach childbearing age. These factors have been much more stable and therefore predictable than the past variations in immigration and births to immigrants.

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"Between 2004 and 2005, total trade through the Los Angeles Customs District increased from $323 billion to $348 billion, a new record level."

# THE ECONOMY

## Employment

### Total Employment

*Why is this important?*

The number, types and wage level of employment in large part determine our region's economic activities and well-being. Income generated through employment accounts for about 70 percent of the total personal income in the region.[1]

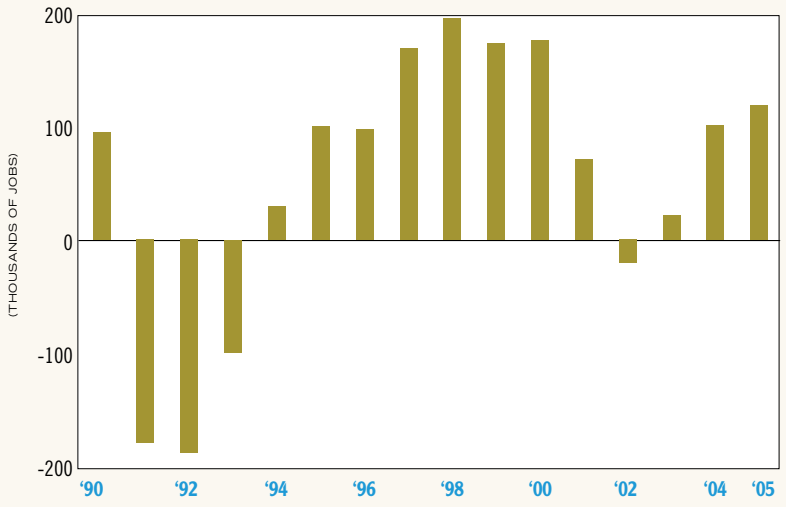
*How are we doing?*

*In 2005, the regional job market continued to show a broad-based expansion over the previous year (Figure 7).* After gaining about 100,000 jobs (or 1.5 percent) in 2004, total wage and salary jobs in the region increased by almost 120,000 (1.7 percent) during 2005. *The increase in 2005 was the highest since 2000 in terms of growth rate and number of new jobs.*

The year 2005 was also the second consecutive year since 2000 that job gains took place at the national level. Since the end of the 2001, growth of the real gross domestic product (GDP) has been recovering. After dropping from 3.7 percent in 2000 to 0.8 percent in 2001 due to the recession, real gross domestic product (GDP) increased at an accelerated pace from 1.6 percent in 2002 to an impressive 3.9 percent in 2004 (Figure 8). *During 2005, damages from major hurricanes (Katrina and Rita), surges in energy prices and consecutive rises in interest rates slowed the growth of real GDP to 3.2 percent, though still higher than the 3-percent average during an economic expansion period.*

Figure 7

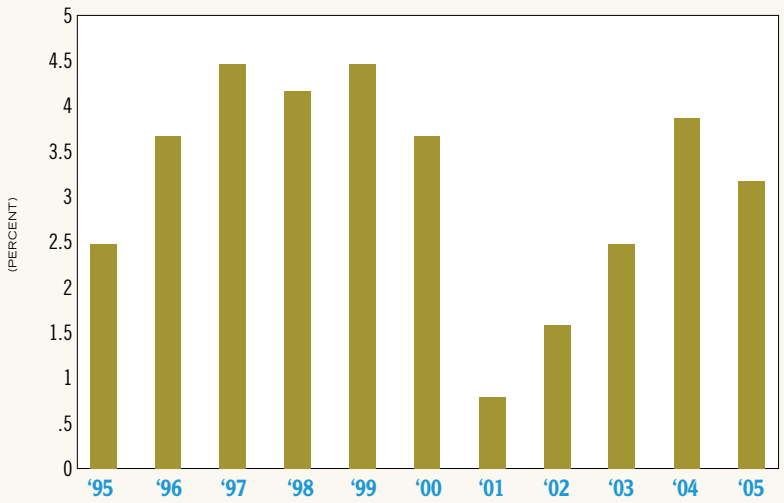
**Wage and Salary Employment** (Change from Previous Year)




*Source: California Employment Development Department*

Figure 8

**Real Gross Domestic Product (GDP), U.S.** (Percent Change from Previous Year)




*Source: U.S. Bureau of Economic Analysis*

Consumer energy prices increased about 21 percent in 2005, following an 18-percent increase in 2004. *An increase in energy prices slows economic growth in the short run primarily through its effects on spending, or aggregate demand.* Because the United States imports most of its oil, an increase in oil price will lead to reductions in domestic spending. At the same time that higher oil prices slow economic growth, they also create inflationary pressures that could further reduce the demand.

The increase in real GDP in 2005 was primarily due to the continuing growth in consumer spending and private investment, though at lower rates than that in the previous period. Real consumer spending increased by 3.5 percent

Figure 9

## Wage and Salary Employment (Thousands)

| | | | | | | 2003-2004 | | 2004-2005 | |
|---|---|---|---|---|---|---|---|---|---|
| COUNTY | 1990 | 2000 | 2003 | 2004 | 2005 | Number | Percent | Number | Percent |
| Imperial | 44.9 | 50.4 | 51.9 | 51.3 | 54.2 | -0.6 | -1.2 | 2.9 | 5.7 |
| Los Angeles | 4,149.5 | 4,079.8 | 3,990.8 | 4,004.1 | 4,024.1 | 13.3 | 0.3 | 20.0 | 0.5 |
| Orange | 1,179.0 | 1,396.5 | 1,436.2 | 1,463.4 | 1,496.2 | 27.2 | 1.9 | 32.8 | 2.2 |
| Riverside/San Bernardino | 735.1 | 1,010.1 | 1,119.7 | 1,178.7 | 1,235.4 | 59.0 | 5.3 | 56.7 | 4.8 |
| Ventura | 247.0 | 294.3 | 304.4 | 306.9 | 313.8 | 2.5 | 0.8 | 6.9 | 2.2 |
| **REGION** | **6,355.5** | **6,831.1** | **6,903.0** | **7,004.4** | **7,123.7** | **101.4** | **1.5** | **119.3** | **1.7** |
| Rest of California | 6,507.9 | 8,065.6 | 7,866.7 | 7,904.7 | 8,015.0 | 38.0 | 0.5 | 110.3 | 1.4 |
| California | 12,863.4 | 14,896.7 | 14,769.7 | 14,909.1 | 15,138.7 | 139.4 | 0.9 | 229.6 | 1.5 |
| U.S. | 109,403.0 | 131,785.0 | 129,999.0 | 131,435 | 133,463.0 | 1,436.0 | 1.1 | 2,028.0 | 1.5 |

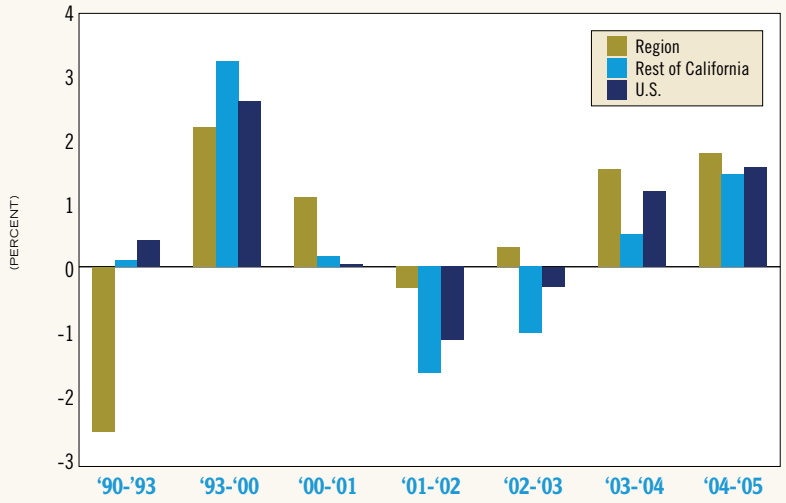
*Source: California Employment Development Department, Council of Economic Advisers.*

between 2004 and 2005, slightly less than the 3.9 percent increase during the previous period.[2] Consumer spending has continued to be fueled by the rebound in household wealth from the significant increase of home equity. Nationally, household wealth at the end of 2005 was about 18 percent higher than it was at the peak of the stock market bubble in 2000. Rising home equity has accounted for about half of the increase.[3] As to the private non-residential investment, it increased by 6.8 percent after a 5.9-percent increase in 2004. Private residential investment achieved an 8.6 percent increase in 2005 after an almost 10-percent increase in 2004. From 2004 to 2005, productivity growth slowed from 3.4 percent to 2.9 percent, though remaining well above its historical average. In 2005, even with the slightly lower growth rate of real GDP than in 2004, the lower rate of productivity growth resulted in the slightly higher rate of job growth.

*In 2005, the region achieved a slightly higher rate of job growth (1.7 percent) than the rest of the state (1.4 percent) and the nation (1.5 percent) (Figure 9).* Between 2000 and 2005, the SCAG region performed better every year in job growth rates relative to the rest of the state and the nation (Figure 10). Between 2004 and 2005, about 2 million jobs were added nationally and since early 2005 the job base expanded from the pre-recession (2000) level, making the period between late 2001 and early 2005 the longest for a full job recovery in the nation's history. However, total employment for the rest of California in 2005 was still below the pre-recession (2000) level.

Figure 10

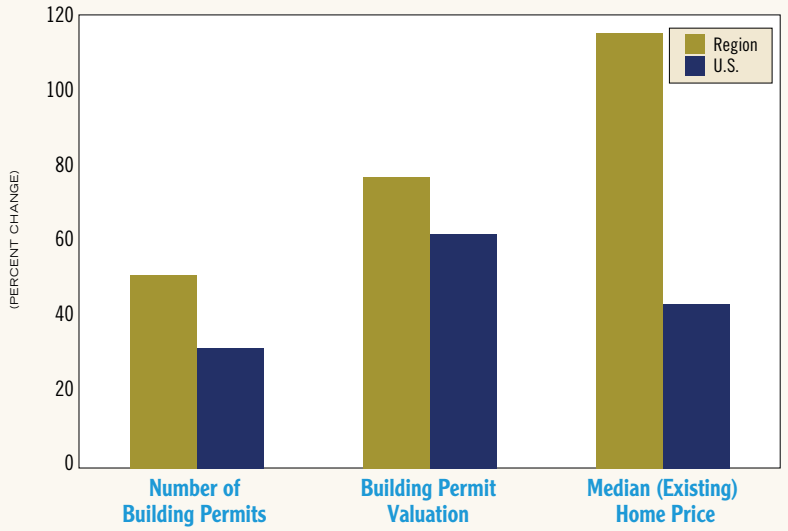
**Employment Change** (Annual Average)




*Source: California Employment Development Department and Council of Economic Advisers*

Figure 11

**Building Permit and Home Price** (2001-2005)

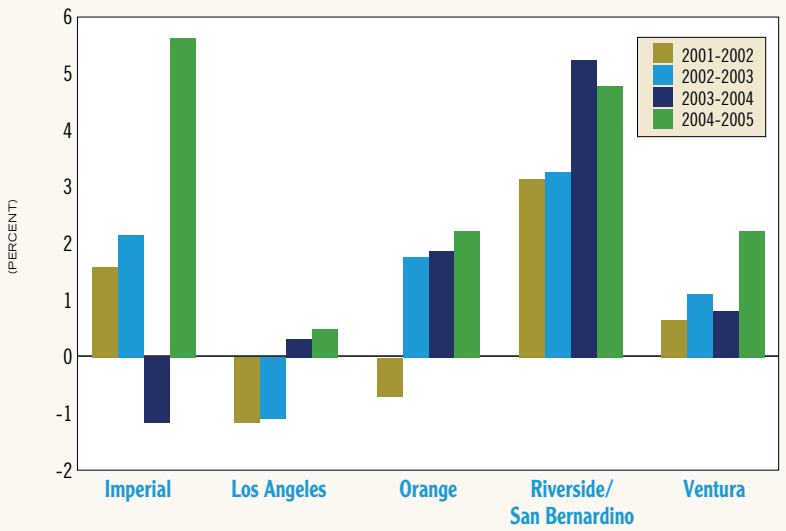



*Source: Construction Industry Research Board, U.S. Census Bureau and National Association of Realtors*

All the national trends discussed above also affected the pace of job recovery in Southern California. In addition, *housing-related sectors contributed much more significantly to the job growth and economic expansion in the SCAG region than in the rest of the nation (Figure 11)*. Between 2001 and 2005, median (existing) home price in the region increased by 114 percent, almost tripled the national rate. During the same period, building permits valuation in the region increased by 76 percent, also higher than the 61 percent in the nation. Hence, the impacts from both housing wealth (due to higher home equity) and housing construction on job growth were disproportionately higher in the region than in the rest of the nation. Between 2001 and 2005, Southern California also had higher rates of population growth than the rest of the nation, which contributed to job growth in sector such as retail trade.

Figure 12

## Employment Change by County




*Source: California Employment Development Department and Council of Economic Advisers*

Within the region, every county increased its total number of payroll jobs in 2005. The Inland Empire (Riverside and San Bernardino counties) continued to be the region's leading job generator, accounting for 48 percent of the total job increases. Jobs in the Inland Empire in 2005 increased by almost 57,000 (or 4.8 percent), slightly less than the 59,000 job increase (5.3 percent) during the previous period. Job increases in the Inland Empire were concentrated in the retail trade, construction, and professional and business services.

In Orange County, after gaining 27,000 jobs (or 1.9 percent) in 2004, total payroll jobs increased by another 33,000 (or 2.2 percent) in 2005. Between 2001 and 2004, financial activities were the top new job generator in Orange County each year. In 2005, professional and business services added 12,000 jobs, replacing financial activities (adding 6,000) as the top job generator.

After gaining 13,000 jobs (0.3 percent) in 2004, Los Angeles County gained another 20,000 jobs (0.5 percent) in 2005, the second consecutive increase since 2001 (Figure 12). Nevertheless, total jobs in Los Angeles County in 2005 were still 125,000 below the 1990 level. Job growth in professional and business services, construction and retail trade offset losses in manufacturing and information sectors.

In Ventura County, total payroll jobs increased by almost 7,000 (2.2 percent) in 2005, an improvement from a modest 0.8 percent increase during the previous period. Finally, Imperial County's payroll jobs increased by 2,900 (5.7 percent) after a 1.2 percent decline in the previous period. Job increase took place primarily in the agricultural, retail trade and government sectors.

## Employment by Sector

### *Why is this important?*

Different economic sectors have different levels of wages as well as future growth potential in employment and income. Composition of occupations also varies among the different economic sectors. A more diversified regional economy will be less vulnerable to turbulent environments, such as recessions or disasters.

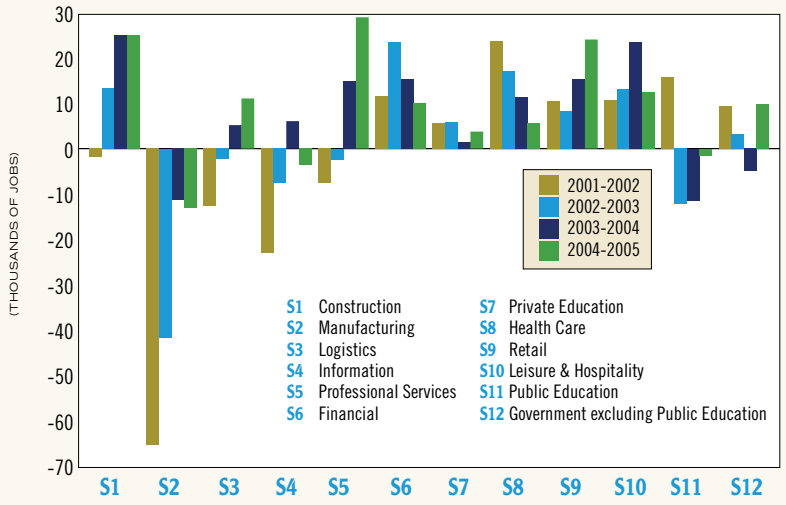
### *How are we doing?*[4]

Between 1990 and 2005, total payroll jobs in the region increased from about 6.4 million to 7.1 million. In 2005, professional and business services was the largest sector with more than 1 million jobs. It also increased its job share in the region from 12.6 percent in 1990 to 14.4 percent in 2005. In contrast, the share of manufacturing jobs in the region decreased significantly from 18 percent to 11.6 percent during the same period. Other sectors that experienced noticeable increases in their job shares included health care, leisure and hospitality and public education.

*In 2005, nine of the region's twelve major economic sectors experienced job increases (Figure 13). Only three sectors suffered job losses: manufacturing, information and public education.* The top three job generators in 2005 included professional and business services, construction and retail trade. Except for construction, the other two sectors continued to expand at a faster pace than in the previous year. The professional and business services sector includes legal, accounting, architecture, design, advertising and consulting services. It was the top job producer in 2005, increasing 29,000 jobs (3 percent). This almost doubled the gains in 2004 of 15,000 jobs (1.6 percent), after two consecutive years of combined losses of 10,000.

Figure 13

**Employment Change by Selected Sectors** (2001-2005)




*Note:*

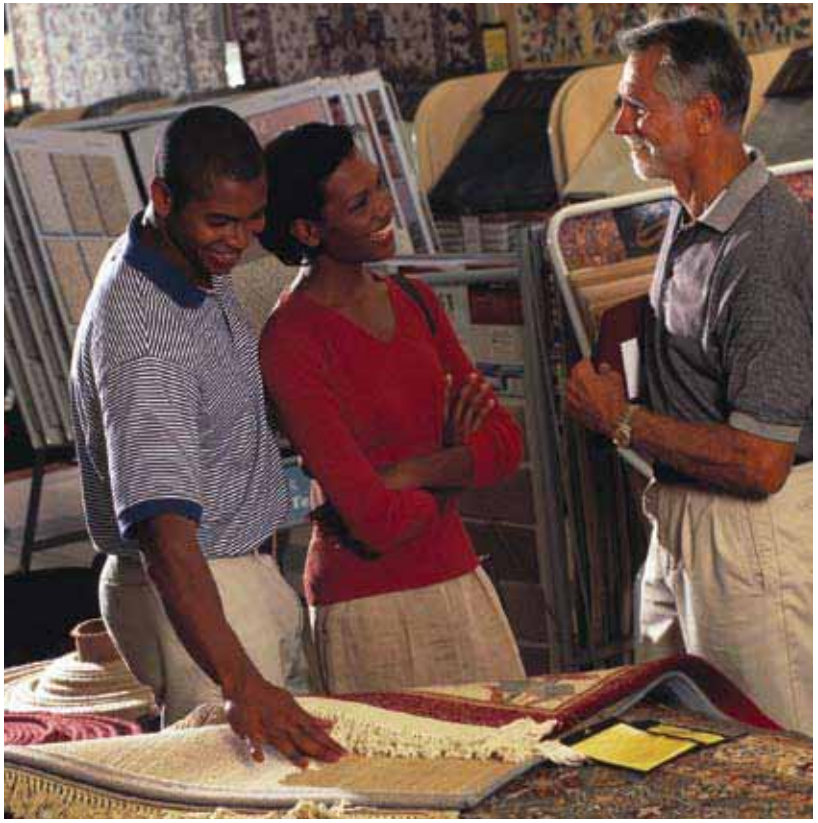
*Financial = Finance, Insurance and Real Estate*
*Logistics = Wholesale Trade, Transportation and Warehousing*
*Information Sector includes communications, publishing, motion picture production and internet service providers*

*Source: California Employment Development Department*

The construction sector increased another 27,000 jobs in 2005, similar to the level in the previous year. Forty percent of the increase took place in the Inland Empire. The rate of increase of 7.4 percent, though less than the 8 percent growth in 2004, was by far the highest among the twelve sectors followed by the retail trade (3.1 percent) and professional and business services (3 percent).

In 2005, retail trade increased by more than 24,000 jobs (3.1 percent), more than doubled the gains of 11,000 (1.1 percent) just two years ago. Some of the gains in retail trade employment are related to the active housing market including furniture, building materials and garden equipment supplies. Auto dealerships posted healthy employment gains, as did grocery stores and clothing stores. Retail trade is primarily a population-serving sector. With an increase of more than 1.5 million residents since 2000, retail trade has been growing steadily throughout the recession and recovery.

The logistics sector includes wholesale trade, transportation and warehousing that have particularly strong ties to the region's foreign trade activities. Transportation and warehousing includes truck, rail and air transportation, couriers and messengers, support services for transportation, and warehousing and storage. In 2005, the logistics sector provided about 600,000 jobs, or one in twelve jobs in the region. Among the total logistics jobs in the state, more than 54 percent were in Southern California. In 2005, the logistics sector added almost 12,000 jobs (2 percent), continuing to expand at a faster pace after its recovery in the previous year. Warehouse and distribution uses occupy over 1.5 billion square feet of building space in the region of which



60 percent are in Los Angeles County. The 1.5 billion square feet represent 15 percent of the national market, or 60 percent of the entire west coast. Another 32 million square feet of building space are under construction of which 67 percent are in the Inland Empire and 27 percent are in Los Angeles County. As land has become scarce closer to the Los Angeles basin, large new

facilities are being constructed in cities further east such as Moreno Valley, Fontana and Perris, and along I-15 toward Las Vegas.[5] Due to the projected significant increase in foreign trade, total jobs in the logistics sector in the region are estimated to increase another 120,000 over the next 10 years.[6]

Three sectors including leisure and hospitality, financial activities and health care continued to expand during 2005, though at lower levels than in the previous year. After increasing 24,000 (3.5 percent) jobs in 2004, the leisure and hospitality sector added another 12,000 (1.8 percent) in 2005. Between 2004 and 2005, international air passenger traffic increased from 16.6 million to 17.6 million, a 6-percent increase, after a 13-percent gain during the previous period. The region has not seen significant increases in the construction of new hotels, and occupancy rates and the average daily room rates were up throughout the region in 2005.

Financial activities sector increased by 11,000 (2.5 percent) jobs in 2005, moderating from almost 16,000 (3.7 percent) in 2004 and 24,000 (5.8 percent) in 2003. Specifically, growth in Orange County slowed down significantly, from an increase of 10,000 (8.2 percent) in 2004 to 6,000 (4.5 percent) in 2005. Growth in the financial activities sector also slowed in the Inland Empire counties. These counties tend to be tied more closely to the housing market (than Los Angeles County) that cooled down somewhat in 2005. Job gains in the health care sector slowed significantly to only 4,500 jobs in 2005 after averaging almost 18,000 for the previous three years. Much of the gains experienced last year were in outpatient health care service employment.

Due to the improved economy, the government sector (excluding education) experienced a clear rebound, turning a loss of 5,000 jobs in 2004 to add almost 10,000 jobs in 2005. The public education sector also reduced its loss of 11,000 in 2004 to less than 2,000 in 2005.

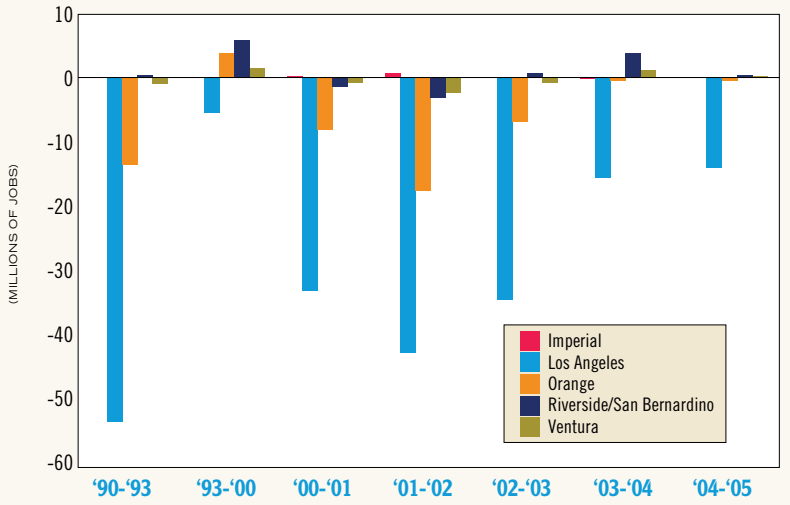
The only sector that shifted from job gains to losses in 2005 was the information sector. After gaining almost 8,000 jobs (3 percent) in 2004, the information sector lost 3,500 jobs (1.3 percent) in 2005. The motion picture and sound recording subsector posted a loss of 1,350 jobs reflecting a more competitive environment for movie locations.

## Manufacturing Sector

Between 2000 and 2003, manufacturing employment at the national level dropped from 17.2 to 14.3 million, a loss of almost 3 million jobs. Between 2003 and 2005, losses were almost stopped. In the SCAG region, it has lost almost 330,000 manufacturing jobs since 1990, most of them (280,000) in durable manufacturing. Between 1990 and 1993, the manufacturing sector in Southern California lost an average of 56,000 jobs per year (Figure 14). After some recovery from 1994 to 1998, it began to decline again. *Since 2004, losses in manufacturing began to stabilize.* In 2005, the region lost almost 14,000 (1.7 percent) manufacturing jobs, somewhat more than the 12,000 loss in 2004. The vast majority (10,000) of the manufacturing job losses were in non-durable manufacturing that experienced a 3-percent decline in 2005. Job losses were concentrated in the apparel industry that shed almost 4,000 jobs in Los Angeles County alone. The apparel industry is one of the low-wage sectors within manufacturing where U.S. labor faces significant competition from developing countries. Losses in the durable manufacturing sector fell to less than 1 percent in 2005, a significant improvement from the 5.6 percent in 2003. *Manufacturing job losses in the region concentrated almost exclusively in Los Angeles County while the Inland Empire and Ventura County maintained the same level of manufacturing employment in 2005 as in 2004. It should be noted that in 2005 the region continued to be the largest manufacturing center in the nation.*

Figure 14

**Manufacturing Employment Change** (Annual Average)




*Source: California Employment Development Department*

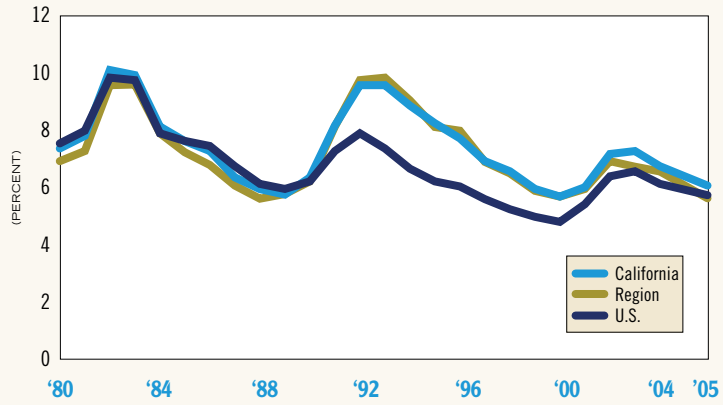
## Unemployment

### *Why is this important?*

Unemployment significantly impacts the economic and social well-being of individuals and families. Groups with higher unemployment rates will naturally have higher poverty rates. Places with higher unemployment rates require higher levels of public assistance.

Figure 15

**Unemployment Rate**




*Source: California Employment Development Department*

### *How are we doing?*

*In 2005, the region achieved its lowest unemployment rate (5 percent) since 1988, and a slightly lower unemployment rate than the national average, the first time since 1990.* From 2004 to 2005, the unemployment rate in the region dropped from 6 percent to 5 percent. During the same period, the unemployment rate declined from 5.5 to 5.1 percent nationally, while it dropped from 6.2 to 5.4 percent in the state (Figure 15).

*In 2005, the unemployment rate declined by at least 0.6 percent in every county in the region. Notably, the unemployment rate in Los Angeles County dropped by 1.3 percent, from 6.6 percent to 5.3 percent* (Figure 16). Imperial County has historically experienced much higher unemployment rates than the rest of the SCAG region (Figure 17). In 2005, its unemployment rate at 15.8 percent represented an improvement from the 17.4 percent in the previous year. At 3.8 percent, Orange County had the lowest unemployment rate in the region in 2005 and one of the lowest in the nation. Ventura County had a 4.7 percent unemployment rate, the second lowest in the region.

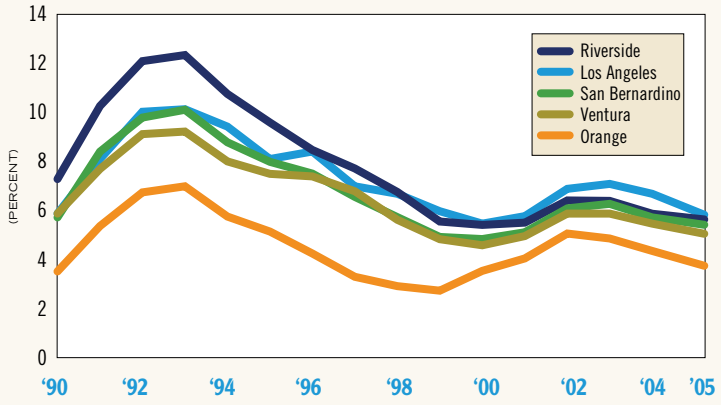
## Average Payroll per Job

### *Why is this important?*

The average payroll per job provides an indication of the overall quality of jobs available in the region. Higher average payroll per job contributes to higher per capita income.

Figure 16

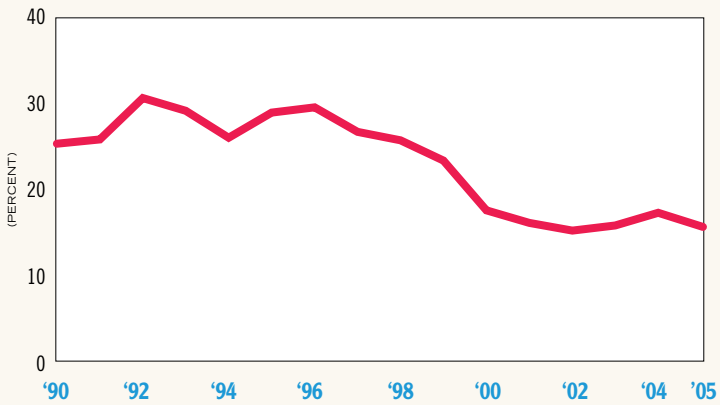
**Unemployment Rate by County**




*Source: California Employment Development Department*

Figure 17

**Unemployment Rate - Imperial County**




*Source: California Employment Development Department*

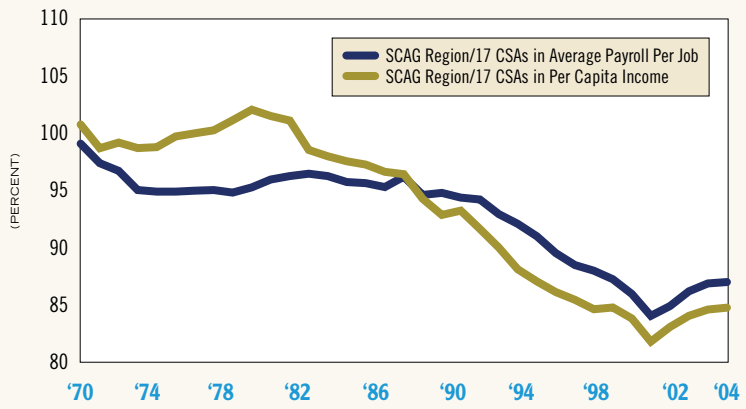
## *How are we doing?*

*In 2005, based on preliminary data, the average payroll per job in the region was $44,390, a decline of 1.6 percent from 2004 after adjusting for inflation.*[7] This was the first decline after two consecutive years of improvements. The information sector continued to have the highest average payroll per job ($76,920) followed by financial activities ($71,980). Leisure and hospitality had the lowest average payroll per job ($23,730) followed by retail trade ($28,880).

In 2004, the average payroll per job in the region increased by 1.7 percent from the previous year after adjusting for inflation, following a modest improvement of 0.6 percent in 2003. Between 2003 and 2004, each of the nine largest metropolitan regions achieved increases in their average payrolls per job in contrast to the previous period during which three regions suffered losses (see Figure 83 page 151). The rate of increase in the SCAG region (1.7 percent) was slightly below the average of the 17 largest metropolitan regions at 2.3 percent.

Figure 18

**SCAG Region vs. 17 Largest Metropolitan Regions**
(Average Payroll Per Job and Per Capita Personal Income)




**Defined as the CSAs (Combined Statistical Areas)*
*Source: U.S. Bureau of Economic Analysis*

Prior to 1987, the SCAG region maintained an average payroll per job at or above 95 percent of the average of the 17 largest metropolitan regions (Figure 18). Between 1987 and 2000, it declined relative to the average of the 17 largest metropolitan regions from just 95 percent to 84 percent. During the recent recession (particularly between 2000 and 2003), several of the largest metropolitan regions, including San Francisco Bay Area, New York and Boston, experienced much larger losses in average payroll per job than the SCAG region. Hence, from 2000 to 2004, average payroll per job in the SCAG region relative to the average of the 17 largest metropolitan regions improved from about 84 percent to 87 percent.[8]

*In 2004, the SCAG region ranked last in average payroll per job at about $42,900 among the nine largest metropolitan regions* (see Figure 84 page 152). The San Francisco Bay Area managed to achieve an impressive increase (4.7 percent) in 2004, rebounding from a sharp decline of equal magnitude just two years ago. The San Francisco Bay Area continued to have the highest average payroll per job at approximately $56,000 in 2004, followed by the New York region at about $54,000.

## Income

### *Why is this important?*

Real personal income per capita (with inflation adjustment) is one of the most important indicators of economic well-being. An increase in real per capita income is generally associated with improving social and economic indicators such as reduced poverty and an increase in educational attainment. Median household income reflects the well-being of households that are in the median position – their incomes are higher than half of the total households but lower than the other half. Total personal income provides an indication of an area's consumption capacity as well as the strength of its economy.

## *How are we doing?*

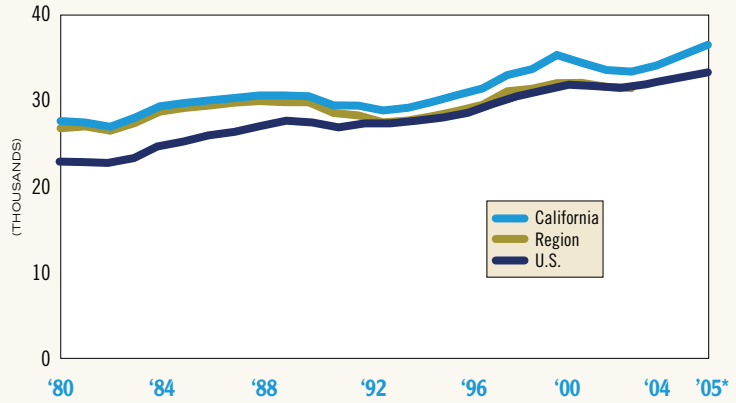
*In 2005, due to the continued economic recovery and expansion, real personal income per capita achieved increases for the nation (1.2 percent to reach $34,586) as well as the state (1.4 percent to reach $37,036). The increases were parallel with the improvements in the job market.* The improvements in 2005 were only the second time since 2000. However, the growth rates were only about half of those during the previous period at the national (2.3 percent) and state (2.7 percent) levels respectively.

Official data for real personal income per capita for the region will not be released until May 2007. Since 1992, per capita income in the region has been tracking closely that of the nation (Figure 19). In addition, since the 2001 recession, the per capita income growth has begun to converge among the SCAG region, California and the nation. *Consequently, real per capita income in the region in 2005 was estimated to achieve a similar pattern of growth, up to 1 percent or half of the growth rate in 2004 to reach $34,990 (Figure 20). Nevertheless, this would still represent the first consecutive gain in the region since 2000.*

*In 2004 (the most current official data available at the regional level), the region's real personal income per capita of $33,165 was a 2 percent increase from the 2003 level.* This represented the first gain after two consecutive years of losses in real per capita income. Between 2003 and 2004, each of the nine largest metropolitan regions in the nation (except Detroit) experienced a significant recovery of their per capita income. Notably, per capita income in the San Francisco Bay Area increased by 4.5 percent, rebounding from a 1.1-percent loss in the previous year. The region (2 percent) performed about the same as the average (2.2 percent) of the nine largest metropolitan regions in the nation (see Figure 85 page 152).

Figure 19

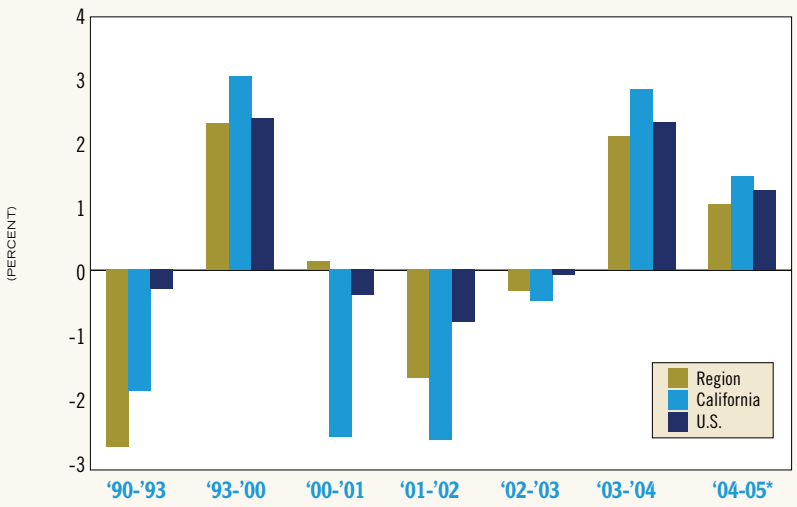
**Real Personal Income Per Capita** (2004 Dollars)




**Data for the SCAG region in 2005 is not available*
*Source: U.S. Bureau of Economic Analysis*

Figure 20

**Growth of Real Personal Income Per Capita** (Annual Average)



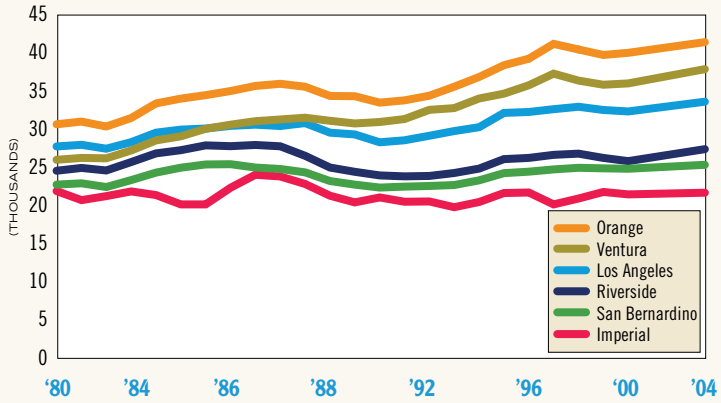

**Estimates for the SCAG region*

*Source: U.S. Bureau of Economic Analysis*

*Among the 17 largest metropolitan regions in the nation, the SCAG region continued to rank last in terms of per capita income in 2004 and is estimated to remain there in 2005* (see Figure 86 page 153). Over the past three decades, the SCAG region's per capita income ranking dropped from the 4th highest in 1970 to 7th in 1990, and 16th in 2000. *Since 1982, the SCAG region's per capita personal income has been below the average of the 17 largest metropolitan regions, and the gap had increased until 2000. In 2004, per capita personal income in the SCAG region was 85 percent of the average of the 17 largest metropolitan regions, improving somewhat from the lowest level of 82 percent in 2000 (see Figure 18 page 50).*

Figure 21

**Real Personal Income Per Capita by County** (2004 Dollars)




*Source: U.S. Bureau of Economic Analysis*

*From 2003 to 2004, real personal income per capita improved in every county in the region except Imperial County* (Figure 21). Per capita income in Imperial

County declined slightly by 0.3 percent in 2004. Ventura County achieved the highest rate of growth of 3.2 percent while San Bernardino County increased by only 1.3 percent. In 2004, the real per capita incomes in Imperial and Riverside counties were still lower than their respective 1990 levels. Orange County continued to have the highest per capita personal income ($41,868) while Imperial County had the lowest ($21,794).

## Total Personal Income

*Between 2000 and 2004, the SCAG region performed at a better level in its growth of total personal income than the per capita personal income. During this period, SCAG region's share of the total personal income in the nation increased by 0.22 percent, followed by the Washington D.C. (0.21 percent). Among the nine largest metropolitan regions in the nation, all the other seven experienced declining shares during the four year period* (see Figure 87 page 154). The San Francisco Bay Area suffered the worse performance with a sharp decrease of almost 0.53 percent in its share, while the New York region experienced declines of 0.38 percent. However, during the 1990s, the SCAG region suffered the largest loss in its national share of 0.76 percent while the San Francisco Bay Area achieved the largest gain of 0.62 percent. Among the large metropolitan regions, because the SCAG region generally had one of the highest population growth rates, it would generally rank lower when comparing based on per capita instead of total personal income.

## Household Income

Household income includes income from all sources for all members of the household. Nationally, real median household income at $46,242 in 2005 was almost the same as in 2004.[9] In California, real median household income in 2005 at $53,629 was 1 percent higher than the previous year. *In 2005, real median household income in the region at $52,069 declined slightly by 0.5 percent from 2004,* following a 2.6 percent gain during the previous period.[10] Between 2000 and 2005, real median household income increased by only 2 percent in the region while it declined slightly by 1 percent in the nation. Within the region, real median household income declined during the 1990s contrary to the national trend of improvement.[11]

## Income Inequality

One way to measure income inequality is through the household income ratios among households at different percentiles. For example, the income level for the 90th percentile indicates how the highest income group fared in a given year while the 10th percentile indicates the lowest income group. The 90th percentile is the level of income for a given area that 90 percent of households are beneath. The 10th percentile is the level of income that 10 percent of households are beneath. *At the national level, income inequality has been increasing steadily since 1969.*[12] Between 1979 and 1999, the SCAG region generally had a slightly higher income inequality than the nation when comparing household income ratios.[13] *In 2005, income inequality at the national level remained almost the same as in 2004.*[14] In 2005, the very rich

households (90th percentile) had an income just over 11 times of the income for the very poor households (10th percentile), an increase from just over 10 times in 1995.

## Poverty

### *Why is this important?*

The poverty rate measures the proportion of a population that has an income below the poverty line and therefore lacks the economic resources needed to support a minimum acceptable standard of living. The poverty line is adjusted for family size. Poverty not only results in current economic hardship, but also limits an individual's and family's future development opportunities. A higher poverty rate is both a cause, as well as an outcome, of lower educational attainment and higher unemployment rates. The extent of poverty also reflects the need for various kinds of public assistance. Poverty among children is of particular concern. Poverty in childhood is associated with a higher risk for dropping out of school, poor health, teenage pregnancy and a long-term economic disadvantage as adults.

### *How are we doing?*

In 2005, a family of four (including two children) earning less than $19,806 a year was classified as living in poverty, compared with $15,720 for a family of three with one child; $13,078 for a family of two with no children; and $10,160 for unrelated individuals.[15] Between 2004 and 2005, the poverty rate for all people decreased slightly in the region while it remained unchanged in California and the nation. Nationally, the poverty rate of 12.6 percent in 2005 was not statistically different from 2004 after four consecutive years of increase since 2000. In California, the poverty rate for all people remained unchanged at 13.3 percent in 2004 and 2005.

*In the SCAG region, 14 percent of residents lived in poverty in 2005, a slight decrease from 2004 (14.3 percent) though continuing to be higher than that of the state (13.3 percent) and the nation (12.6 percent).*[16] In addition, about 20 percent of children under 18 were below the poverty line in 2005, little changed from 2000. The poverty rate was highest for female-headed households (25 percent), and lowest for persons aged 65 and over (8.9 percent). *In 2005, the SCAG region continued to have the highest poverty rate (14 percent) for all people among the nine largest metropolitan regions in the nation* followed by the Dallas region (13.3 percent), while the Washington D.C. region achieved the lowest poverty rate of only 7.9 percent (see Figure 88 page 154). In 2005, Orange County continued to maintain the lowest poverty rate for all residents within the region of 8.8 percent while Imperial County experienced the highest at 21.5 percent.

## Taxable Sales

*Why is this important?*

Taxable sales provide important revenue sources for state and local governments and special districts. While employment and income are measures on the production side, taxable sales measures the level of consumption activities. Taxable sales tend to follow closely with trends in personal income, job market and consumer confidence.

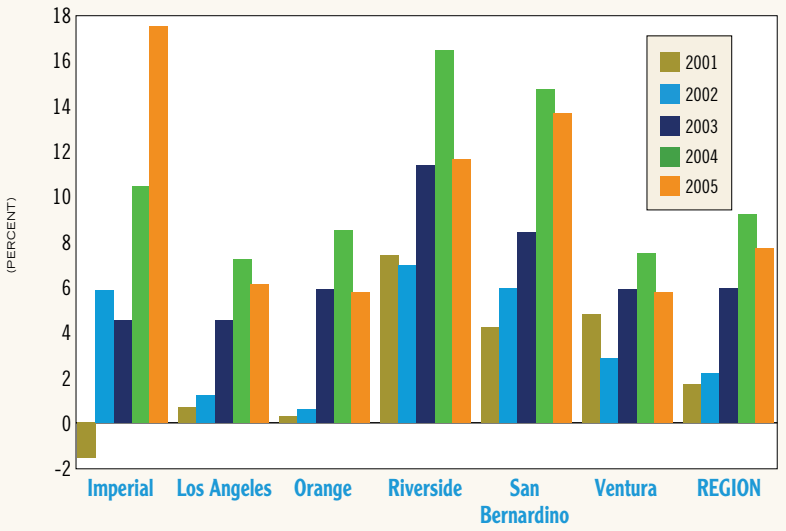
*How are we doing?*

In 2005, total taxable sales in the region were estimated to increase by more than 7 percent from 2004, slowing down from the almost 10 percent growth between 2003 and 2004 (Figure 22).[17] Nevertheless, the 7 percent rate of growth was still somewhat higher than the average (6 percent) during the past ten years.

From 2000 to 2002, total taxable sales in the region increased by only about 2 percent per year. The wealth effects due to significant increases in home equity, particularly during 2003 and 2004, contributed to the accelerated growth in taxable sales. During these two years, total taxable sales in the region grew 2 to 3 percent above the growth rate of its total personal income. Within the region, Imperial County (17.5 percent) had the highest rate of growth in taxable sales in 2005 followed by San Bernardino (13.7 percent) and Riverside (11.6 percent) counties.

Figure 22

**Taxable Sales** (Change from Previous Year*)




*Change between 2004 and 2005 is based on data for the first two quarters

Source: California State Board of Equalization

## International Trade

*Why is this important?*

International trade includes export and import activities that create job opportunities and bring income into the region. Though exporting goods produced in Southern California generates higher net economic benefits for

the region, imports can create economic benefits too. The region's role as a major transshipment center linking domestic and global markets is also of national and international significance.

## *How are we doing?*

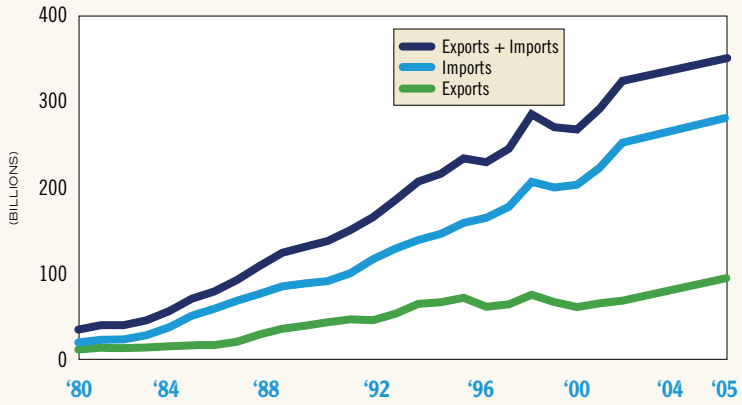
Between 2004 and 2005, total trade through the Los Angeles Customs District (LACD) increased from $323 billion to $348 billion (or 8 percent), a new record level. This was somewhat lower than the 11-percent increase during the previous period (Figure 23). Among the $25 billion increase, $18 billion was through imports, and another $7 billion through exports.

Among the $348 billion in trade passing through the LACD, imports accounted for 77 percent, exports 23 percent. In 2005, among the $78 billion exports out of the LACD, almost half ($37 billion) were by air with the other half by sea. Exports by air are generally smaller and higher value goods. On the other hand, among the $270 billion imports into the LACD, 86 percent were by sea with the other 14 percent by air.

The region's prominence in international trade has been fostered through its large domestic market, global ties through its growing Asian and Hispanic communities, strategic location, and excellent trade infrastructure serving the rest of the nation. Total trade through the LACD increased from less than $40 billion in 1980 to $348 billion in 2005, more than an eight-fold increase. The region's direct employment in international trade also increased from about 175,000 in 1980 to 450,000 in 2005, which represents an increase of 45,500 jobs from 2004.[18] Trade jobs are found in a variety of activities, including vessel operation, cargo handling, surface transportation (truck and rail), trade finance, freight forwarding, custom brokerage, insurance, etc.

Figure 23

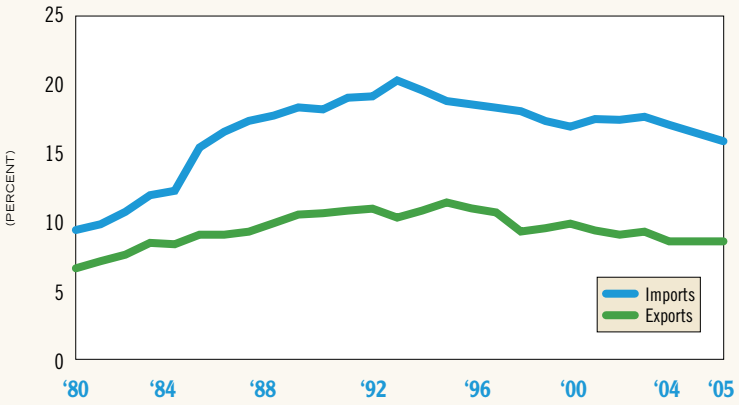
**Exports and Imports - LA Customs District** (Current Dollars)




*Source: U.S. Census Bureau*

Figure 24

**Exports and Imports - LA Customs District** (Percent of U.S. Total)




*Source: U.S. Census Bureau*

Between 1980 and 2005, the share of the LACD's trade value of the U.S. total grew from about 8 percent to its peak of 16 percent in 1993 and then began declining to 13.5 percent in 2005. The share of the LACD's export of the U.S. total was just below 9 percent in 2005 while share of imports was about 16 percent (Figure 24). In 2005, the LACD retained the number one ranking in the U.S. in terms of total trade value, followed by the New York ($286 billion) and Detroit ($225 billion) customs districts.

Asian countries dominated both imports (86 percent) as well as exports (72 percent) through the LACD.[19] *In 2005, China continued to widen its lead as Southern California's leading trade partner, after surpassing Japan in 2002.* Total trade value with China through LACD reached over $109 billion in 2005, a 27 percent increase from 2004 after similar performance in the previous period. Total trade value with China more than doubled the corresponding value with Japan of $46 billion in second place. Other major trade partners included South Korea, Taiwan and Malaysia.

"In 2005, the total number of building permits issued reached 91,000 units, a slight decline from the 93,200 units in the previous year"

# HOUSING

## Housing Construction

*Why is this important?*

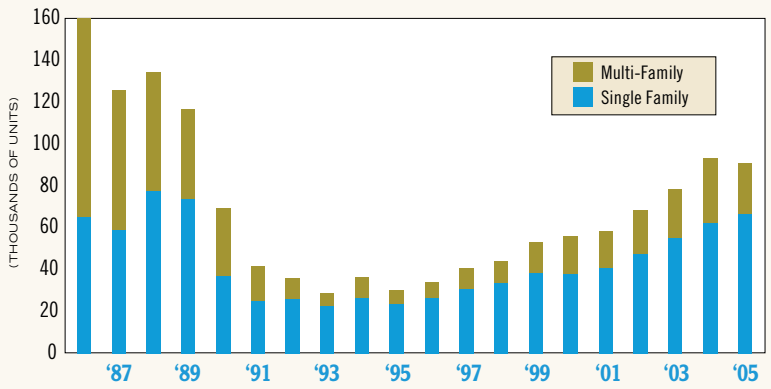
The magnitude of housing construction, population growth, and new households is a major determinant of housing prices. Different geographical distributions of new housing result in different needs for support infrastructure and services. The residential construction industry is also an important source of employment and corporate profit in the region.

*How are we doing?*

*In 2005, the total number of building permits issued reached 91,000 units, though declining slightly from the 93,200 units in the previous year, it was still the second highest since 1989 (Figure 25). Notably, the decline was only within the multi-family sector in which the number of permits decreased by 22 percent (or 6,800 units) in one year.* Permits for single-family units achieved a modest 7 percent (or 4,600 units) increase, significantly less than the 16 percent annual increase between 2001 and 2004. Since the mid-1990s, housing construction activities in the region have experienced a significant recovery. Between 1995 and 2001, the number of permits issued rose steadily, and between 2001 and 2004 the rate of increase accelerated. Total number of residential building permits increased from about 30,000 units in 1995 to over 91,000 units in 2005, more than tripled.

Figure 25

### Residential Building Permit Activity



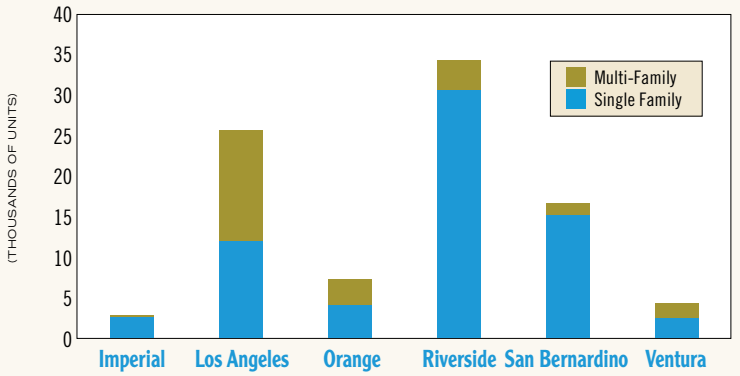

*Source: Construction Industry Research Board*

Between 2004 and 2005, the number of permits issued decreased in Orange County (-1,900 units, or 21 percent), San Bernardino County (-1,800 units or 10 percent) and Los Angeles County (-1,300 units or 5 percent). The declines were concentrated almost exclusively in multi-family units. In Orange County, the permit tally dropped in three consecutive years to about 7,200 units in 2005, the lowest since 1994. Riverside County generally maintained its level of 34,000 units with permits during 2004 and 2005. Imperial County experienced the highest growth rate with building permits increasing from 1,200 units to 2,900 units (or 140 percent) in the past two years while Ventura County also achieved a 23-percent increase during the same period.

As to the distribution of permits within the region, the Inland Empire counties accounted for about 58 percent of the total permits issued in 2005. In particular, Riverside County led among the six counties in the total number of permits issued (34,300 units), close to 40 percent of the regional total, followed by Los Angeles County (25,600 units, or 29 percent).

Figure 26

### Residential Building Permits by Housing Types, 2005

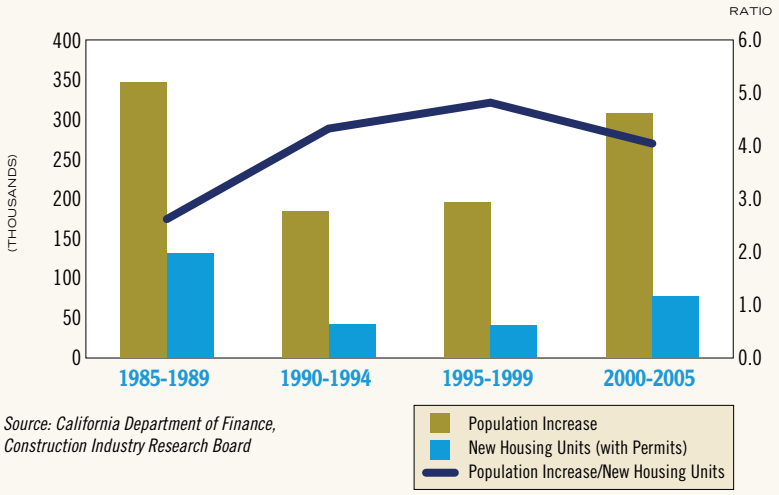



*Source: Construction Industry Research Board*

Among the total permits issued in 2005, about 27 percent were for multi-family housing, a decrease from about 31 percent over the past five years. *However, within the region, there continued to be significant differences between the coastal and inland counties with respect to the share of multi-family housing permits.* Specifically, each of the three coastal counties achieved at least 40 percent of the permits issued for multi-family units including Los Angeles (53 percent), Orange (44 percent) and Ventura (42 percent) (Figure 26). Los Angeles County led the nation in multi-family development, with 10,900 multi-family units under construction at the end of 2005.[1] In Ventura County, the 42 percent share of multi-family housing permits was a significant increase from 14 percent just three years ago. In the remaining three inland counties, close to 90 percent of the total permits were for single-family housing construction.

Figure 27

**Population Increase vs. New Housing Units 1985-2005**



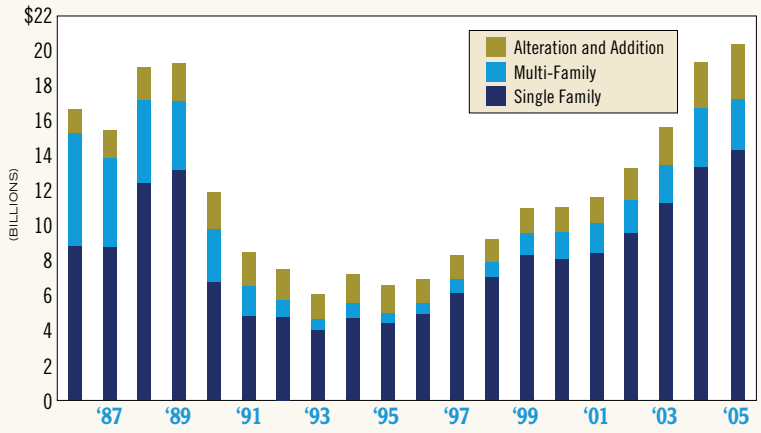

*Source: California Department of Finance, Construction Industry Research Board*

Since 2000, the continuous increase of permit activities (except 2005) and the recent slowdown in population growth have narrowed the gap significantly between housing supply and demand. For example, yearly population in the region increased by about 300,000 between 2000 and 2005 compared to only 195,000 between 1995 and 1999, a rise about 50 percent. However, annual building permits issued during the period from 2000 to 2005 were over 72,000, an 80 percent increase from about 40,000 units in the previous 5-year period (Figure 27). Hence, the ratio between population growth and new housing units with permits declined noticeably from 4.8 persons per unit (during the period between 1995 and 1999) to 4 persons per unit (during the period between 2000 and 2005), though still higher than the average household size of 3.1 persons per unit.

Total valuation of permits in 2005 reached over $20.4 billion, with an annual increase of $3.8 billion (or 5.6 percent), significantly less than the record 25 percent during the previous period (Figure 28). Between 2001 and 2005, total valuation of permits increased by $8.8 billion. *While the housing construction industry in the region almost collapsed during the recession in the early 1990s, it has been serving as an important stabilizing force for the regional economy since the 2001 recession.*

Figure 28

**Valuation of Residential Building Permits**




*Source: Construction Industry Research Board*

## Homeownership

*Why is this important?*

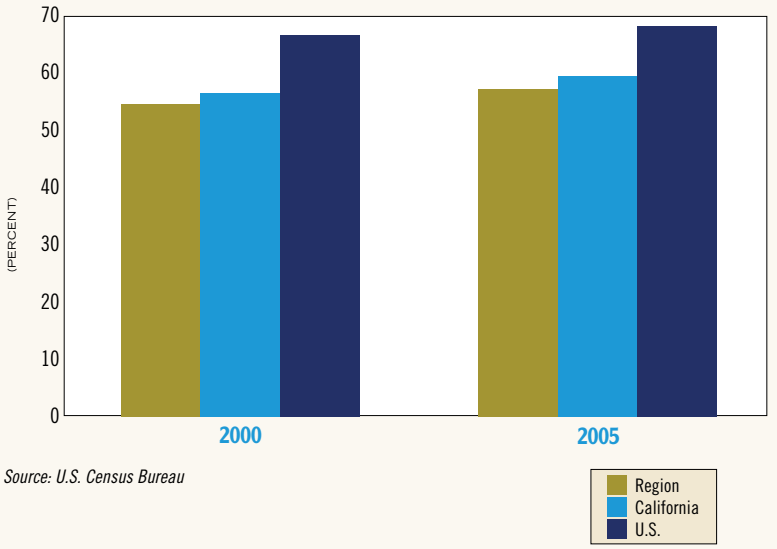
Owning one's home has long been considered an important part of the American Dream. The equity generated from homeownership represents almost 45 percent of total household wealth.[2] Higher homeownership rates also help to improve neighborhood stability.

*How are we doing?*

From 2004 to 2005, homeownership rates remained almost unchanged at the regional, state and national levels. Since 2000, homeownership in the region has been increasing steadily to reach over 56 percent, an increase of about 2 percentage points (Figure 29).[3] Within the region, every county achieved an increase in homeownership during the five year period. Homeownership in Riverside County reached 70.4 percent in 2005, the highest in the region and followed by Ventura County with 69 percent.[4] Riverside and Ventura counties are the only two counties with homeownership higher than the national average. Between 2000 and 2005, homeownership increased from 58.8 to 62 percent in Orange County while it remained at 58 percent in Imperial County.[5] Los Angeles County, though its homeownership increased from 46.9 percent in 2000 to over 49 percent in 2005, continued to have the lowest homeownership in the region.[6]

Figure 29

**Homeownership Rates**




*Source: U.S. Census Bureau*

Among the nine largest metropolitan regions in the nation, the SCAG region continued to have the second lowest homeownership, just above the New York region (53 percent). Detroit's and Philadelphia's homeownership rates at 74 and 70 percent respectively in 2005 were the only two regions with homeownership higher than the national average.[7]

## Housing Affordability

*Why is this important?*

Housing affordability provides an indication of the level of financial burden of housing expenses. Housing constitutes the largest share of household expenditures among all consumption items. When a household spends too much on housing, there is not enough left to meet other household needs, such as transportation, healthcare or education. Housing affordability also affects decisions as to where to live. Hence, housing affordability is an indicator reflecting the fundamental well-being of households. In addition, it influences business decisions to locate or expand in the region. Lack of affordable housing will result in a weakening of our region's attractiveness and competitiveness.

*How are we doing?*

Housing affordability can be measured by the share of households that can afford to purchase a median-priced home or by the share of household income spent on housing. *By both measures, housing affordability continued to decline throughout Southern California and reached a record low in 2005.*

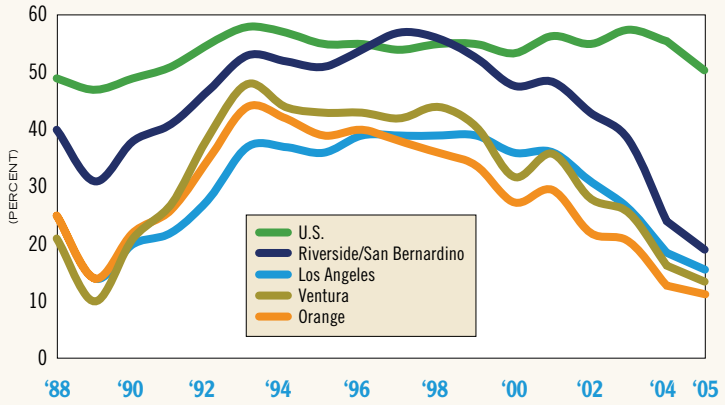
In the three coastal counties (Los Angeles, Orange and Ventura), the share of households able to afford a median-priced home dropped below 15 percent in 2005, the lowest since 1989. In Los Angeles County, the affordability measure dropped from 19 percent in 2004 to 14 percent in 2005, after a 7 percentage point drop in the previous period. In Ventura and Orange counties, the affordability measure dropped to 13 and 11 percent respectively.

*Over the last few years, the sharpest decline of affordability occurred in the traditionally more affordable Inland Empire where the share of households able to afford a median-priced home dropped 30 percent, from 48 percent in 2001 to only 18 percent in 2005 (Figure 30). In 2005, every county in the region had lower housing affordability than the national average and the gaps have continued to widen since 1997.* While about half of the nation's households could afford a median-priced house in 2005, less than 15 percent of the region's households could achieve the same.

Figure 30

**Housing Affordability**

(Percent of Households Who Can Afford to Purchase a Median-Priced Home)



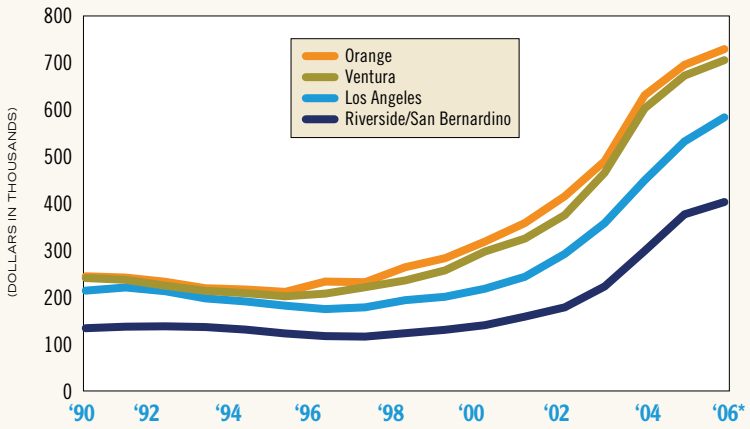

** Data for Imperial County is not available*
*Source: California Association of Realtors*

Housing affordability is generally impacted by household income, home prices and mortgage interest rates. *During 2005, continuing sharp increases in home prices combined with the lack of growth in median household income and slight increase in interest rates made housing less affordable.*

Real median household income declined slightly by 0.5 percent from 2004 to 2005 and achieved a very modest 2 percent increase since 2000. However, median home prices in the region reached historic peaks in 2005 in almost every county in the region (Figure 31). Since 1998, after recovering from the losses during the previous recession, median home prices had increased between 8 and 12 percent per year up to 2001. Between 2001 and 2005, partly because of lower mortgage interest rates and continuing population growth, median home prices for existing homes more than doubled in Los Angeles, Ventura, and the Inland Empire, while almost doubling in Orange and Imperial counties. For example, the median price for existing homes in Los Angeles County rose from $241,000 in 2001 to $529,000 in 2005, an increase of about $290,000 (or 120 percent) in just four years. During the same period, median existing home price in the Inland Empire increased from $157,000 to $374,000, an increase of $220,000 (or 140 percent). Between 2001 and 2005, home price in Imperial County also increased from about $125,000 to $234,000, almost doubled.[8] Data in the first six months in 2006 showed the rate of home price appreciation slowed down across the region.

Figure 31

**Median Home Price** (Existing Single-Family Homes in Current Dollars)

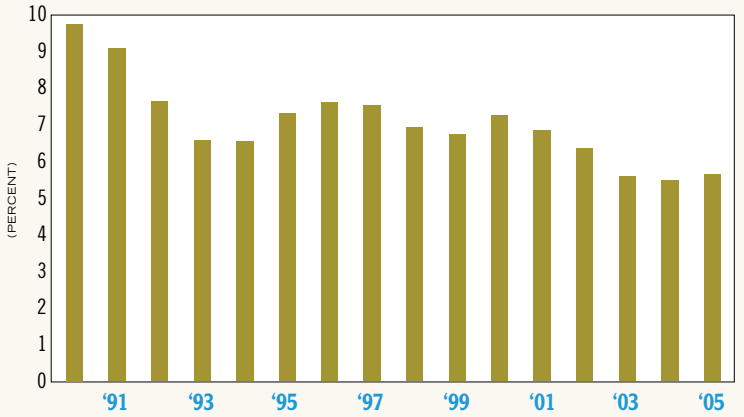



**Based on June 2006 median home prices*
*Source: California Association of Realtors, Imperial County data not available*

*The record high home prices were affected by several factors including low interest rates, wider availability and uses of non-traditional mortgage financing and the accumulation of unmet demand since the early 1990s.* In 2005, average mortgage interest rate rose slightly from 5.5 to 5.64 percent, still one of the lowest in the past 40 years (Figure 32). Lower interest rates could allow for higher selling prices and still keep the same monthly mortgage payment amount. In addition, there are wider availability and uses of non-traditional mortgage financing in recent years.

Figure 32

**Average Mortgage Rate**




*Source: Real Estate Research Council of Southern California*

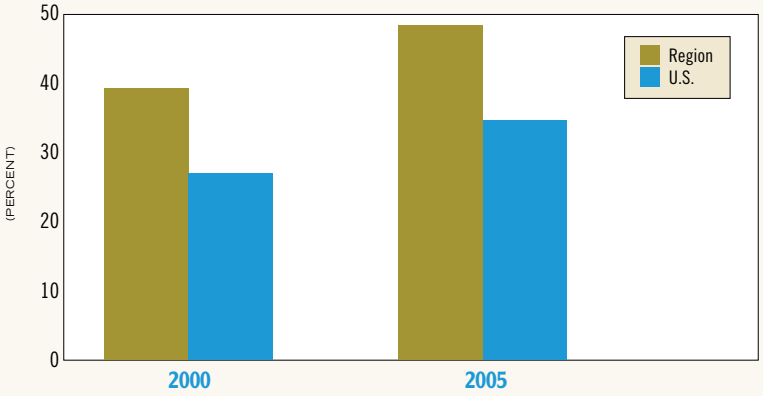
*In 2005, over 48 percent of the region's owner households (with a mortgage) had monthly costs at or greater than 30 percent of household incomes, about a 3 percent increase from 2004 and up from 39 percent in 2000 (Figure 33).* Statewide data further indicated that 20 percent of recent California homeowners (those who have purchased a house within the last 2 years) spend more than half of their incomes on housing costs.[9] At the national level in 2005, only 35

percent of owner households had monthly costs at or greater than 30 percent of household incomes. In 2005, the SCAG region had the second highest housing cost burden among the nine largest metropolitan regions in the nation following the San Francisco Bay Area with 50 percent of owner households had monthly costs at or greater than 30 percent of household incomes.

Figure 33

### Housing Cost Burden

(Homeowners Paying 30 Percent or More of Household Income on Housing)

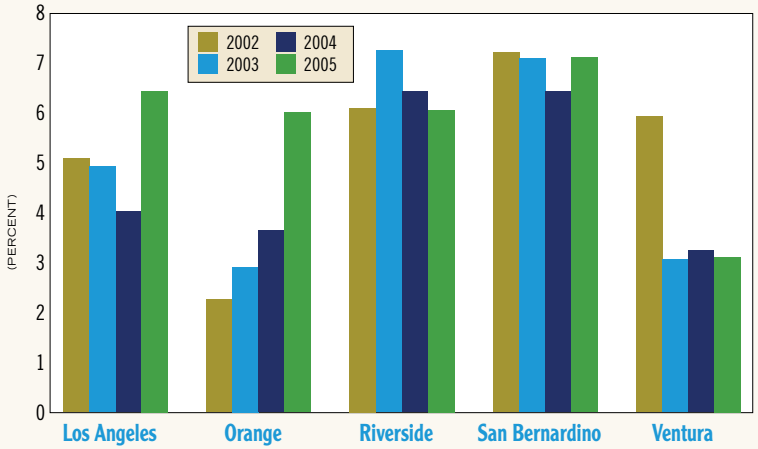



*Source: U.S. Census Bureau, 2000 and 2005 American Community Survey*

Figure 34

### Average Monthly Rent

(Change from Previous Year without Inflation Adjustment)



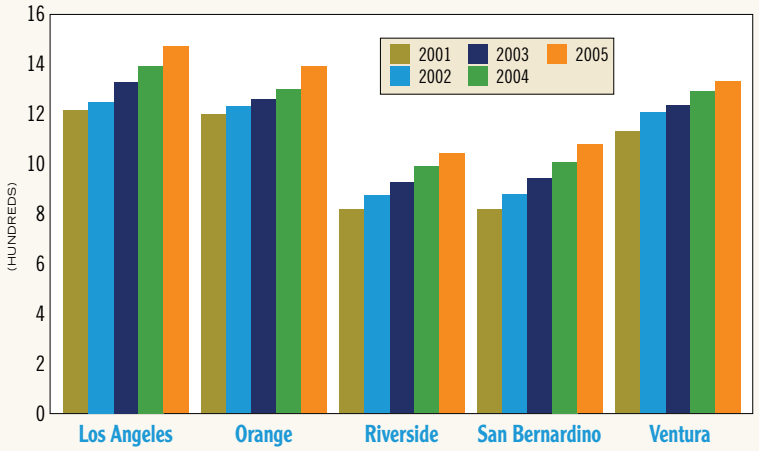

*Source: Real Estate Research Council of Southern California*
*Imperial County data not available.*

With rising interest rates, record home prices and continuing population growth, demand for rental units has been growing. The conversion of apartments to condominiums has also reduced the supply of rental units. For example, in the City of Los Angeles, about 11,000 apartments have been converted to condos since 2004.[10] Between 2004 and 2005, average rents in the region increased generally by more than 6 percent (without adjusting for inflation) (Figure 34).

In 2005, average monthly rents were about $1,400 in the coastal counties and above $1,000 in the Inland Empire (Figure 35). The Los Angeles/Orange county area topped all markets in the west for the most expensive monthly rents while occupancy rate increased by 0.5 percent to almost 96 percent. With rent increases significantly exceeding household income growth, rental cost burden has continued to rise. *Among the over 2.4 million renter households in the region in 2005, more than 53 percent (1.3 million renter households) spent 30 percent or more of their incomes on rent, up from almost 49 percent in 2000 (Figure 36).* Since 2000, rental cost burden has been increasing at the regional, state and national levels.

Figure 35

**Average Monthly Rent**
**(Current Dollars)**

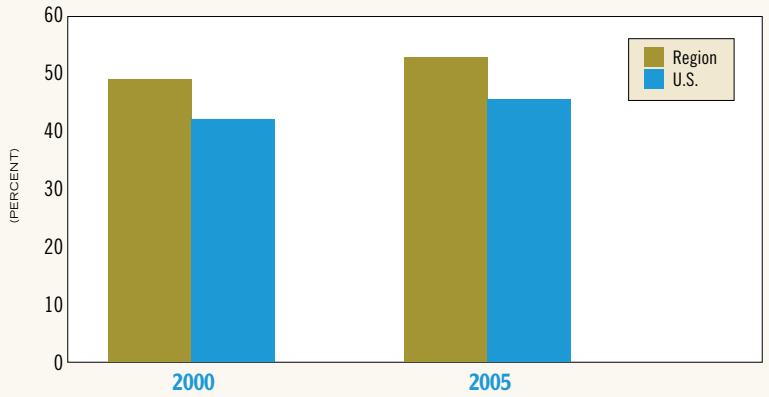



*Source: Real Estate Research Council of Southern California*
*Imperial County data not available.*

Figure 36

**Rental Cost Burden**

(Renter Paying 30 Percent or More of Household Income on Rent)




*Source: U.S. Census Bureau, 2000 and 2005 American Community Survey*

*Among the nine largest metropolitan regions in the nation, the SCAG region continued to have the highest share (53 percent) of rental households with monthly rent at or greater than 30 percent of household income (see Figure 89 page 155).* Following the SCAG region was the New York region, with 49 percent of renters spending 30 percent or more of their incomes on rent. In addition, California had the highest median rent among all states in 2005. Hence, rental housing is an important public policy issue at the regional as well as the state levels.

The extraordinary high housing cost burdens not only impact the well-being of residents but also discourage business decisions to locate or expand in the region. Lack of affordable housing remains a serious challenge to the region's long-term economic growth.

## Housing Crowding

### *Why is this important?*

Housing crowding measures the percent of housing units with more than one person per room, including all rooms except bathrooms. It provides an indication of housing shortages and housing affordability. Lack of affordable housing will lead to higher levels of housing crowding.

### *How are we doing?*

In 2005, about 10.6 percent of the occupied housing units were considered to be crowded, a slight decrease of 0.5 percent from the previous year.[11] Between 2000 and 2005, the share of crowded housing in the SCAG region declined by 3.2 percent. Within the region, Los Angeles County continued to have the highest rate (12.7 percent) of crowded housing. Overcrowding is most common among low-income households and most prevalent in renter housing. In 2005, Southern California continued to have the highest rate of crowded housing among the nine largest metropolitan regions.[12]

# THE SOUTHERN CALIFORNIA PUBLIC OPINION SURVEY 2006: CONCERNS AMID SATISFACTION

BY KIM HASELHOFF, PH.D. AND PAUL ONG, PH.D.

This essay presents findings from a recently completed survey of Southern California residents (those living in the counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura). Details of the survey can be found at: http://lewis.sppsr.ucla.edu/special/SocalSurvey/index.cfm. Public opinion surveys are based on people's subjective views, but nonetheless, can play an important role in decision making as they gather information that complements data from standard sources such as the Decennial Census and Current Population Survey. The information from the survey can help better inform elected officials and policymakers about the public's concerns and priorities, and how residents feel about their local government and their local government's performance.

While this essay focuses on problems in the region, it should be noted that Southern California is an attractive place to live. Almost three-quarters of survey respondents believe the weather is the best thing about the region, but others also mentioned amenities (both natural and cultural), and services (39%), opportunities, including educational and economic opportunities, among others (39%), and lifestyle (18%) (see Exhibit 1). Over 60 percent of survey respondents also believe that things are going well in the region as far as quality of life is concerned (see Exhibit 2). In addition, 64 percent of respondents believe things will stay the same or get better in the next twelve months, versus only 32 percent who believe things will get worse. (Residents in Orange and Ventura counties are most satisfied with quality of life, with 71 percent of residents believing things are going somewhat or very well, versus 60 percent and 63 percent for Los Angeles County and the Inland Empire, respectively). As for financial security, 71 percent of survey respondents report feeling financially secure (19% said they felt *very* secure). Despite these positives, however, residents do have some serious concerns about life in the region. One challenge in improving the quality of life in Southern California is to continue to find innovative solutions for the major problems identified by residents in the survey.

*In 2006 Southern Californians rated the top problems in the region as:*

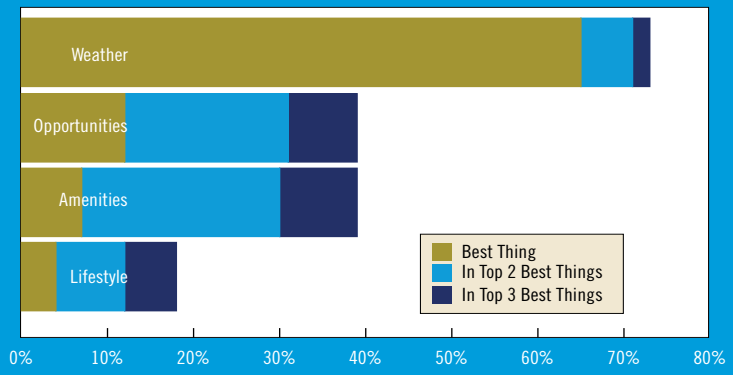
- Transportation
- Crime
- Environment
- Economy
- Immigration and Education *(tie)*

Transportation, and specifically traffic, was by the far the most cited concern, both overall and across demographic groups. Transportation (mobility) also received the lowest possible grade on the SCAG State of the Region report card for 2005.

The Southern California Survey (SCS) also found that a majority of Southern California residents have some degree of confidence in their local government, although they have less confidence in local government's ability to solve the problems that most affect them. Whites have more confidence than other ethnic groups do. Regionally, Inland empire residents have lost considerable confidence in local government since last year. Overall, ratings of local government performance vary by issue area, but most residents rate performance as neither adequate nor inadequate but somewhere in the middle. However there is more polarization in opinion on government performance in 2006 than we found in 2005.

Exhibit 1

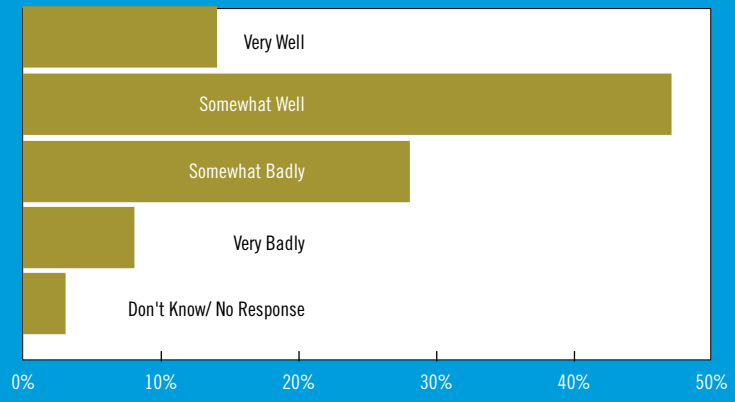
**Best Things About Living In Southern California***




**Respondents were asked to name the three best things about living in Southern California*

Exhibit 2

**How are things going in Southern California?**



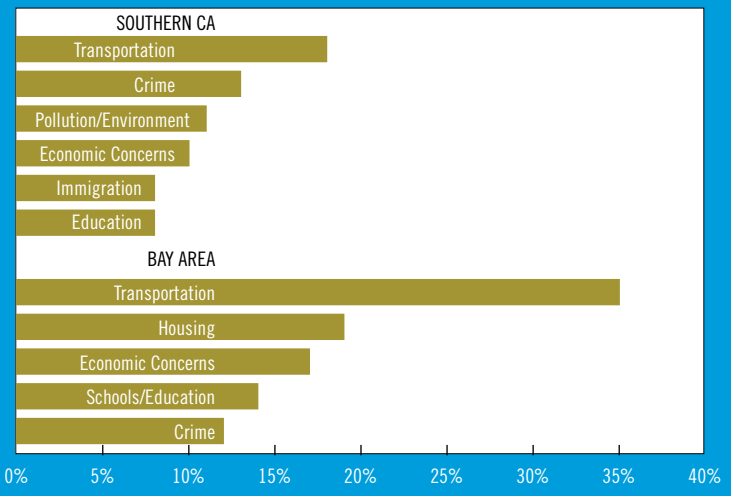
## OVERVIEW OF REGION'S MOST IMPORTANT PROBLEMS

Exhibit 3 displays the top five problems in Southern California, as well as the top five problems in the Bay Area, for comparison. Transportation, Crime, Pollution/Environment, the Economy, Immigration, and Education (which tied for the fifth place spot) are the top five problems cited by Southern California Survey respondents. Many of these problems are related to life in a large metropolitan area, so it is not surprising that the Bay Area generally shares the same concerns. Transportation is the top concern in both regions, though it ranks more highly in the Bay Area. Housing is still a top concern in the Bay Area, as it was last year, but in Southern California it was bumped off the top five list this year by Environmental concerns and Immigration. The Economy, Crime, and Education continue to be on the top five list in both regions, with crime actually moving into the second spot in the Southern California region, up from fourth place last year. We also broke down the Southern California region into three areas, Los Angeles County, the Inland Empire, and a third "other" area, Ventura/Orange county. The top three problems in these three areas were virtually the same, and the same as the top problems overall – Transportation, Crime, and the Environment (which tied with the Economy for third place in the Inland Empire).

Imperial County, which is part of the Southern California Association of Governments, but not part of the SCS sample, sits just east of San Diego County. It is a much more rural area of the region and its concerns are a bit different than those in the five county metropolitan area. While the SCS did NOT survey residents of Imperial County, survey results of attendees at the Sixth Annual Imperial Valley Economic Development Summit (2005) as to the two largest challenges for the Imperial Valley as it grows provide somewhat comparable data. (The California Center for Border and Regional Economic Studies notes that these results are not a scientific sample in any way, but they still provide insight into life in the area). The top five concerns listed included Aesthetics/beautification (30%), Good paying jobs (22%), Qualified workforce (20%), Traffic (12%), and Maintaining rural aspects of community (8%) (CCBRES Bulletin, April 2005). Not surprisingly, economic concerns rate higher than traffic in this much more rural area of the region where unemployment rates were 16% in 2005, versus about 5% or below for the rest of the five counties (State EDD data).

Exhibit 3

**Top Problems in Southern California and Bay Area**

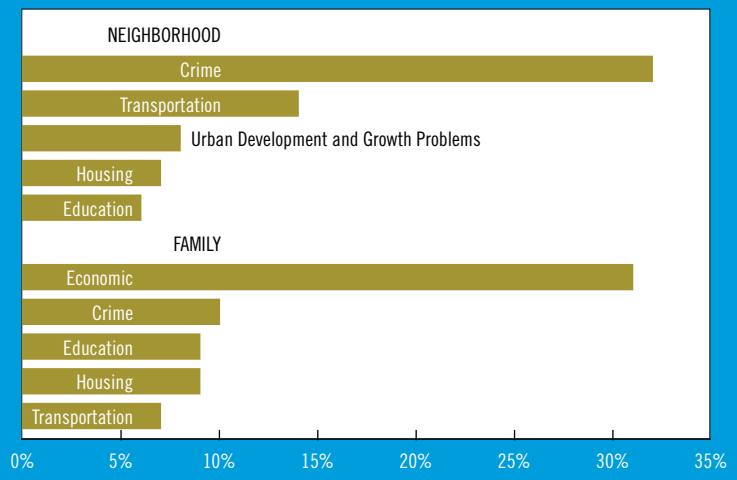



*Source: Bay Area Council 2005, SCS 2006*

The SCS also asked respondents about the top problems in the respondent's neighborhood as well as the most important issues facing his or her own family today. The results are displayed in Exhibit 4. Many of the problems are the same at the regional, neighborhood, and family level, although housing apparently is more of a concern for neighborhoods and families. Crime, transportation, and education are concerns at all levels. However families tend to deal more with economic problems, such as financial security, jobs, etc., than with any other issue.

Exhibit 4

**Top Problems in Your Neighborhood and Your Family**




## PERCEPTION OF PROBLEMS BY DEMOGRAPHIC GROUPS

A breakdown of the top three problems according to ethnicity, education, age, and income indicates a high degree of consistency in the perception of problems among demographic groups. There are a few slight differences though. We developed a scoring system to determine the order of importance of problems among groups. We assigned a score to each response depending on whether it was the first second or third answer. First answers received a 4, second answers a 2, and third answers a 1. Again, Transportation was ranked as a top problem, with Crime the second most important problem, and the re-

sponses were consistent among all groups except the 36-54 age group, which ranked Economic concerns second and Crime third. The only other variation was noted among third responses. Although most respondents ranked the Environment as the third most important problem, those with a BA or higher, and those making more than $40,000 per year ranked Economic concerns as the third most important problem (though the environment was ranked closely behind in the case of the top two income groups). Only those in the 18-35 age group ranked Immigration as the third top concern. The list of the top three concerns by demographic groups is displayed in Exhibit 5.

## BACKGROUND ON TOP FIVE PROBLEMS

The following section provides a brief overview of the top problems identified by residents so the reader has a basic understanding of the more objective challenges facing the public and local government.

### *Transportation*

The most overwhelming concern in the region is transportation. Although various responses related to transportation were offered, by far the most common response to the question about the region's most important problem was traffic. Although Southern California does not have the highest average commute times in the U.S., it does stand out for the level of congestion. In terms of the average hours wasted annually per traveler, Los Angeles and Orange counties have the worst congestion of all U.S. metropolitan areas. Riverside and San Bernardino tied for first out of 27 large metro areas, and Ventura tied for seventh out of 30 medium metro areas. These delays are a major source of frustration in the region (SCS Fact Sheet #12, 2005).

Exhibit 5

**Most Important Problem by Demographic Groups**

| | Most Important Problem | Second Most Important Problem | Third Most Important Problem |
|---|---|---|---|
| **BY ETHNICITY** | | | |
| **White** | Transportation | Crime | Environment |
| **Latino** | Transportation | Crime | Environment |
| **Other** | Transportation | Crime | Environment |
| **BY EDUCATION** | | | |
| **High School or Less** | Transportation | Crime | Environment |
| **Some College** | Transportation | Crime | Environment |
| **BA or Higher** | Transportation | Crime | Economic |
| **BY AGE** | | | |
| **18 - 35** | Transportation | Crime | Immigration |
| **36-54** | Transportation | Economic | Crime |
| **55+** | Transportation | Crime | Environment |
| **BY HH INCOME** | | | |
| **Less than $40,000** | Transportation | Crime | Environment |
| **$40,000 - $80,000** | Transportation | Crime | Economic |
| **$80,000+** | Transportation | Crime | Economic |

### *Crime*

Although crime was on the list of top five problems last year, this year it is the second most important concern. It also is the top issue at the neighborhood level and the second most important problem for families. According to the California Department of Justice, violent crime has actually been declining since the mid-1990s. Statewide the number of violent crimes decreased 11 percent between 1998 and 2003. The violent crime rate also decreased considerably in each of the five Southern California counties between 1994 and 2003. This has been offset somewhat by a slight increase in property crime, (which is partly due to an increase in the motor vehicle theft rate). Although statistics from the past year are not yet available at the county level, crime statistics from the city of Los Angeles up to November 2005 also indicate a continuing fall in the crime rate, down 15 percent from 2004 and down 23 percent from 2003 (LAPD, 2005). So overall the concern with crime seems to belie the statistics.

### *The Environment*

The environment was rated as the third most important problem in the region this year. About 60 percent of these responses indicated pollution, or more specifically air pollution, as the greatest concern. (A separate question later in the survey asked respondents what they think is the most important environmental issue facing Southern California today. Over 50 percent rated air pollution as the most important environmental issue, with water pollution a distant second (9%) and traffic congestion third (8%)). Air quality in California in general has greatly improved over the past two decades. Several dangerous air pollutants that were at harmful levels twenty years ago no longer exceed health-based standards (Air Resources Board). In Southern California, the AQMD's South Coast Air Basin Smog Trend indicates that there were only about 25 smog days that exceeded the "1-Hour Federal Ozone Standard" versus a high of over 200 days in 1977. However, reducing levels of PM10 (particulate matter) and other emissions continues to be a challenge. Finally, air toxics emitted mainly by diesel engines are of increasing concerns. Ships, trucks, and trains associated with the burgeoning freight stream from the ports through Southern California are major sources of this pollution There is still much to be done to curb air pollution in a region with over 8 million cars and trucks, as well as ports, rail, and airports.

### *The Economy*

The economy is the fourth most important problem in the region, down from the second most important concern last year. However, it is by far the highest concern within families in the region. Over the last few years, the regional economy has been in a doldrums. The unemployment rate increased in the early 2000s, from 4.7% in 2000 to 6.1% in 2003, but the increase was not as dramatic as the increase during the early 1990s. In recent months, the Southern California unemployment rate has declined moderately. The State of California Employment Development Department Labor Market statistics indicate that the annual average unemployment rate has declined moderately in all five southern California counties from 2004 to 2005. However, in recent years real per capita income has been relatively flat. This is particularly true in the early 2000s. While the economic slowdown was moderate, the impact was

particularly hard on those at the bottom of the income ladder. The average (median) per capita income for the bottom fifth took a much larger hit than for those at the top fifth (SCS Fact Sheet #1, 2005).

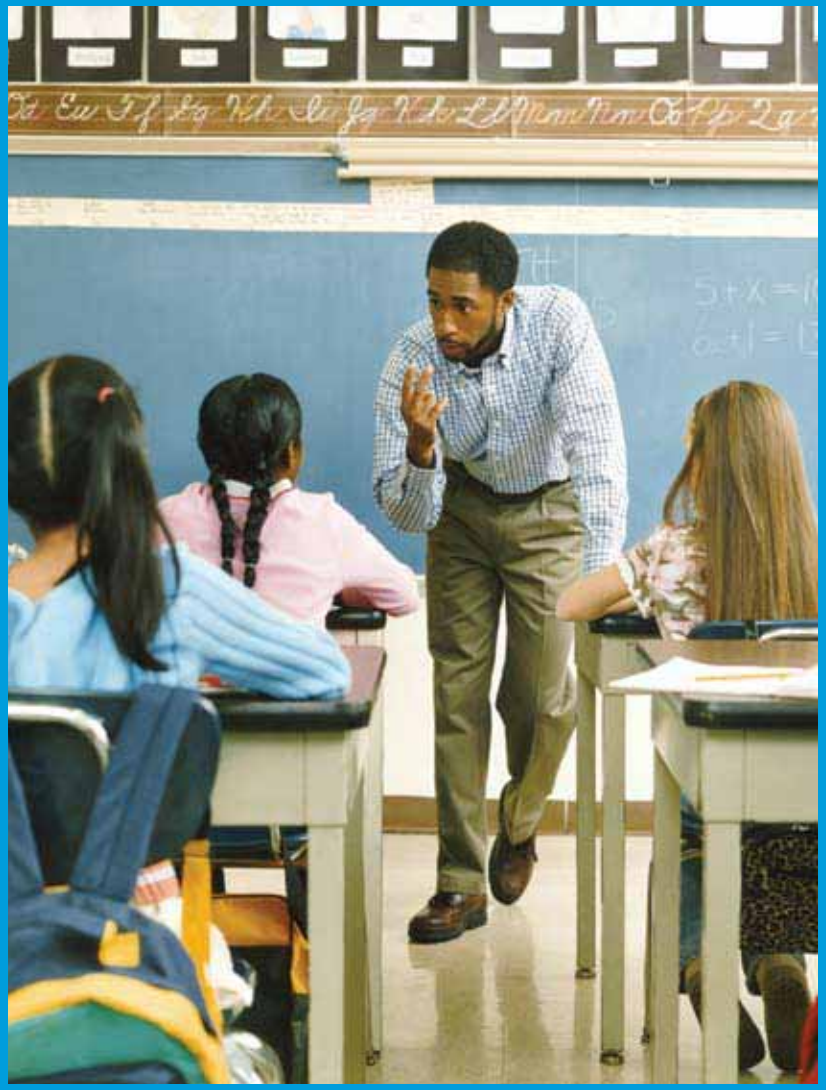
### *Education*

Education, the problem that tied for fifth most important (with immigration), is a statewide problem as well as a regional one. A recent survey on the state of education in California found that 82 percent of Californians believe the quality of education in the state is at least somewhat of a problem, and 52 percent consider it a big problem, up from 46 percent in 1998 (Public Policy Institute of California, 2005). On a more local level, education is a major issue in the city of Los Angeles where the mayor has lobbied the legislature to give him some power over the school district (Perry, 2005).

Throughout Southern California 7th graders scored lower than the national median in reading and math scores except for in Orange and Ventura counties in 2005 (where scores hovered in the 50th percentiles). These CAT 6 scores showed very slight improvements in most counties from 2003 to 2005, but no major gains. San Bernardino and Los Angeles counties also had higher dropout rates (20 % and 15 % respectively) than the state average (13 %) in 2005 (SCAG 2005 Report Card).

### *Immigration*

As for immigration, estimates of the number of illegal immigrants in the U.S. vary widely. As of 2003 the US Citizenship and Immigration Services put the



number at 7 million, growing at rate of 500,000 annually, while the Pew Hispanic Center estimates that the number is closer 12 million today based on the Current Population Survey (Knickerbocker, 2006). California is home to more illegal immigrants than any other state in the nation, an estimated 2.4 million, although the Public Policy Institute of California (PPIC) notes that Arizona has become the primary border crossing area in the past few years, and now has a higher percentage of illegal immigrants per capita. The recent congressional debates over immigration have fueled concerns about immigration throughout the state. PPIC found that in their January 2006 survey only 11 percent of respondents mentioned immigration or illegal immigration as the most important issue for state leaders to address this year, but by April 2006 that percentage shot up to 27 percent, putting immigration as the most frequently cited issue (Johnson, 2006). They also found that perceptions of immigration vary by region. The March 2004 survey found that almost half of Los Angeles County residents described illegal immigration to their county as a "major problem", versus 25 percent of Central Valley residents interviewed in April 2004 (ibid).

So overall the issues identified by the public as top problems are serious issues by any measure. However, the discrepancy between the public's perception of crime and the environment (most specifically air pollution) as top problems needing to be addressed, and the objective measures that indicate significant improvements over the past fifteen years or so, is interesting. We see a couple of reasons for this gap. 1. Personal experience often trumps objective data. If you look out the window and see smog, you think the air is worse, no matter what the data indicate. Likewise, if crime in your area is low but your car is stolen, or even your neighbor's car is stolen, crime is a concern for you. 2. Expectations and standards change. New scientific information on the harm from pollutants is a good example. We know a lot more than we did twenty years ago about how harmful various air pollution particles can be, and we have more evidence of the link to respiratory diseases in children and adults, so our standards and expectations of what clean air is have been raised, even as the air continues to improve. And finally, 3. Media coverage makes an impact, both positive and negative. Media coverage of the damaging effects of pollution helps to raise awareness of the problem, which is good. On the other hand, the need to boost network ratings may mean that crime stories are emphasized, exaggerating the extent to which crime actually happens, and making residents more fearful.

## CONFIDENCE IN SOUTHERN CALIFORNIA LOCAL GOVERNMENT

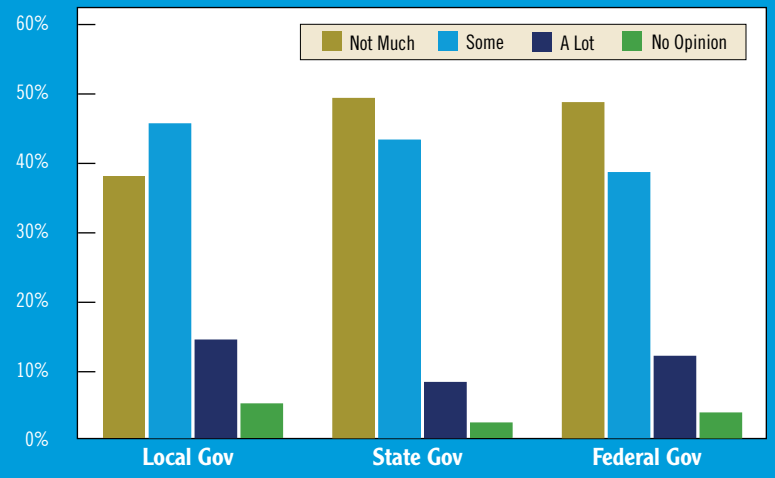
We should point out that perceptions of local government can differ greatly, as local governance is a fairly complex and fragmented system. Southern California's system of local government is broken up among several counties, almost two hundred cities, and numerous special districts. While California's local government structure is less complex than others nationwide (PPIC, 1998, vii), the overlapping responsibilities can make it difficult at times to know who is in charge on any particular issue. However, it is useful to know how residents perceive their local government and how they feel about its performance on the region's problems.

The SCS asked residents about their level of confidence in "your local government." The two questions were about general confidence and confidence in

local government's ability to solve the problems that most affect your own household or family. Southern California residents tend to have higher levels of general confidence in local government than in its ability to solve problems that affect them personally. About 58 percent of respondents have at least some confidence in local government generally, as opposed to the 51 percent who report some degree of confidence in solving problems that affect them. Overall though, residents have more confidence in their local government than in the state or federal government. Exhibit 6 displays the percent of respondents who have confidence in each level of government. More respondents indicated "not much" confidence in the state and federal government (48% and 47% respectively) than in local government (37%).

Exhibit 6

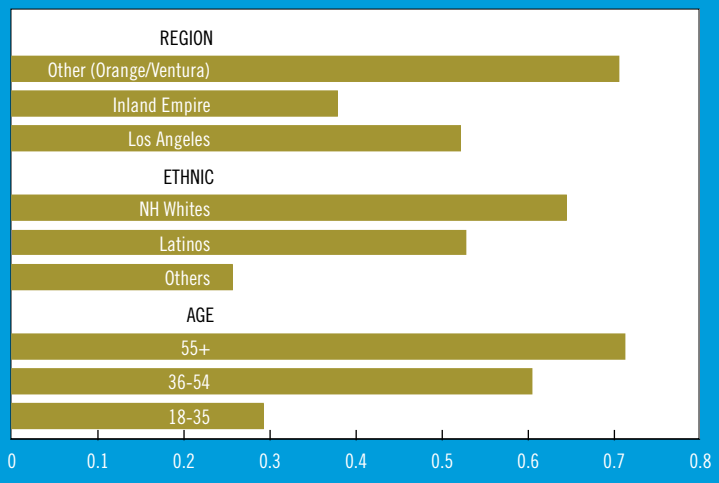
**Confidence in Local, State and Federal Governments**




To compare confidence levels among demographic groups and in different areas in the region we calculated confidence scores for each respondent based on the responses to both of the confidence questions. Exhibit 7 displays the average confidence score by ethnicity, age, and region. Whites had higher confidence scores (.64) than Latinos (.53) or other groups (.26), but the scores for all three ethnic groups have dropped since last year. As for age, there were much higher confidence levels among residents 55 and older versus those in the 18-35 age group. While older residents averaged a confidence score of .71,

Exhibit 7

**Average Confidence Score by Region, Ethnicity, Age**



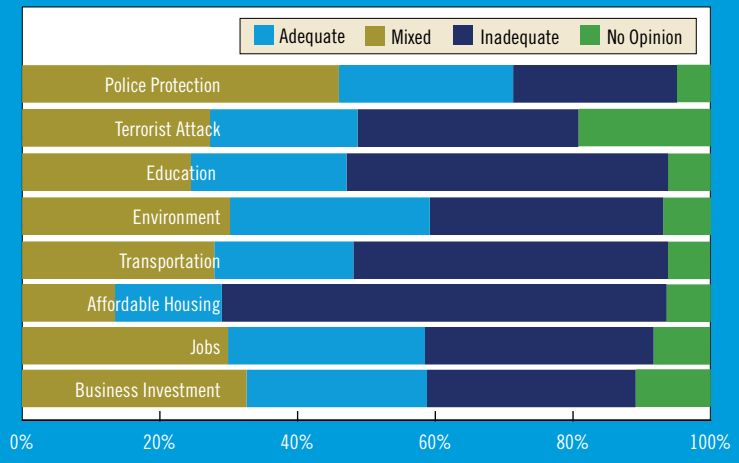
younger respondents averaged only .29. Scores also differed widely by region. While last year the Inland Empire and Other (Ventura, Orange counties) regions both had scores around .90, (much higher than Los Angeles), this year the Inland Empire confidence score dropped to .38, significantly lower than the Los Angeles region score (.52) which remained about the same as last year. For the Other region the score dropped slightly to .71.

## LOCAL GOVERNMENT PERFORMANCE ON THE ISSUES

The survey also asked respondents whether the performance of Southern California's elected officials in several different issue areas has been generally inadequate, mixed, or adequate. Residents are most satisfied with elected officials' performance on police protection, with almost 50 percent of respondents indicating that local government is doing an adequate job here. There was also relative satisfaction with protecting the environment, keeping and attracting jobs, and keeping attracting business investment in the region; over 50 percent of respondents indicated that performance on these issues was adequate or mixed. Respondents were slightly less satisfied with performance on improving transportation and education, and preparing for a terrorist attack, and very dissatisfied with performance in providing affordable housing in the region (see Exhibit 8).

Exhibit 8

**Government Performance**




The results here indicate that residents do discriminate between the issues they consider to be the top problems in the region, and their opinion of how well local officials are handling the region's myriad problems. Affordable housing, for example, is a top problem for families and neighborhoods, (and was considered a top regional problem last year) but overall respondents see higher urgency in other problems for the region. However they also seem to agree that local officials could be doing more to ease the housing crisis. On the other hand, while convinced that crime is a major concern in the region, residents do express a higher level of approval for efforts on police protection than for other issues. So there does appear to be a distinct difference between what is seen as a top problem, and the expectations of how much can be done, or is being done, (at the local level at least), to solve that problem. In this case resident's perceptions were in line with the more objective measures of performance, as SCAG's 2005 Report Card gave the lowest grades on the same issues on which residents felt local officials could do more: Affordable Housing (D), Transportation (F) and Education (D).

## GOVERNMENT PERFORMANCE RATINGS BY DEMOGRAPHIC GROUPS

This section examines how opinions on government performance vary by demographics and geography. The differences are generally slight. The most variation we see is by education and ethnicity. Those with the lowest levels of education tend to give more "adequate" ratings and fewer "inadequate" ratings than those with higher levels of education (see Exhibit 9). As for ethnicity, Latinos are significantly more satisfied with elected officials than are whites and other ethnic groups. In fact the Latino percentage of adequate ratings increased from 18 percent last year to 25 percent this year, while for other groups the same percentage rose only two points. However all groups displayed a rise in inadequate ratings as well. For whites and other ethnic groups, inadequate ratings rose ten percent over last year.

Looking at government performance ratings by income indicates that those in the lowest income group are more likely to give an "adequate" response than others, although they are also about equally likely to respond that government performance is "inadequate (see Exhibit 10). Here too we see increasing polarization on views of local government. Views of local government by region of southern California indicate that while last year Los Angeles area residents gave the most "inadequate" responses, this year the Inland areas proved the most dissatisfied. "Inadequate" responses jumped from 21 percent last year to 37 percent this year

Exhibit 9

**Government Performance by Ethnicity and Education**

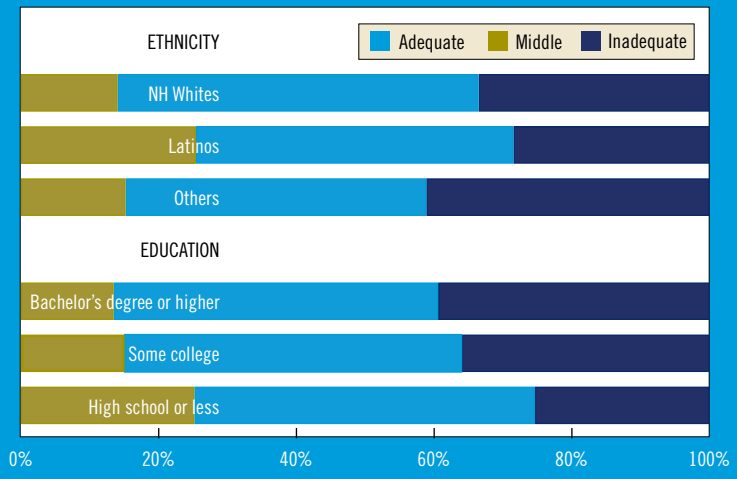
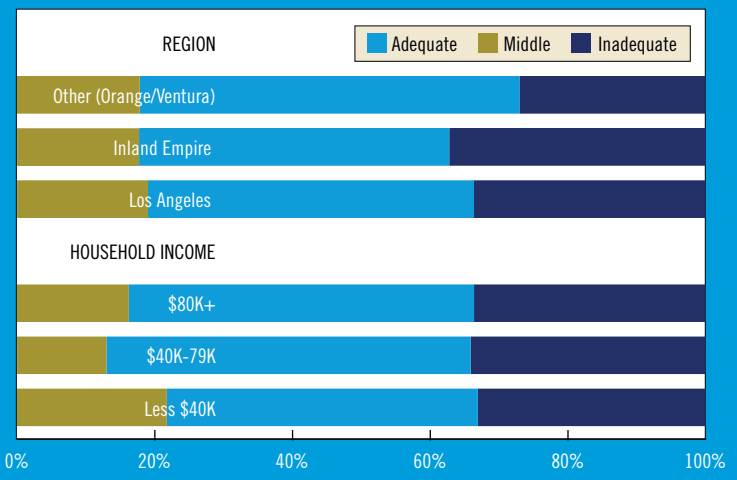



Exhibit 10

**Government Performance by Household Income and Region**



for Inland residents, while the "adequate" responses increased only 2 percent, to 18 percent. By age group we see younger respondents are most likely to give local government good marks. The 18-35 age group gave the most "adequate" responses while the 36-54 age group gave the most middle range responses and the 55 and older group were most likely to answer "inadequate."

The overall picture here is that the majority of respondents, regardless of demographic group, came out with a middle range response score to the questions about government performance, indicating that most residents lack strong opinions one way or the other However the number of middle range responses has declined significantly from last year, indicating stronger feelings about local government performance in 2006 than 2005.

## CONCLUSION

Overall Southern California residents are generally content with the quality of life in the region, secure about their financial situation, and optimistic about the future, but they do have serious concerns about some of the major problems in the region. These concerns are generally in line with more objective indicators of what the top problems are in Southern California, perhaps with the exception of crime, and to some extent, air pollution. Residents also distinguish between problems that need to be solved, and problems that they feel local officials could do more to alleviate. This is an important distinction, as it acknowledges that some problems are more intractable than others, require more involvement (and money) from the state and/or federal government, or perhaps require a more comprehensive approach, including cooperation on the part of various local governments and the state and federal government. Transportation planning and improvements, for one, involves all of these intricacies, which contribute to the difficulty in finding solutions. However, the continued consensus on transportation as the top problem over the past two years, among all groups in the region, should also serve as a reminder that local officials need to continually look for new solutions. The challenges of the top problems in the region will not be solved easily, but continued efforts can help build confidence in local government and its ability to meet these challenges.

*For references in this essay please go to: http://lewis.sppsr.ucla.edu/special/SocalSurvey/index.cfm and click on "SCAG Guest Essay"*

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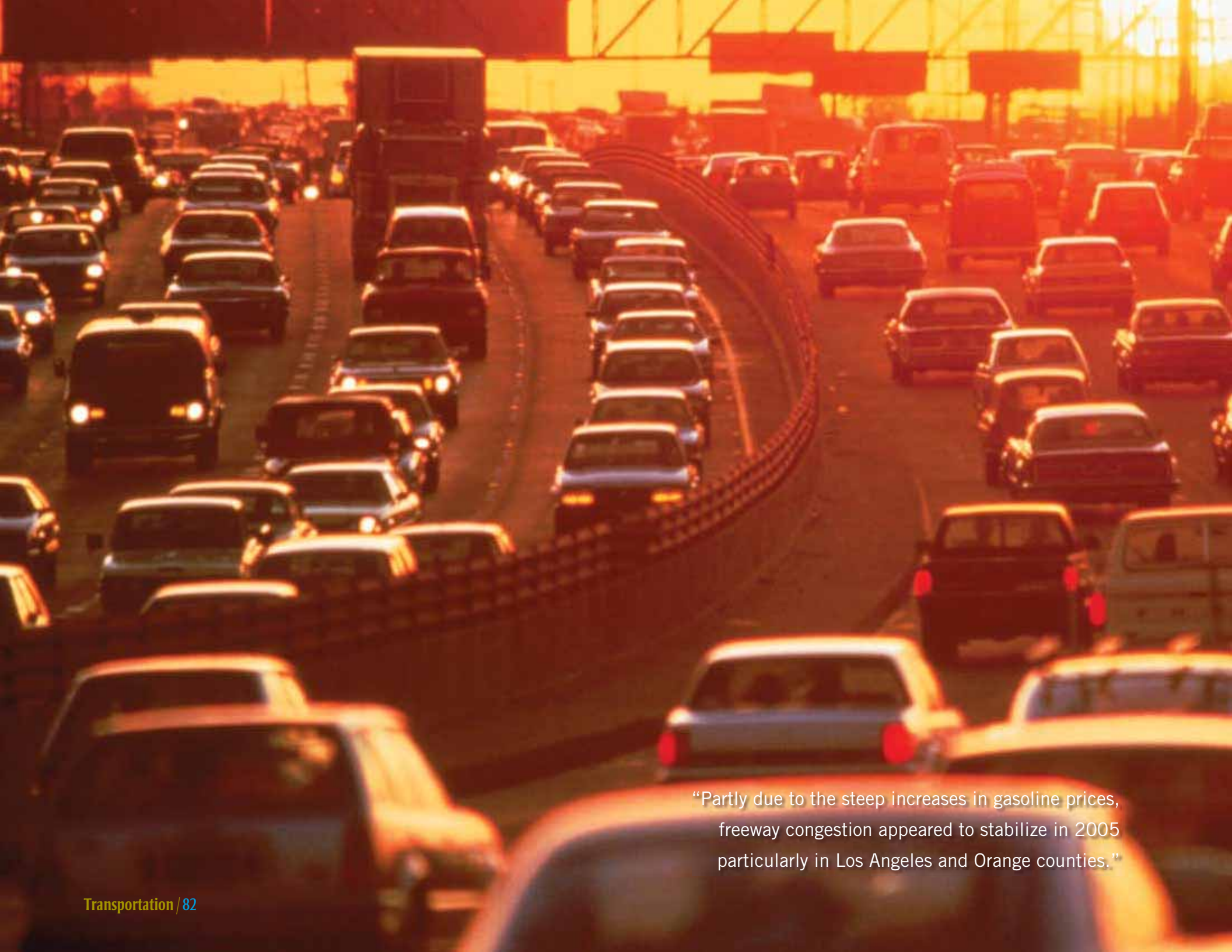


"Partly due to the steep increases in gasoline prices, freeway congestion appeared to stabilize in 2005 particularly in Los Angeles and Orange counties."

# TRANSPORTATION

## Journey to Work: Mode Choices

*Why is this important?*

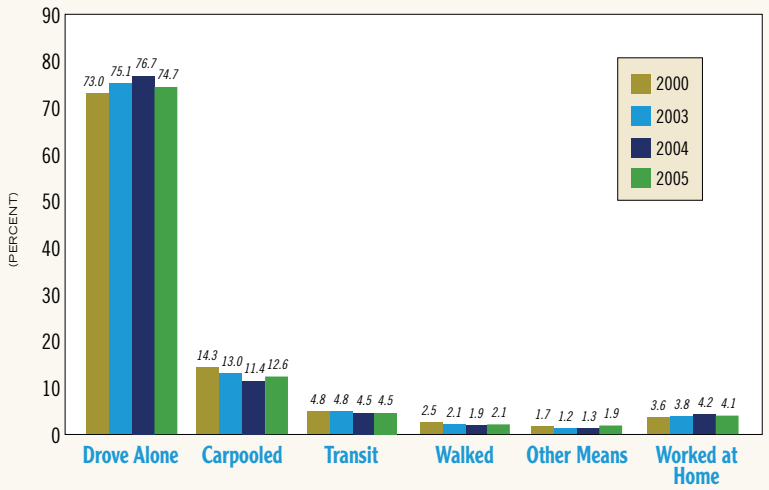
Single-occupant vehicle use accounts for the highest level of land consumption among all transportation modes. It also generates the highest level of environmental, economic and social impacts. Increasing the use of alternative modes to work (e.g., carpool, transit, etc.) is critical to accommodate future growth with less environmental, economic and social impacts.

*How are we doing?*

*From 2004 to 2005, the share of drive-alone commuting decreased from 76.7 percent to 74.7 percent, reversing the trend of a steady increase since 2000.* During the same period, there was an increase in the region's carpool share of work trips from 11.4 percent to 12.6 percent, reversing the trend of a steady decline since 2000 (Figure 37). This was similar to the trend at the national level though the magnitude of increase in carpool share was larger in the SCAG region (Figure 38). The sharp rise of gasoline prices seemed to contribute to these reversals in the region and the rest of the nation (as further discussed in the Highway Use and Congestion Section below).

Figure 37

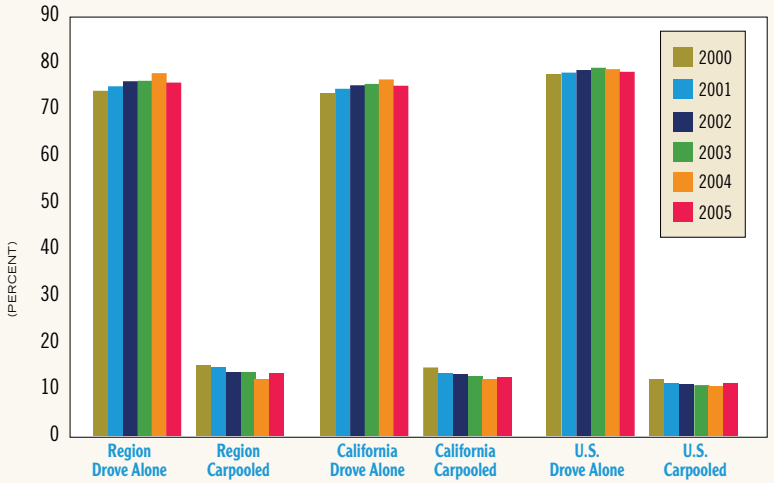
**Mode Choice to Work** (Workers 16 Years and Over)




*Source: U.S. Census Bureau, American Community Survey*

Figure 38

**Mode Choice to Work - Drive Alone and Carpool** (Workers 16 Years and Over)




*Source: U.S. Census Bureau, American Community Survey*

It should be noted that the region's carpool share of commuting in 2005, though increased from 2004, was still well below the 2000 level at 14.3 percent. *Nevertheless, among the nine largest metropolitan regions, the SCAG region continued to have the highest rate (12.6 percent) in 2005 of workers who carpooled to work followed by the Dallas region (11.8 percent).* Among those who carpooled, most (close to 80 percent) were in a 2-person carpool, and the remaining 20 percent were in 3-or-more-person carpools.

Within the region, carpool share of commuting increased in every county between 2004 and 2005. The Inland Empire led the region in carpool share in 2005 with Riverside County achieving the highest at 16 percent (almost a 2 percent increase from 2004) and San Bernardino at 14.6 percent.[1]

Since 1980, carpool shares of commuting have generally been declining across the nine largest metropolitan regions in the nation except between 2004

and 2005 (see Figure 92 page 157). The SCAG region has had the highest carpool share since 1990. In 2005, the SCAG region maintained the most extensive High-Occupancy Vehicle Lane (HOV) system, accounting for more than 20 percent of the total HOV lane miles in the nation. Between 1980 and 2005, the SCAG region experienced the smallest losses (4.5 percentage points) in carpool share of commuting while the other eight largest regions experienced an average loss of almost 9 percentage points.

In 2005, transit share of commuting in the region was 4.5 percent, the same as in 2004. In addition, about 4.1 percent of workers in the region worked at home instead of commuting to a workplace, changing little from the previous year.

## Journey to Work: Travel Time

*Why is this important?*

Though the share of work trips among total trips has been declining, work trips continue to generate disproportionately higher impacts on the regional transportation system. Work trips tend to take longer than other daily trips. In addition, commute hours are generally the period with the most traffic congestion. Accordingly, transportation investments are still influenced significantly by the nature of work trips. Finally, the choice of residential location is partly determined by the location of work and the associated journey to work.

### *How are we doing?*

*Between 2004 and 2005, average travel time to work remained essentially unchanged at 28.9 minutes in the region after increasing 0.7 minutes during the previous period.* This continued to be higher than the state (27 minutes) and national (25 minutes) averages.[2] Within the region, average travel time decreased very slightly in Los Angeles and Orange counties while it continued increasing in the Inland Empire. For example, from 2004 to 2005, while the average travel time in Orange County decreased slightly from 27 to 26.5 minutes, it increased from 28.8 to 30.7 minutes in San Bernardino County. In 2005, workers in Riverside County continued to have the highest average travel time to work in the region, almost 32 minutes, while Imperial had the lowest at 19 minutes.

## Highway Use and Congestion

### *Why is this important?*

Highway congestion causes delays affecting personal mobility and goods movement and results in increased economic and social costs. In addition, congestion impacts the region's air quality. The number of vehicle miles traveled (VMT) indicates the overall level of highway and automobile usage, and is directly related to mobile source emissions.

### *How are we doing?*

For the past two decades, Southern California has been consistently experiencing very high levels of congestion. Contributing factors include large population and physical extent of the region, rapid population growth, high automobile dependence, low levels of transit usage, and a maturing regional highway system with limited options for expansion. Larger metropolitan regions generally have higher levels of congestion than smaller metropolitan regions. Among the nine largest metropolitan regions, Southern California had one of the highest dependence on automobiles despite of having the lowest per capita income. Currently, the region has about 14 million vehicles and close to 11 million licensed drivers. The region's highway system is a maturing system with limited options for expansion. This is particularly true for southern Los Angeles County and Orange County. For example, 95 percent of Orange County's planned arterial network has already been built.[3]

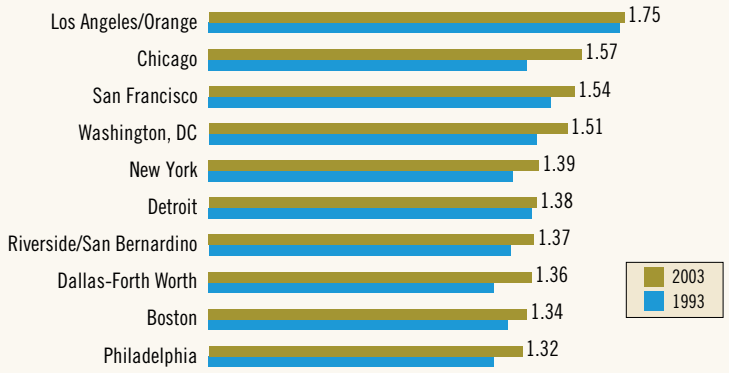
As a major gateway for international trade, the region's highways carry some of the highest truck volumes and share some the most congested bottlenecks for trucks in the nation.[4] For example, I-710, which feeds trucks directly to and from the ports, and the I-605 and SR 91, carry as much as 40,000 trucks on an average weekday.

*The SCAG region (particularly Los Angeles and Orange counties) regularly ranks as the most congested metropolitan region in the nation.* Congestion level is measured by indicators such as travel time index or annual delay per traveler. For example, in 2003, a traveler in Los Angeles/Orange counties during the peak period spent 75 percent more time than if traveling at free-flow speed (Figure 39). At

1.75 in 2003, Los Angeles/Orange counties have the highest travel time index among the nation's major metropolitan areas based on the most current data available.[5] The Chicago region had the second highest at 1.57. Riverside/San Bernardino counties, with an index of 1.36 in 2003, ranked 7th highest. Nationally, congestion has grown in every metropolitan area regardless of size but has been most severe within the largest metropolitan areas.

Figure 39

**Peak Period Travel Time Index** (by Metropolitan Area)




** Travel time index is the ratio of peak period travel time to free flow travel time.*
*Source: Texas Transportation Institute*

Though Los Angeles/Orange counties had the nation's highest congestion level, their travel time index increased little between 1993 and 2003, while other metropolitan areas experienced much larger increases in congestion

levels. During this period, the travel time index in Los Angeles/Orange counties rose very slightly from 1.73 to 1.75, while it increased from 1.34 to 1.57 in Chicago and from 1.44 to 1.54 in San Francisco. Significant investment in transit (e.g. the Red Line and light rails) and HOV system since 1990 contributed to the slower increase in congestion level in Los Angeles and Orange counties. The travel time index in Riverside/San Bernardino counties increased from 1.27 to 1.37 during the 10-year period.

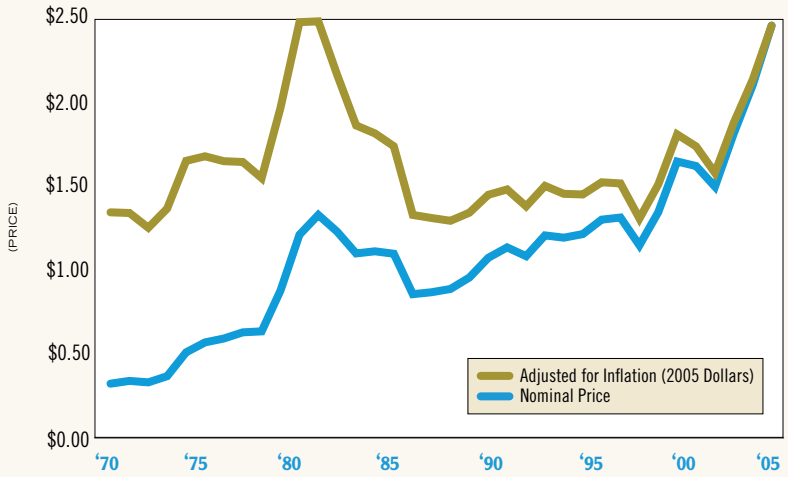
In 2003, a traveler in Los Angeles/Orange counties during the peak period experienced a total of 93 hours of delay, the highest among major metropolitan areas (see Figure 93 page 158). A traveler in Riverside/San Bernardino counties experienced a total of 55 hours of delay, the 9th highest. Close to half of the delay resulted from incidents. Total cost incurred due to congestion was

almost $12 billion in 2003, significantly higher than any other metropolitan region (see Figure 94 page 158).

*Gasoline price is an important factor influencing the amount of vehicle travel and the associated fuel consumption.* Between 1970 and 2005, annual average gasoline (nominal) prices increased from 35 cents to almost $2.50 per gallon. With inflation adjustment based on 2005 dollars, gasoline prices increased from $1.36 to $2.50, an 84-percent increase (Figure 40). During the 35-year period, gasoline prices with inflation adjustment generally stayed below $2 per gallon (and mostly fluctuated around $1.50) with the exception of two periods: the last energy crisis in the late 1970s and early 1980s and the recent price run-up since 2002. Gasoline prices (based on 2005 dollars) were below $1.6 per gallon in 2002 but have been increasing about 15 percent per year reaching $2.50 in 2005. This surge continued into 2006 reaching a new high of $3 (2006 dollars) per gallon in mid 2006 before declining since September 2006. Gasoline price changes are correlated with the world prices of crude oil, because crude oil represents a large percentage of the final price of gasoline.

Figure 40

**California Gasoline Prices per Gallon, 1970-2005** (Annual Average)



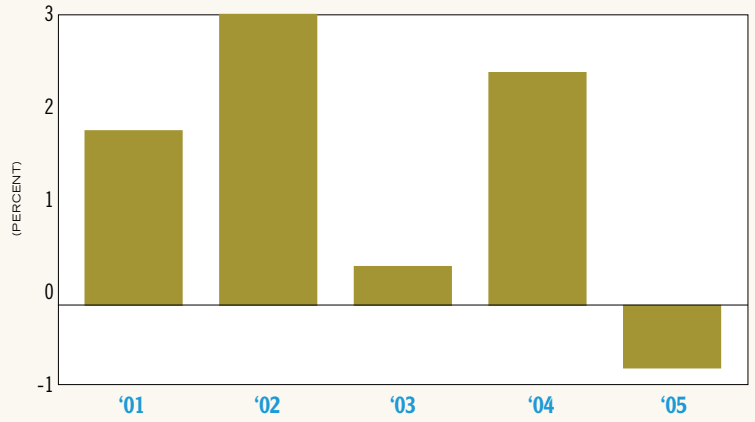

*Source: California Energy Commission*

*Gasoline price at $2.50 in 2005 was the highest between 1970 and 2005 and began to have some impacts on the commuters' mode choices and total vehicle miles traveled.* From 2004 to 2005, there was an increase in the region's carpool share of work trips from 11.4 percent to 12.6 percent reversing the trend of a steady decline since 2000 (as further discussed in the Journey to Work Section). During the same period, the share of drive-alone commuting decreased from 76.7 percent to 74.7 percent, reversing the trend of a steady increase since 2000. In addition, the total VMT in the region appeared to

stabilized in 2005. Specifically, between 2004 and 2005, total VMT declined by 0.8 percent based on preliminary data, the first decline since 2000 (Figure 41).

Figure 41

**Vehicle Miles Traveled (VMT)** (Change from Previous Year)

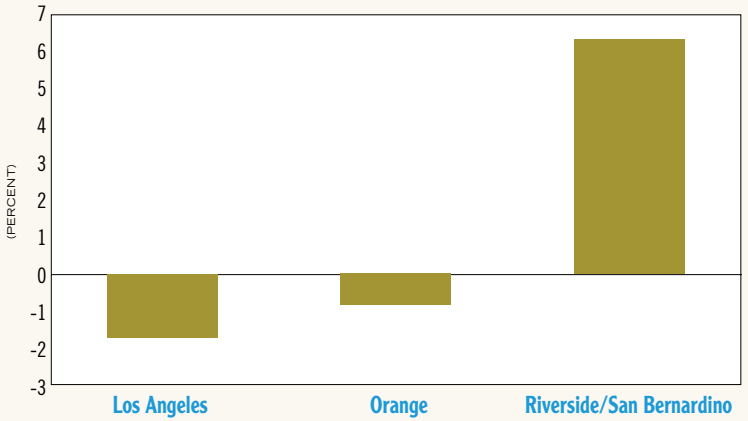



*Source: California Department of Transportation*

*The slight shift away from drive-alone commuting along with the stabilization of the total VMT in 2005 contributed to the stabilization of the overall congestion level, particularly in Los Angeles/Orange counties.* Measured by the travel time index (the ratio of peak period travel time to free flow travel time for the same trip), both Los Angeles and Orange counties seemed to maintain their freeway congestion levels in 2005 from 2004 since the percentage drop was not significant (Figure 42). However, freeway congestion continued to increase in Riverside and San Bernardino counties because of their significantly higher rates of growth in population and employment than in the coastal counties. This is also generally consistent with the slight decrease in the average travel time between 2004 and 2005 in Los Angeles and Orange counties and the continuing increase in the Inland Empire (as further discussed in the Journey to Work Section). The trend of stabilization of the freeway congestion level in Los Angeles/Orange counties but with increased congestion level in the Inland Empire continued through at least the first half of 2006.[6]

Figure 42

**Freeway Congestion Level, 2004-2005**



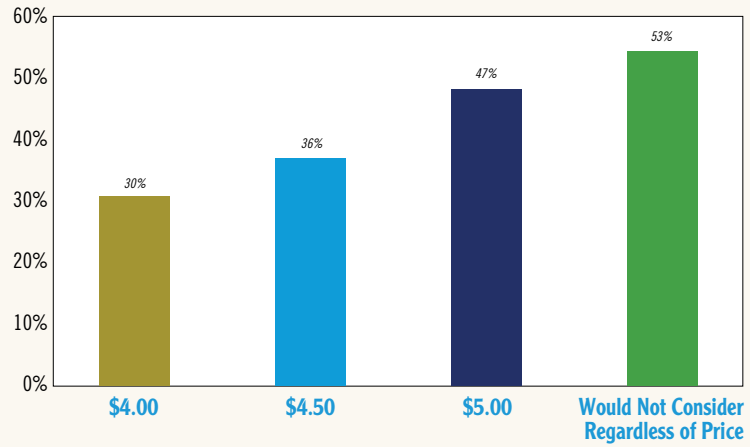

*Note: Based on the travel time index that is the ratio of peak period travel time and free flow travel time. Data for Ventura and Imperial counties not available.*

*Source: Federal Highway Administration, Urban Congestion Report*

In late 2005, when commuters in Southern California were asked about the question "at what price would you consider an alternative mode?", about 30 percent who drove alone indicated that they would consider an alternative mode if gasoline price reached four dollars per gallon. At five dollars per gallon, about 47 percent of the drive-alone commuters would consider alternative modes. Nevertheless, 53 percent of the survey respondents indicated that they would not consider switching to an alternative mode regardless of the price of gasoline primarily due to the lack of choices (Figure 43).

Figure 43

**Gasoline Price Thresholds Affecting Mode Choice**
Survey Question: At What Price Would You Consider An Alternative Mode?




*Respondents were those who drove alone to work
Source: SCAG 2005 State of the Commute Survey

## Highway Fatalities

### *Why is this important?*

Highway accidents are the leading cause of death for people between the ages of 4 and 33.[7] Highway fatalities, about 43,200 deaths in 2005, accounted for about 95 percent of transportation-related deaths. Highway accidents and other incidents also accounted for more than 40 percent of the total annual delay of the region's highway system.

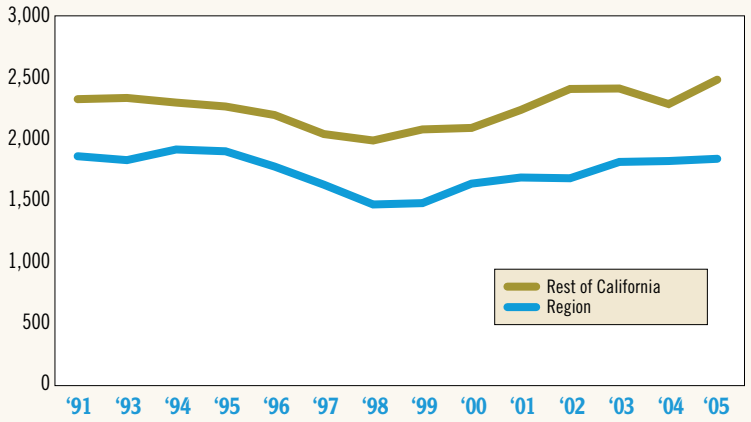
### *How are we doing?*

*In 2005, motor vehicle crashes in the region resulted in 1,824 fatalities (about 5 deaths per day), almost the same as that in the past two years* (Figure 44). For the rest of California, total number of highway fatalities of 2,476 in 2005 was about the same as in 2003, though increasing by almost 9 percent from 2004. At the national level, total number of highway fatalities increased slightly from 42,636 deaths in 2004 to 43,200 deaths in 2005, about a 1.3 percent increase, after gradual declines in the previous two years.[8]

Young drivers who are between 16 and 24 years old have consistently had the highest fatality rate among different age groups, more than double the fatality rate of the general population. Older drivers who are 74 years or older have the second highest fatality rate among different age groups, about 50 percent higher than that of the general population.

Figure 44

## Highway Accident Fatalities

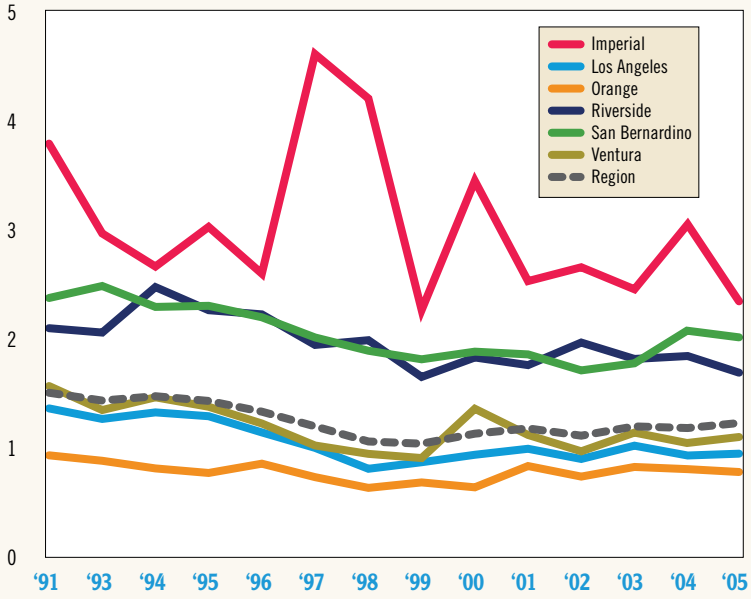



*Source: California Highway Patrol with 2005 preliminary data*

Between 2004 and 2005, highway fatality rates declined noticeably in Imperial County and slightly in the Inland Empire while remaining almost the same for the other counties in the region (Figure 45). *In 2005, the region's highway accident fatality rate at 1.18 persons per 100 million vehicle miles traveled was significantly higher than the national average for urban areas (0.94 persons per 100 million vehicle miles traveled).*[9] *The highway fatality rate in the region in 2005, though about the same as in 2004, continued to be the highest since reaching its lowest level in 1998. However, the fatality rate in 2005 was about 30 percent below the 1991 level.*

Figure 45

## Highway Accident Fatalities (Per 100 Million Vehicle Miles Traveled)




*Source: California Highway Patrol with 2005 preliminary data and California Department of Transportation*

## Transit Use and Performance

### *Why is this important?*

Use of public transit helps to improve congestion and air quality and decrease energy consumption. Reliable and safe transit services are essential for many residents to participate in economic, social and cultural life in Southern California. Annual transit boardings measures transit use at the system level, while transit trips per capita provides a measure of transit use at the individual level.

### *How are we doing?*

*Total transit boardings in the region in FY 2005 (from July 2004 to June 2005) increased by 16 percent, from 617 million to a record high of 672 million (Figure 46). This was primarily due to the recovery of the MTA transit system from the labor strikes during the previous two fiscal years.* It was also facilitated by the surge in gasoline prices that resulted in some shift from private auto to transit use. The MTA system accounts for about two-thirds of the regional total in transit boardings. During FY 2005 the MTA transit system achieved an increase of 57 million (15 percent) to reach total boardings of 439 million, more than recovering the loss in the previous two years.

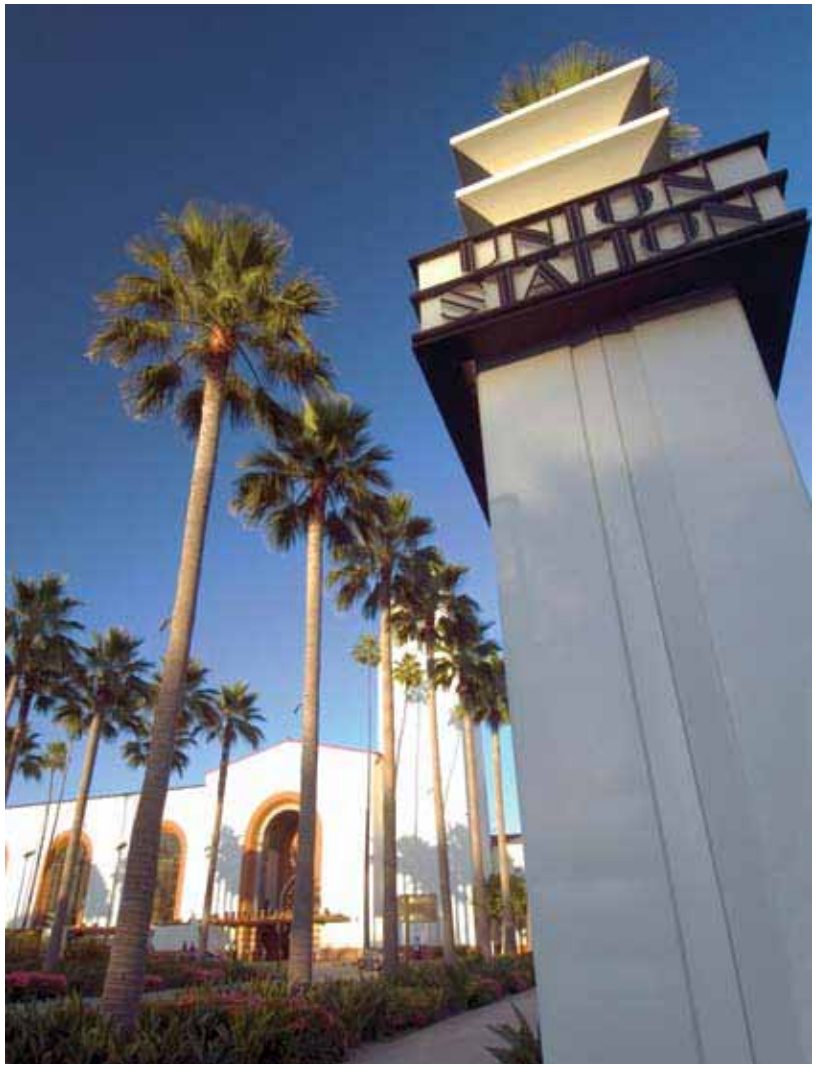
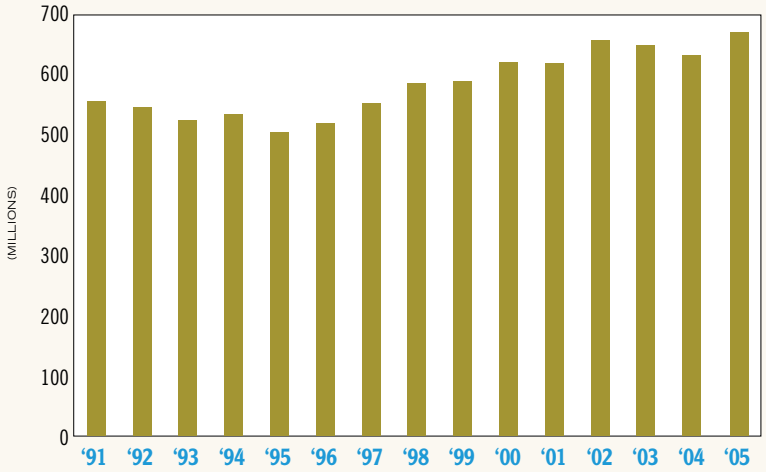


Figure 46

**Transit Boardings - All Major Operators**




*Source: National Transit Database by fiscal year and SCAG including preliminary estimates for 2005 data.*

In addition to the MTA system, a few other transit systems also experienced significant increase. For example, total boardings of the Riverside Transit Agency increased from 6.4 to 7.4 million (15 percent) between FY 2004 and FY 2005. In addition, Metrolink also saw its annual boardings increase by 9 percent, exceeding 10 million for the first time.

Nationally, transit boardings also increased at a faster rate than the population (less than 1 percent). Within the different transit modes, light rail achieved the highest increase in 2005 of 6 percent followed by commuter rail (2.8 percent) and heavy rail (2.3 percent). Total highway travel in 2005 was estimated to remain about the same as in 2004.

Between 2004 and 2005, since transit boardings in the region increased at a much faster rate than the population, transit trips per capita increased from 35 in FY 2004 to 37 in FY 2005, which was just above the 1990 level of 36. Nevertheless, transit use accounted for only about 2 percent of all trips in the region. Major barriers to further transit system development and higher transit use include an auto-oriented urban structure, inadequate level of service and a lack of geographic coverage (or insufficient destinations).[10]

Southern Californians use more energy for transportation (about 40 percent) than for any other activity. Levels of energy consumed and air pollutants emitted by transit are only a fraction of those by the automobiles. Greater use of public transit therefore offers an effective strategy for achieving significant energy savings and improving air quality.

## Airports

### *Why is this important?*

Air transportation is vitally important to the regional economy of Southern California. Because of its geographical location, Southern California relies heavily on air transportation services to access and interconnect with domestic and foreign markets. For example, airborne exports accounted for

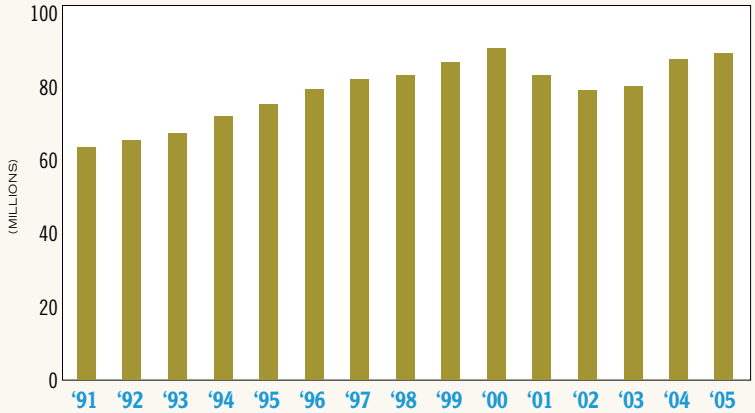
almost 50 percent of the total value of commodity exports out of the Los Angeles Customs District (LACD) in 2005.[11] Adequate aviation capacity and quality services are essential to the tourism, business, and trade sectors of the regional economy.

## *How are we doing?*

In 2005, total air passengers in the region experienced a modest increase of 2.2 million (2.5 percent) reaching 88.3 million, just below the 2000 (pre-September 11) record level of 89 million (Figure 47). The 2.5 percent increase was significantly less than the 9 percent increase during the previous period. Among the 88.3 million passengers, about 70.6 million (or 80 percent) were domestic while 17.6 million (or 20 percent) were international. At Los Angeles International (LAX), the share of international passenger traffic increased steadily from 25.8 percent in 2000 to 28.4 percent in 2005.

Figure 47

### Air Passenger Traffic at Major Airports

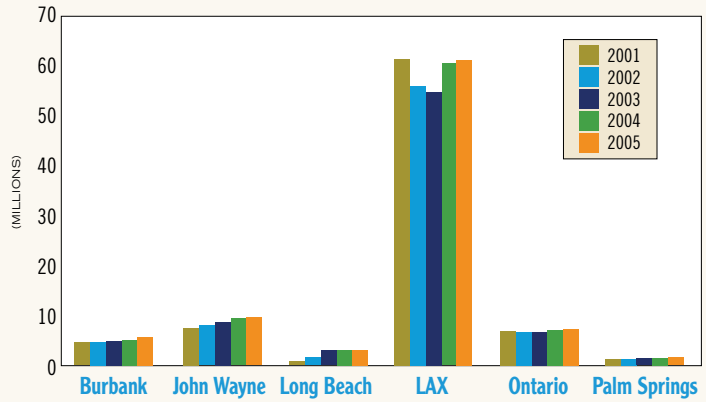



*Source: Data gathered from airports*

Among the airports in the region, LAX achieved the largest increase of 0.8 million (1.3 percent) to reach 61.5 million, still significantly below its 2000 (pre-September 11) record level of 67 million (Figure 48). Burbank Airport, however, achieved the highest rate of growth of 12 percent between 2004 and 2005. In addition, John Wayne Airport increased by more than 0.3 million to reach 9.6 million. Between 2000 and 2005, the share of LAX in total air passengers in the region decreased from 76 percent to just below 70 percent.

Figure 48

## Air Passenger Traffic by Airport

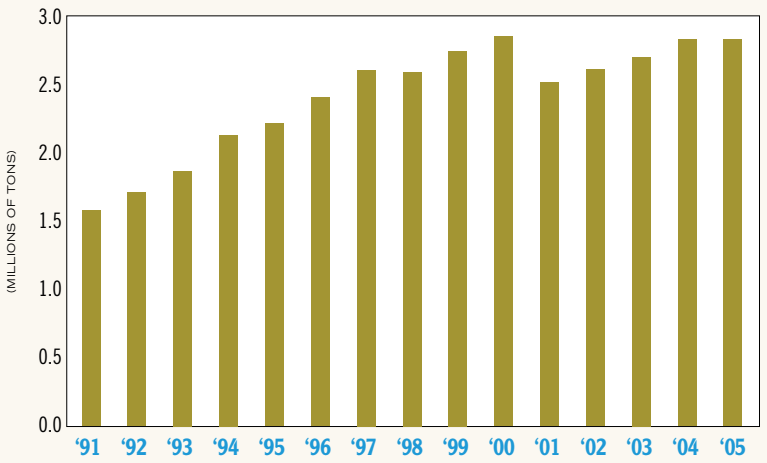



*Source: Data gathered from airports*

Total air cargo in the region's airports reached over 2.8 million tons in 2005, the same level as in 2004 and just below the pre-September 11 level. This was significantly below the 5.4 percent average annual growth rate between 1970 and 2000 (Figure 49). Just over three-quarters of the region's air cargo traffic went through LAX while another 21 percent went through Ontario Airport. By 2030, total air cargo in the region is projected to reach 8.7 million tons, more than triple its 2005 level.[12] Among the total air cargo in 2005, about 63 percent (1.75 million tons) are international cargo and 37 percent (1.05 million tons) are domestic cargo. LAX is one of only three major freight gateways in the nation that handles more exports than imports in value terms.

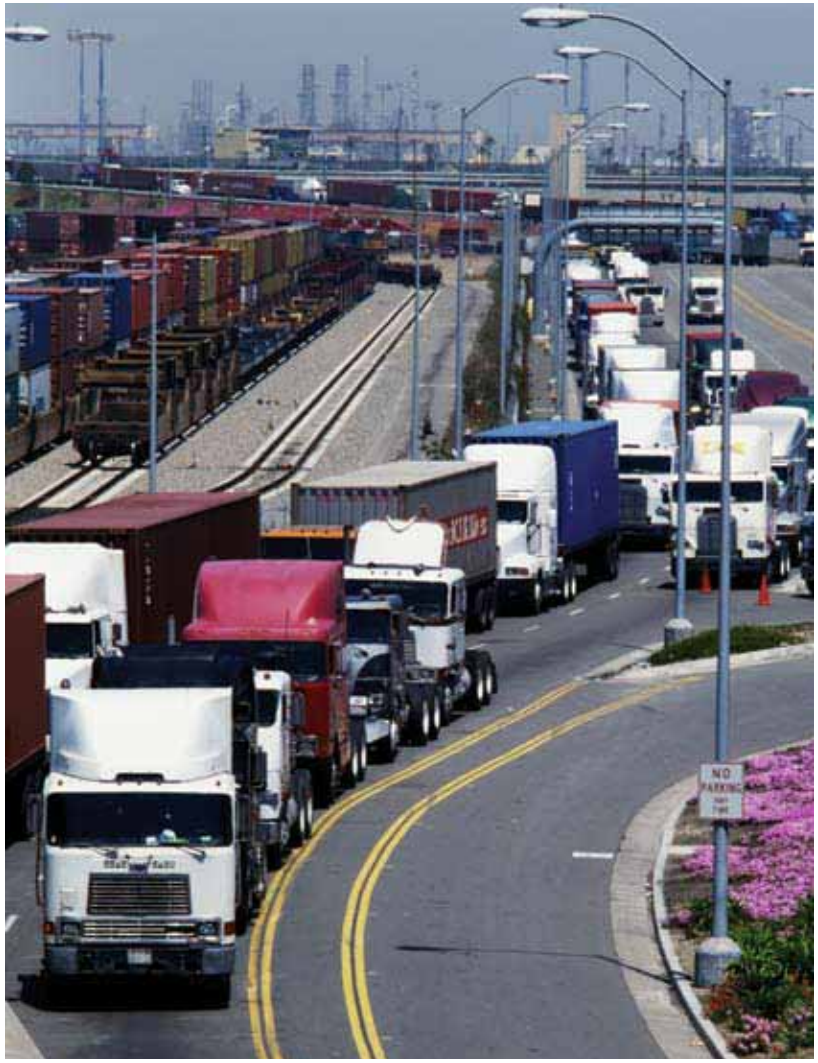
Figure 49

## Air Cargo in the Six Largest Airports




*Source: Data gathered from airports*

In 2005, among the ten largest airports in the world, LAX ranked 5th in passenger traffic, behind Atlanta, Chicago, London and Tokyo (see Figure 95 page 159). LAX also ranked 7th in total cargo volumes in 2005 (see Figure 96 page 159).



## Ports

### *Why is this important?*

Almost 85 percent of the imports coming through the Los Angeles Customs District (LACD) arrive at the region's ports.[13] Continuing to provide a world-class port infrastructure is critical to sustaining a growing and prosperous regional economy.

### *How are we doing?*

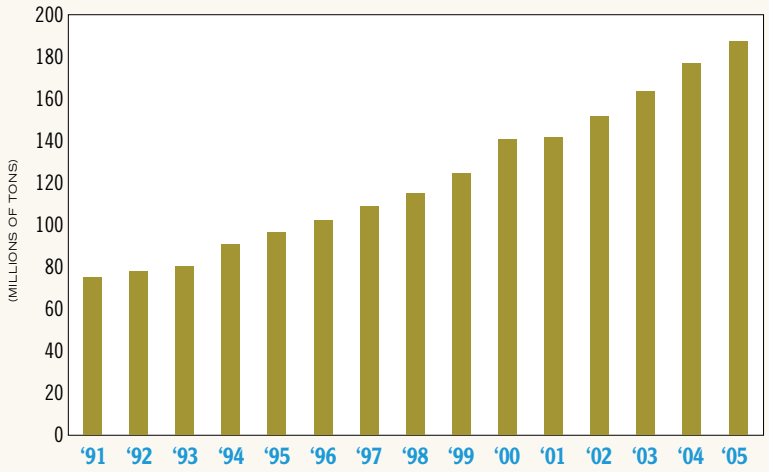
Total traffic at the Ports of Los Angeles and Long Beach increased from 178 million tons in 2004 to 187 million tons in 2005, a 5.2 percent increase but less than the 8.3 percent increase during the previous period (Figure 50). Between 2004 and 2005, traffic at Port Hueneme increased by 14 percent, from 4 to 4.6 million tons, following an 18 percent increase during the previous period. Only about 8 percent of the cargo shipments at Port Hueneme were through containers.

*In 2005, the Los Angeles/Long Beach port complex ranked fifth in the world in container traffic* (14.2 million TEUs – twenty-foot equivalent units) following Singapore (23.1 million), Hong Kong (22.4 million), Shanghai (18.1 million) and Shenzen, China (16.2 million).[14] Total container traffic at the Los Angeles/Long Beach port complex was about one third of all U.S. waterborne container traffic, and 6 times as much as the Bay Area Port. Three quarters of the trade through the San Pedro port complex is produced or consumed elsewhere.[15] By 2020, total container traffic at the twin-ports is

projected to more than double their 2005 level, reaching 36 million TEUs.[16] In 2005, the twin-ports also maintained their dominant role among West Coast ports, attracting almost 56 percent of the total traffic.

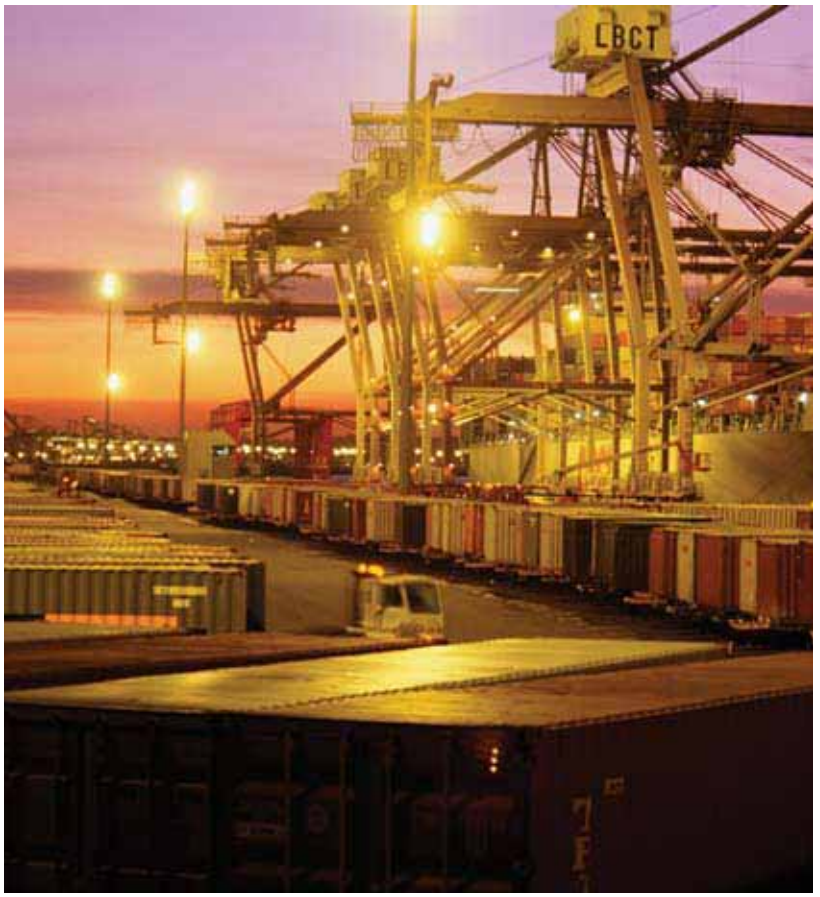
Figure 50

**Port Cargo at Los Angeles and Long Beach**

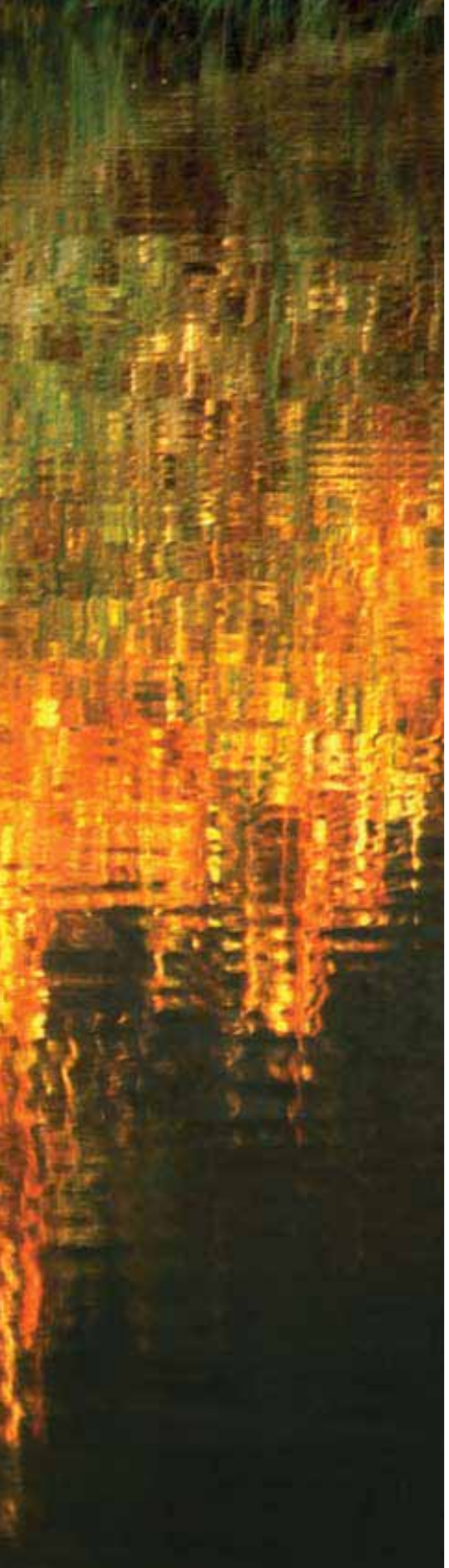



*Source: Los Angeles Economic Development Corporation*

Activities at the ports have been identified as the largest source of air pollution in the region, a condition that will increase over time as port traffic increases. For instances, a substantial contributor to air pollution is the low-grade diesel fuel used by ships. In December 2005, the California Air Resources Board (ARB) instituted a requirement for the use of higher-grade, less polluting diesel fuel within 24 miles of the California coast.



"How water is used would impact the health and sustainability of the regional ecosystem."



# THE ENVIRONMENT

## Air Quality

### *Why is this important?*

Good air quality is vital for the health of residents, nature and the economy. Human health effects of air pollution can range from lung irritation to cancer and premature death. Ecological effects include damage to crops and contamination of waters. Degradations in human and ecological health often adversely impact economic well-being.

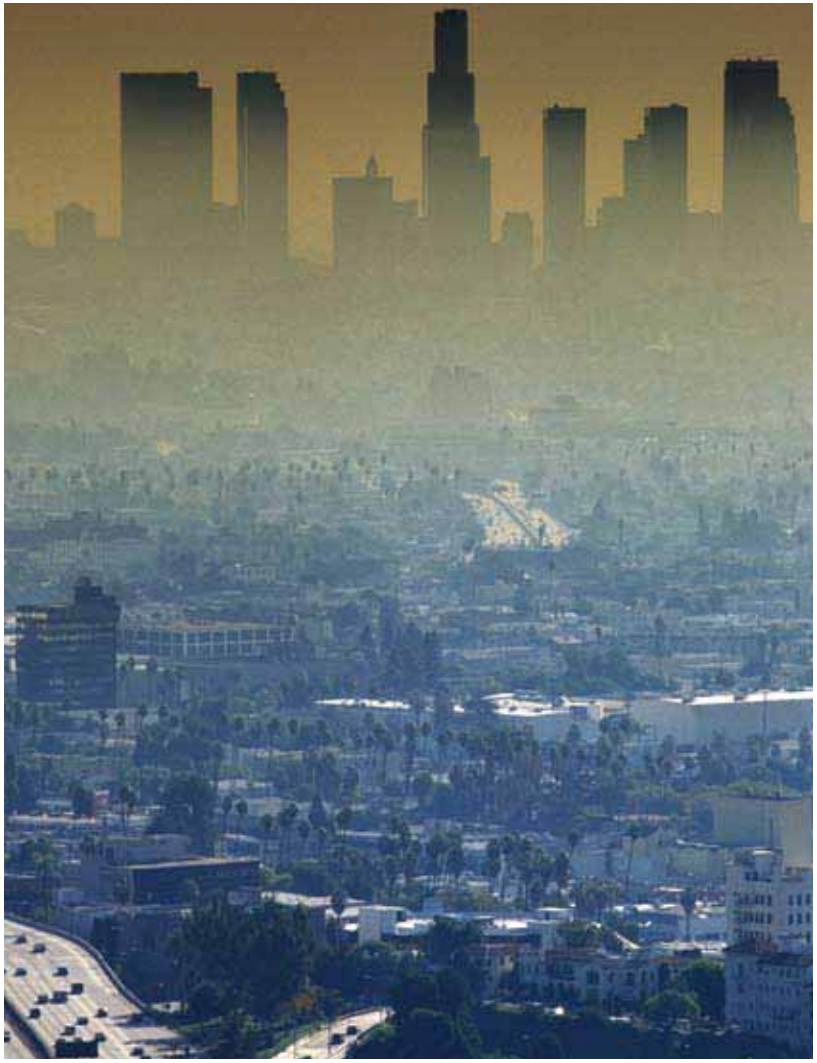
### *How are we doing?*

The SCAG region includes four air basins: South Coast, Mojave Desert, Salton Sea and South Central Coast (Ventura County portion) (see Map on the next page). An air basin generally has similar meteorological and geographical conditions throughout.

The U.S. Environmental Protection Agency (EPA), shortly after its creation in 1970, developed regulations targeting six "criteria" pollutants that adversely affect human health and welfare: ozone, particulate matter (PM), carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), and lead. Among these, the first three pollutants have exceeded federal health standards for many years, with various parts of the SCAG region showing moderate to extreme levels of pollution except for CO in the past few years. Because of their significance, this report focuses on the first three pollutants.

*Air quality trends are affected by emissions as well as meteorology (weather) and terrain. In particular, meteorology causes year-to year changes in air quality trends that can mask the impacts of emissions.* For example, an analysis of daily weather conditions in the South Coast Air Basin found that 1981, 1994, 1995 and 2003 had many days when the weather was likely to promote high levels of ozone.[1]


Kings
Tulare
Inyo
Nevada
San Luis Obispo
Kern
Santa Barbara
South Central Coast Air Basin
Ventura
Los Angeles
San Bernardino
Mojave Desert Air Basin
South Coast Air Basin
Riverside
Orange
PACIFIC
OCEAN
San Diego
Salton Sea Air Basin
Imperial
Arizona
Mexico
AIR BASINS
in the SCAG Region
MDAB
SCAB
SSAB
VC SCCAB
Ports
Major Airports
Ports of Entry
Freeway
Highway
County
N
Source: California Air Resources Board and Air Districts



*However, long-term trends are closely related to the changes in emission levels.* In addition, air masses can move from basin to basin. As a result, pollutants such as ozone and particulate matter can be transported across air basin boundaries.

While some pollutants, such as CO, are directly emitted, others are formed in the atmosphere from precursor emissions. Such is the case with ozone, which is formed in the atmosphere when reactive organic gas (ROG) and oxides of nitrogen (NOx) precursor emissions react in the presence of sunlight. Particulate matter (PM) which includes $PM_{10}$ and $PM_{2.5}$ is a complex pollutant that can either be directly emitted from dust or soot or formed in the atmosphere from precursor emissions such as NOx, ROG and oxides of sulfur (SOx).

Air pollution consistently ranks high among public concerns in Southern California, and control efforts have been a high priority in recent decades. *Despite significant improvements in the past two decades, the South Coast Air Basin still has some of the worst air quality in the nation. Specifically, the South Coast has the highest maximum concentration of ozone and $PM_{2.5}$ in the nation.*

## Ozone

Beginning in June 2005, the national one-hour ozone standard was revoked and replaced by a new 8-hour ozone standard that is more health protective. The new ozone standard is more stringent than the old standard but allows longer timeframe for attainment.[2] Currently, all four air basins in the region are designated as non-attainment areas for 8-hour ozone. The State Implementation Plan (SIP) for ozone is due to U.S. EPA in June 2007.

Ozone is a colorless and poisonous gas. Ground level ozone is a major component of urban and regional smog. Ozone is a strong irritant, which can reduce lung function and aggravate asthma as well as lung disease. Repeated short-term ozone exposure may harm children's developing lungs and lead to reduced lung function in adulthood. In adults, ozone exposure may accelerate the natural decline in lung function as part of the normal aging process.

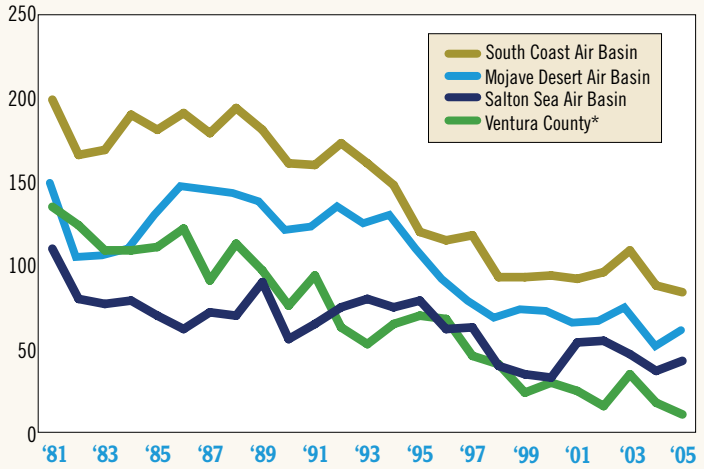
*In 2005, ozone pollution improved slightly in the South Coast Air Basin and Ventura County but worsened somewhat in the Mojave Desert and Salton Sea air basins.* In the most populous and polluted South Coast Air Basin, the number of days exceeding the federal 8-hour ozone standard decreased slightly from 88 days in 2004 to 84 days in 2005, the lowest since 1976 (Figure 51). However, ozone improvements have shown signs of leveling off since 1998. The maximum 8-hour ozone concentration in the South Coast Air Basin decreased very slightly from 0.148 ppm (parts per million parts of air) in 2004 to 0.145 ppm in 2005, about half of the 1985 level.[3] The number of days for health advisories in the South Coast Air Basin, however, increased from 4 to 11 days between 2004 and 2005.[4]

Between 2004 and 2005, Ventura County also achieved reductions in the number of days exceeding the federal 8-hour standard, from 18 to 11 days. However, during the same period, both the Mojave Desert and the Salton Sea air basins experienced increases in the number of days exceeding the federal 8-hour standard, from 49 to 55 days and 37 to 43 days respectively. *Within the region, the Central San Bernardino Mountain area surpassed the federal 8-hour ozone standard for a total of 69 days in 2005 followed by the Santa Clarita Valley (47 days) and Banning Airport area in Riverside County (39 days).*[5]

Figure 51

**Ozone Pollution in Non-attainment Air Basins**

(Number of Days Exceeding Federal 8-hour Standard)



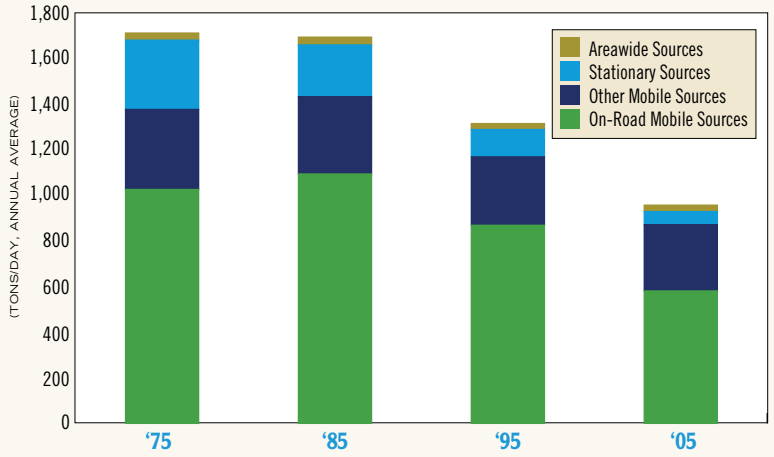

** Ventura County is part of the South Central Coast Air Basin*
*Source: California Air Resources Board and South Coast Air Quality Management District*

Emissions of ozone precursors ROG and NOx in the South Coast Air Basin are generally following a downward trend (Figure 52). For example, total emissions of NOx were reduced from over 1,700 tons/day in 1975 to

about 950 tons/day in 2005. This is primarily due to the reductions from on-road mobile sources as more stringent vehicle emission standards have been implemented and as newer, less-polluting vehicles become a larger share of the fleet. *In 2005, heavy duty trucks were responsible for 320 tons/day of NOx, a third of the total NOx emissions in the South Coast Air Basin.* As to "other mobile sources", major NOx contributors are off-road combustion equipment, ships and trains. The NOx emissions from off-road combustion equipment have been decreasing and offset the increases from ships. NOx emissions from stationary sources (e.g., electric utilities) in the air basin have declined substantially since 1975, despite a nationwide increase in emissions from electric utilities in the same period. These large reductions are primarily due to increased use of natural gas as the principal fuel for power plants, and control rules that limit NOx emissions.

Figure 52

**NOx Emissions in the South Coast Air Basin**




*Source: California Air Resources Board*

The California Air Resources Board has identified the South Coast Air Basin as a transport contributor to several downwind air basins – the Mojave Desert, Salton Sea, San Diego and the South Central Coast air basins. As ozone precursor emissions in the South Coast Air Basin decline further, the transport impact on the downwind air basins should also decrease.

## $PM_{10}$

$PM_{10}$ is particulate matter with diameter of 10 micrometers (um) or smaller. The diameter of a human hair is about 60 micrometers. Exposure to particulate matter aggravates a number of respiratory illnesses and may even cause early death in people with existing heart and lung disease. Both long-term and short-term exposure can have adverse health impacts.

Three air basins in the region have been designated as non-attainment areas for $PM_{10}$: the South Coast, Salton Sea and Mojave Desert. The annual average indicator provides a measure of long-term exposure to particulate matter that could contribute to breathing disorders, reduce lung function, and curtailed lung growth in children. It should be noted that, on September 21, 2006, the U.S. EPA revoked the $PM_{10}$ annual standard but retained the 24-hour standard. However, in tracking the performance of the region in 2005, both the annual and 24-hour $PM_{10}$ standards are used.

Since 1987, the South Coast Air Basin has been exceeding the Federal annual average standard of 50 ug/$m^3$ (micrograms per cubic meter of air) but with a general trend toward improvement (Figure 53). In 2005, there continued to have a slight reduction from 2004 in the $PM_{10}$ annual average in the South Coast Air Basin, from 8 percent to 4 percent above the federal standard. Exceedances of the federal annual standard in the South Coast Air Basin were confined to Riverside County with a maximum of 52 ug/$m^3$ (or 104 percent of the federal standard).[6] On an annual basis, directly emitted $PM_{10}$ emissions contribute approximately 65 percent of the ambient $PM_{10}$ in the South Coast Air Basin. Among the directly emitted $PM_{10}$ emissions in 2005, 46 percent

were from paved road dust while another 14 percent were from construction and demolition.[7] Directly emitted $PM_{10}$ emissions, though declining by about 20 percent between 1990 and 2005, are projected to increase slightly (about 5 percent) by 2020.[8]

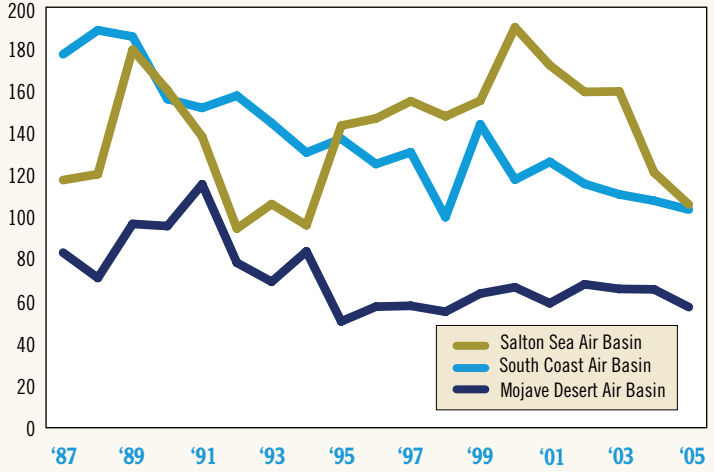
In the Salton Sea Air Basin, the $PM_{10}$ pollution level has been fluctuating since 1987. The Salton Sea Air Basin has contained the highest level of $PM_{10}$ annual average within the SCAG region since 1995. Between 2004 and 2005, the annual average of $PM_{10}$ pollution in the Salton Sea Air Basin dropped significantly from 22 percent to about 6 percent over the federal standard. Among the directly emitted $PM_{10}$ emissions in 2005, 70 percent were from fugitive windblown dust and another 14 percent were from unpaved road dust.

In the Mojave Desert Air Basin, $PM_{10}$ pollution level has been below the federal annual average standard since 1992. Among the directly emitted $PM_{10}$ emissions in 2005, 58 percent were from unpaved and paved road dust while only 10 percent were from fugitive windblown dust.

*In 2005, the number of days exceeding the federal 24-hour standard (150 ug/$m^3$) for $PM_{10}$ decreased slightly in the Salton Sea Air Basin, from 8 to 6 days (Figure 54).* The number of days with an unhealthy level of $PM_{10}$ describes the chronic extent of $PM_{10}$ pollution. *In both 2004 and 2005, neither the South Coast nor Mojave Desert air basin had any exceedance regarding the federal 24-hour standard.*

Figure 53

**$PM_{10}$ in Non-attainment Air Basins**
**(Percent of Federal Annual Average Standard*)**




** Above 100 percent means exceeding the federal standard. Also $PM_{10}$ condition may be impacted significantly by natural events or pollution transport.*

*Source: California Air Resources Board*

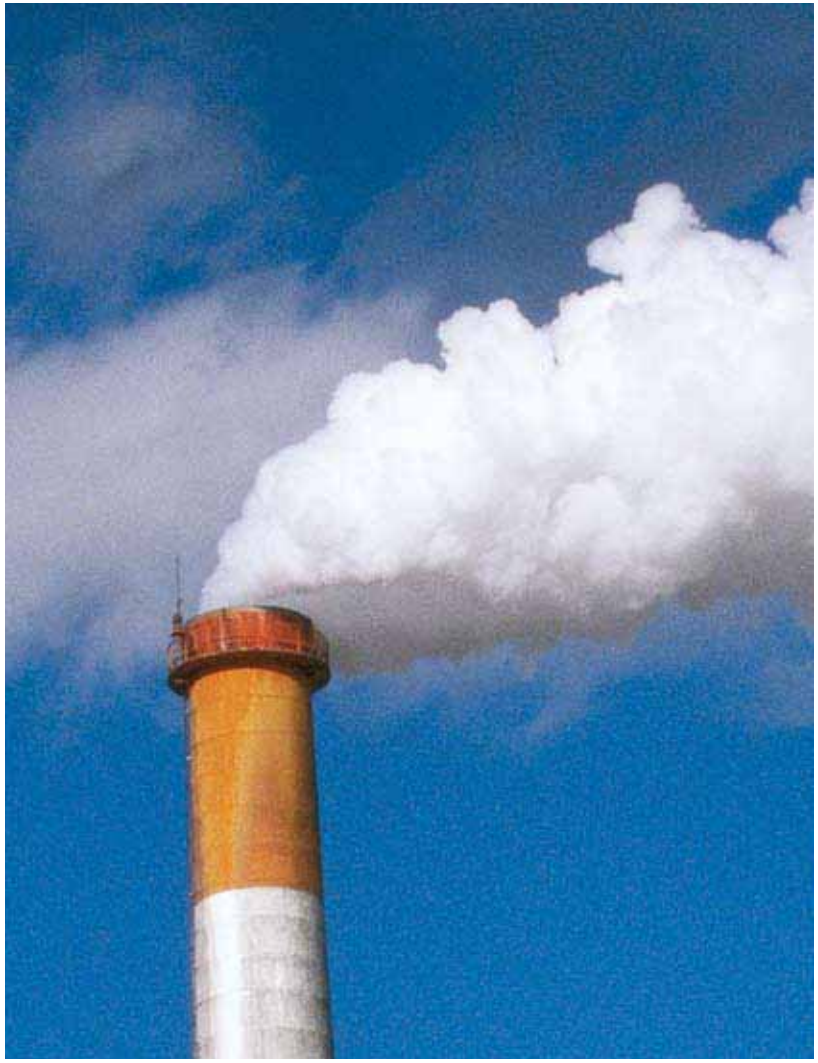


Figure 54

## $PM_{10}$ Pollution in Non-attainment Air Basins

Days Exceeding Federal $PM_{10}$ 24-hour Standard

| AIR BASINS | 2003 | 2004 | 2005 |
|---|---|---|---|
| Mojave Desert | 8 | 0 | 0 |
| Salton Sea | 28 | 8 | 6 |
| South Coast | 6 | 0 | 0 |

*Source: California Air Resources Board*

California state standards for $PM_{10}$ are significantly more stringent than federal standards due to greater consideration given to the potential health impacts. Specifically, the state annual average standard for $PM_{10}$ of 20 ug/$m^3$ is only 40 percent of the federal standard of 50 ug/$m^3$. In 2005, both the Salton Sea and South Coast continued to significantly exceed the state annual average standards. In addition, the state 24-hour standard for $PM_{10}$ of 50 ug/$m^3$ is only a third of the federal standard of 150 ug/$m^3$. In 2005, the Salton Sea Air Basin exceeded the state $PM_{10}$ 24-hour standard on 160 days, while the South Coast Air Basin exceeded on 198 days.[9]

### $PM_{2.5}$

$PM_{2.5}$ is a subgroup of finer particles within the classification of $PM_{10.}$ They pose increased health risks because they can penetrate deeper in the lung than $PM_{10}$ and contain substances that are particularly harmful to human health.

The U.S. EPA promulgated area designations for $PM_{2.5}$ for the first time in early 2005. Within the SCAG region, only the South Coast Air Basin was designated as a non-attainment area with 2014 as the required attainment year. The State Implementation Plan (SIP) for $PM_{2.5}$ is due to U.S. EPA in April 2008, but will be submitted in June 2007 along with the ozone SIP because many of the control strategies that reduce $PM_{2.5}$ precursor emissions are also needed to help attain the 8-hour ozone standard. State non-attainment designation is more encompassing and includes, in addition to the South Coast, the Western Mojave Desert Air Basin and Ventura County.

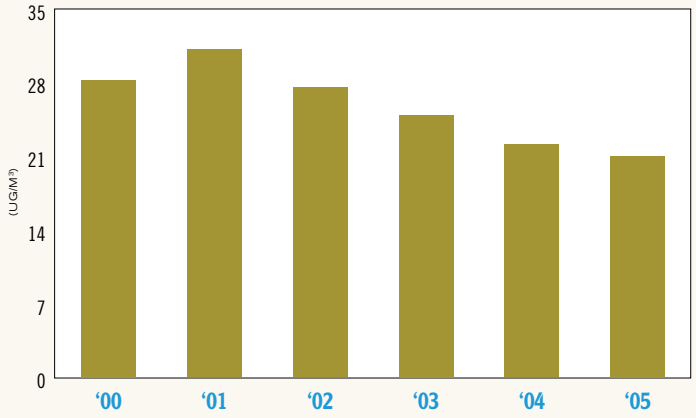
*While the annual average concentration of 21 ug/$m^3$ in the South Coast Air Basin declined in 2005 from the previous year (22.1 ug/$m^3$), it continued to exceed the federal standards of 15 ug/$m^3$ (Figure 55).* Specifically, 12 of the 19 monitoring stations in the basin showed exceedance, ranging from coastal cities to inland valleys. Nevertheless, the annual average $PM_{2.5}$ concentration in the South Coast Air Basin in 2005 was the lowest since monitoring began in 1999.

*$PM_{2.5}$ particles being smaller than $PM_{10}$ particles are more difficult to control.* In a recent action by the U.S. EPA on September 26, 2006, the federal 24-hour $PM_{2.5}$ standard was revised to be significantly more stringent, lowered from 65 ug/$m^3$ to 35 ug/$m^3$. In 2005, while the South Coast Air Basin did not have any exceedance of the federal 24-hour standard for $PM_{10}$, it exceeded the (old) federal 24-hour standard for $PM_{2.5}$ on 6 days sampled, a slight decrease from 7 days sampled in the previous year.[10]

On an annual basis, directly emitted $PM_{2.5}$ emissions contribute approximately 40 percent of the ambient $PM_{2.5}$ in the South Coast Air Basin. Among the directly emitted $PM_{2.5}$ emissions, about 55 percent are from areawide sources, while 33 percent are from mobile sources and another 12 percent are from stationary sources. $PM_{2.5}$ emissions, though declined by about 22 percent between 1990 and 2005, are projected to remain relatively stable until 2020.

Figure 55

**$PM_{2.5}$ Pollution in the South Coast Air Basin**
(Annual Average Concentration*)




** Federal annual average standard for $PM_{2.5}$ is 15 ug/$m^3$*
*Source: South Coast Air Quality Management District*

### Carbon Monoxide

In December 2002, the South Coast Air Basin met federal attainment standards for CO (with no violation in 2001 and the one day allowable exceeding the federal standard in 2002). *The basin continued to have no violation for CO from 2003 to 2005.* During the past two decades, peak 8-hour CO levels decreased in the South Coast Air Basin from 28 ppm in 1985 to 5.9 ppm in 2005 (in south central Los Angeles County).[11] Even though the South Coast has met the attainment requirements since 2002, it has not been officially redesignated as an attainment area. Continuing reductions from motor vehicle control programs is expected to continue the downward trend in ambient CO concentrations.

## Water Resources

### Total Water Use

#### *Why is this important?*

Water is essential to human life. With the continuing increase of population in the region, ensuring reliable water resources to meet demand and maintaining water quality are vital goals for all of Southern California. In addition, how water is used would also impact the health and sustainability of the regional ecosystem.

#### *How are we doing?*

The SCAG region depends on both imported and local sources to meet its demand for water. This includes imported water from the Colorado River via the Colorado River Aqueduct, the State Water Project via the California Aqueduct, and the eastern Owens Valley/Mono Basin in the Sierra Nevada via the Los Angeles Aqueduct. *Together, depending on the rainfall level, imported water generally accounts for about 70 to 75 percent of the regional water supply.* The remaining 25 to 30 percent comes from local surface and ground water and from reclaimed water sources.[12] *It is important to note that available water from all three imported sources may be reduced in the future as other users and uses place greater demands on these sources.* For example, environmental and water quality needs in the Delta and Owens River/Mono Basin systems affect import water supply quantity, quality and reliability. In addition, the Colorado River basin has experienced a five-year drought that is unprecedented in recorded history, while total water demand in its basin continues to rise because of population and economic growth. The Colorado River Water is perhaps the most critical and uncertain element of the water resource planning in Southern California.

In addition, the region also needs to assess and plan for impacts of global climate change (as further discussed in the Energy Section), as well as the cost of replacing aging infrastructure. *Some of the most significant impacts from global climate change will be on water resources, impacts that are of special concern to the SCAG region where water scarcity and quality are already of great concern.*

Within the SCAG region, the Metropolitan Water District (MWD) is the largest urban water supplier. Its service area includes more than 15 million residents in the region (Figure 56). In recent years, MWD has provided about half of the municipal, industrial and agricultural water used in its service area.

Figure 56

### Population Within Water District Service Area

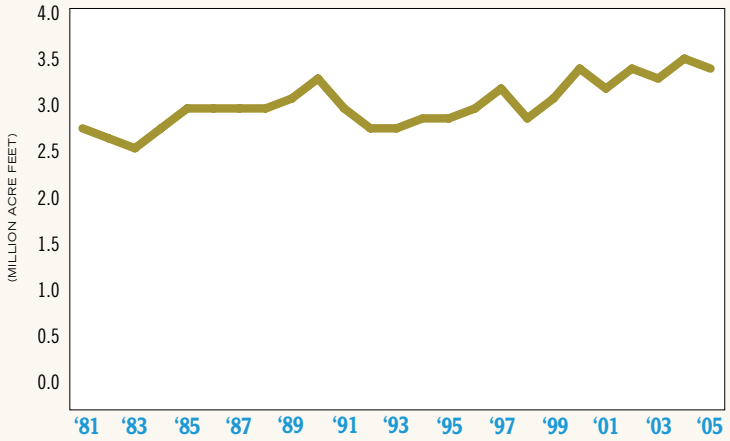
| COUNTY | MWD | Non-MWD |
|---|---|---|
| Imperial | 0% | 100% |
| Los Angeles | 92% | 8% |
| Orange | 100% | 0% |
| Riverside | 72% | 28% |
| San Bernardino | 41% | 59% |
| Ventura | 72% | 28% |
| REGION | 85% | 15% |

*Source: Metropolitan Water District*

In 2005, total water consumption was over 3.4 million acre-feet. The 2005 level was only 6 percent higher than the 1990 level (a dry year), despite an increase of almost 3.5 million (24 percent) residents since 1990 (Figure 57). Within the MWD service area in the SCAG region, total water consumption did not experience significant increases for several years in the mid-1990s due to the recession, wet weather, conservation efforts, and lingering drought impacts. Of total consumption, only 7.5 percent was for agricultural purposes and the rest was for urban (municipal and industrial) uses.

Figure 57

### Total Water Consumption*
(Metropolitan Water District Service Area)




**Within the SCAG region. Total water consumption includes municipal/industrial and agricultural uses.*
***One acre foot equals 325,851 gallons.*

*Source: Metropolitan Water District including projected data for 2005*

In recent years, the region has developed an array of local projects to complement imported water supplies. They include surface water storage, groundwater storage and conjunctive use, water recycling, conservation, brackish water desalination, water transfer and storage, and infrastructure enhancements. Within the MWD service area, water conservation programs are estimated

to conserve about 736,000 acre-feet of water in 2005, almost tripled the 1990 level at 250,000 acre-feet.[13] Some of the major river systems in Southern California have been developed into systems of dams, flood control channels and percolation ponds for supplying local water and recharging groundwater basins. For example, the San Gabriel and Santa Ana rivers capture over 80 percent of the runoff in their watersheds.

## Per Capita Urban Water Use

### *Why is this important?*

Water consumption per capita is important when looking at a city or county's growth projections in order to maintain a safe yield per person and sustain community well-being.

### *How are we doing?*

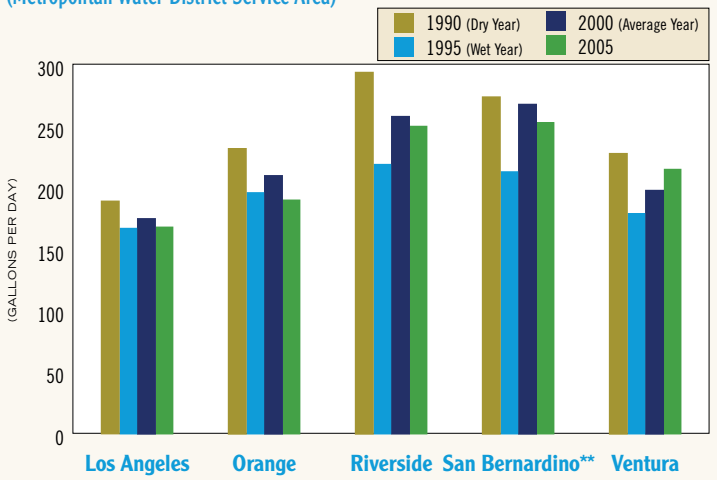
Urban water use includes residential, commercial, industrial, fire fighting and other uses. Hence, per capita urban water use consists of more than the amount of water used directly by an individual. Since 1991, per capita urban water use has generally been below the pre-drought levels. While 1990 was a dry year, 1995 was a wet year and 2000 represented an average year. In 2005, per capita urban water use declined slightly from the 2000 level in each county in the region except for Ventura County (Figure 58).

An important factor contributing to the overall decline in per capita urban water consumption is the development of various conservation programs and practices. These include retrofitting with water efficient technology for showerheads and toilets and changing landscaping practices toward drought-tolerant plants. In addition, implementation of new water rate structures has helped suppress growth in per capita water demand.

Figure 58

**Per Capita Urban Water Consumption***

(Metropolitan Water District Service Area)




**Not including agricultural use. 2005 data are estimates by MWD.*
***San Bernardino's portion includes only 41% of the County's total population, significantly less than other counties.*

*Source: Metropolitan Water District, 2005 Regional Urban Water Management Plan.*

In Southern California, much of the variation in per capita water use among counties can be attributed to climate differences. Within the region, the Inland Empire counties continued to maintain higher per capita urban water consumption rates than coastal counties. For example, in 2005, per capita urban water consumption per day in San Bernardino and Riverside counties was 250 and 253 gallons respectively in contrast to 190 gallons in Orange County and 168 gallons in Los Angeles County. This partly reflects higher landscape water use due to warmer and dryer climate conditions. In addition, a single family unit has higher per capita water use than a multi-family unit. The Inland Empire has much higher share (72 percent) of single-family residential units than Los Angeles County (55 percent) or Orange County (63 percent).

## Beach Closure

### *Why is this important?*

When the ocean waters off a beach contain high concentrations of certain bacteria, they become unsafe for swimming and other recreational uses. In 1999, the California Department of Health began monitoring all beaches which have more than 50,000 annual visitors and have outflows from storm drains, rivers, or creeks. Closures or advisories are issued for beaches that fail to meet the state's standards for various sources of bacterial pollution.

### *How are we doing?*[14]

*Between 2004 and 2005, the total number of beach closing/advisory days increased from 2,860 to 3,278 among the 98 beaches monitored in the region.* The increase of 15 percent of beach closing/advisory days in the region was less than that at the state level during the same period, from 3,985 to 5,175, or 30 percent.

*In 2005, Los Angeles County experienced 2,213 beach closing/advisory days, the highest number in the past 5 years and also the highest among all California counties for the third consecutive year.* Following Los Angeles County were Santa Barbara (653 beach closing/advisory days), Orange County (631 beach closing/advisory days), and Ventura County (434 beach closing/advisory days). Polluted urban stormwater runoff continues to be the largest source of pollution and the predominant cause of beach closing across the state.

Between 2004 and 2005, the number of beach closing/advisory days in Los Angeles County increased significantly from 1,469 to 2,213, a 51 percent increase following the 1 percent increase during the previous period. Almost 99.7 percent of total beach closing/advisory days in the county in 2005 were due to elevated bacterial levels from unknown sources. The remaining 0.3 percent was due to known sewage spills.

Orange County experienced a 33 percent decrease from 939 to 631 beach closing/advisory days between 2004 and 2005, after a 26 percent decrease during the previous period. Similar to conditions in Los Angeles County, 81 percent of total beach closing/advisory days in Orange County were due to elevated bacterial levels from unknown sources. Ventura County also experienced a slight decrease of 4 percent from 452 to 434 beach closing/advisory days between 2004 and 2005, after a 37-percent reduction during the previous period. Among the total beach closing/advisory days, about 52 percent were preventive due to debris on the beach and 35 percent were from unknown source of contamination.

## Solid Waste

### *Why is this important?*

Disposing of waste in landfills is not only costly but, if not treated properly, could have dire impacts on the ecosystem and human health. For example, decomposition of waste in landfills releases methane into the atmosphere, a significant contributor to global warming. Hence, a sustainable society would minimize the amount of waste sent to landfills by reducing, recycling or reusing the waste generated as much as possible.

### *How are we doing?*

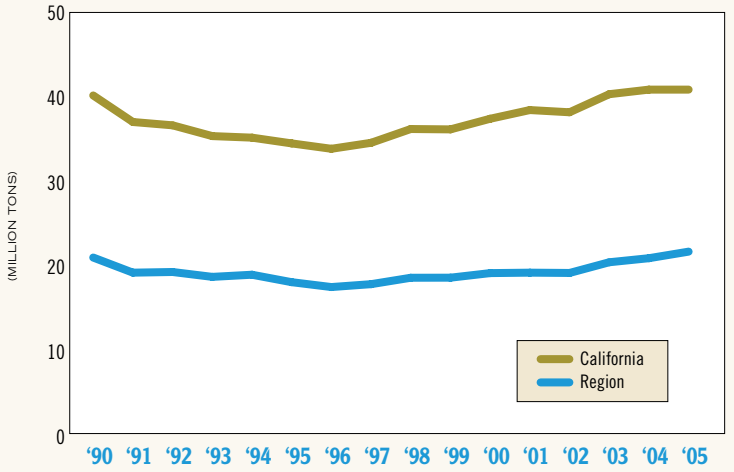
The 1989 California Integrated Waste Management Act set the goal of 50 percent diversion of each city and county's waste from landfill disposal by the year 2000. Diversion measures include waste prevented, waste re-used, waste recycled or waste composted. Waste diversion programs such as curbside recycling pickups, greenwaste collection, and municipal composting have

steadily increased the diversion rate. *At the statewide level, the diversion rate – the share of amount diverted out of the total waste generated - increased from 10 percent in 1989 to 53 percent in 2005.*[15] Hence among the 79 million tons of waste generated in California in 2005, over 42 million tons were diverted. Among the total waste generated, about 30 percent was organic matter, 22 percent was construction and demolition materials and 21 percent was paper.[16]

*In 2005, the total amount of waste disposed to landfills in the region reached 22.3 million tons, a slight increase of almost 1 million ton from 2004. It was also a higher level than any year since 1990 (Figure 59).* During the 1990s, waste sent to landfills in the region declined for several years, however, it has increased gradually since 1996. This is similar to the trend at the state level. Many landfills in the region are running out of capacity while environmental concerns make building new landfills or expanding existing landfills increasingly difficult.

Figure 59

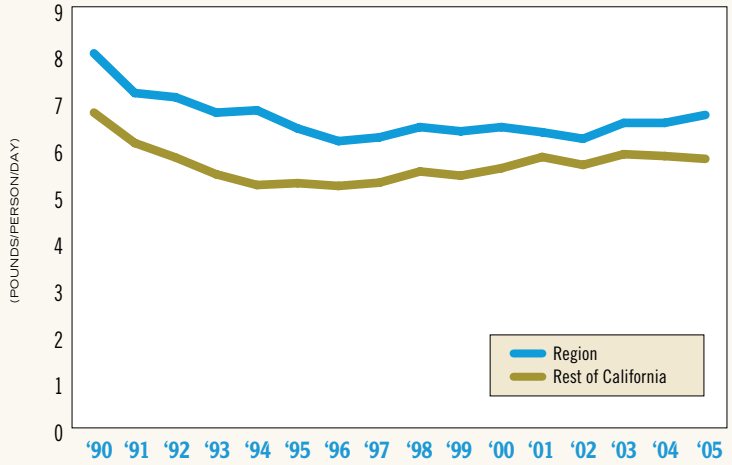
**Solid Waste Disposal at Landfills**




*Source: California Integrated Waste Management Board*

Figure 60

**Solid Waste Disposal in Landfills**




** Including residential and non-residential waste disposal.*

*Source: California Integrated Waste Management Board*

Since the passage of the Waste Management Act in 1989, the region began to make progress in reducing the amount sent to landfills on a per capita basis. In 1990, the region disposed about 8 pounds of solid waste per capita per day into the landfills, higher than that of the rest of the state of 6.8 pounds per capita per day. Various measures to implement the Act had reduced the per capita disposal rate in the region continuously to just over 6 pounds per day

(or almost 25 percent) in 1996, the lowest level since 1990. Since 1996, per capita disposal rates fluctuated somewhat and began to increase after 2002 to about 6.7 pounds per day in 2005. (Figure 60).

## Energy

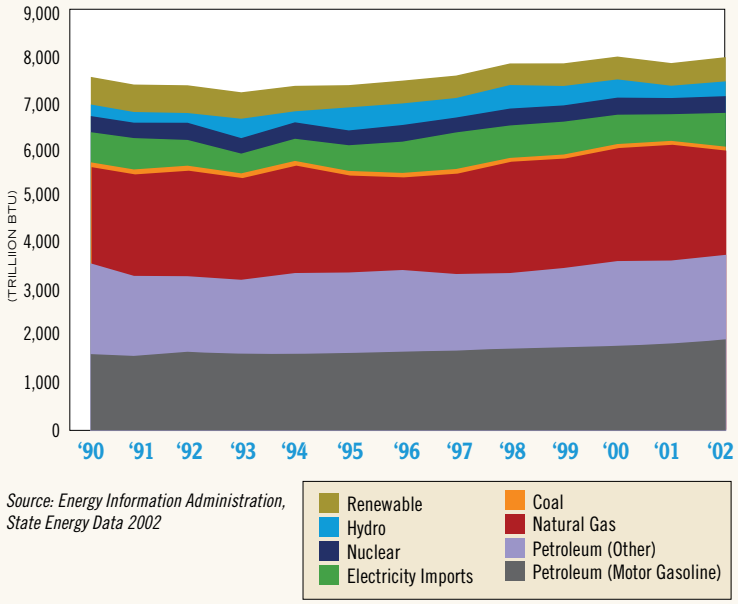
### *Why is this important?*

Energy is a critical input for the production processes of the regional and national economy. In addition, it is essential for everyday life. Reliance on fossil fuels contributes significantly to global warming that would result in adverse

impacts on many ecological systems, human health as well as the economy. Furthermore, strong dependence of foreign imports greatly reduces the reliability and security of this vital resource.

Figure 61

**California Energy Consumption Estimates by Source**




*Source: Energy Information Administration, State Energy Data 2002*

## *How are we doing?*

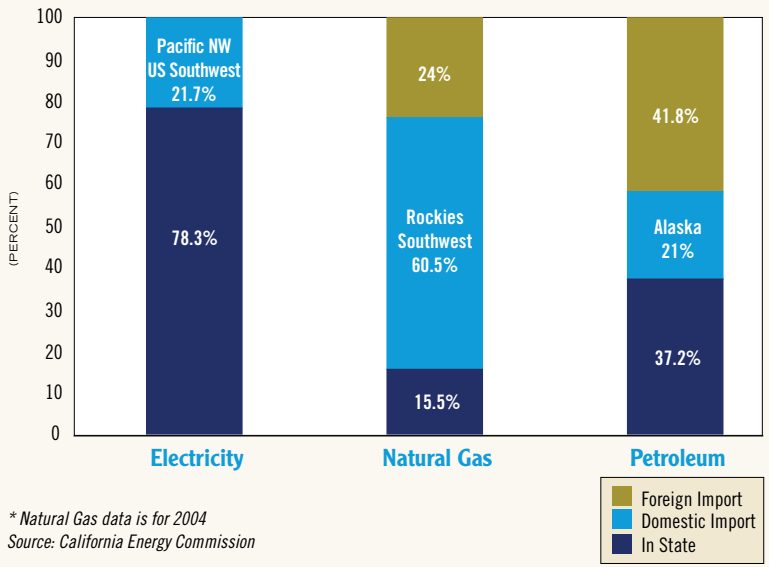
*Energy use in California is predominantly fossil-fuel based (i.e. petroleum, natural gas and coal), accounting for almost 85 percent of the total consumption (Figure 61). In addition, California obtains nearly two-thirds of its energy from outside its borders, including 63 percent of petroleum, 84 percent of natural gas and 22 percent of electricity uses (Figure 62).*

Based on the recent statewide inventory, petroleum accounted for about 47 percent of the total energy use, natural gas 28 percent and coal just below 1 percent.[17] In addition, imported electricity (9 percent of the total energy use) was produced mainly by coal or natural gas. Other sources of energy include renewable (6.5 percent), nuclear (4.5 percent) and hydroelectric power

(4 percent). As to the energy consumption by sectors in California, transportation sector is the largest user of 39 percent, followed by the industrial sector of 24 percent. Commercial and residential sectors each used about 18.5 percent. For major energy sources such as petroleum and natural gas, the SCAG region accounts for about 45 percent of the total state use and is expected to have similar consumption patterns to that of the state in the shares of different energy sources.

Figure 62

**California's Major Sources of Energy, 2005**




** Natural Gas data is for 2004*
*Source: California Energy Commission*

*At the national level, 86 percent of the total energy consumption is fossil-fuel based, almost the same proportion as that in California.* However, the nation relies much more on coal (23 percent) and less on natural gas (23 percent) and petroleum (40 percent) than California. In addition, within the non-fossil fuels, the nation also relies more on nuclear (8.5 percent).

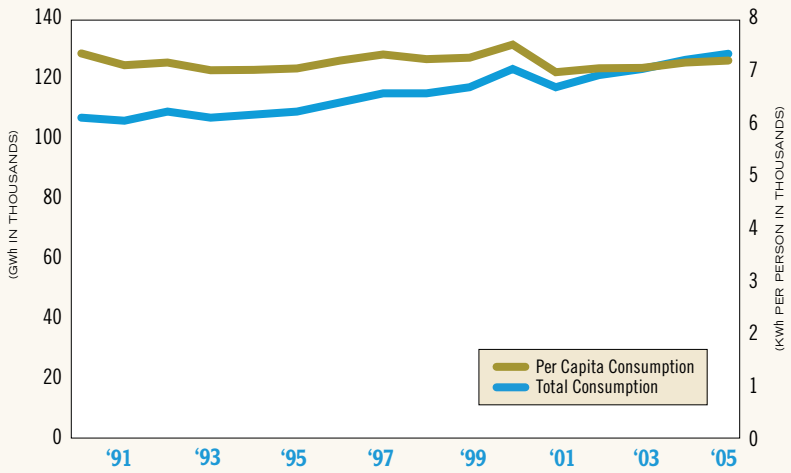
## Electricity Consumption

In 2005, the SCAG region consumed almost 128,000 gigawatt–hours (GWh) of electricity, about 48 percent of the total consumption in the state (Figure 63). In

the region, electricity consumption increased 15 percent during the 1990s. Total consumption declined in 2001 after the electricity crisis but since then has been increasing about 1.3 percent per year, roughly keeping pace with the population growth. Hence per capita electricity consumption in the region is projected to remain relatively constant over the next 10 years, at about 7,100 kilowatt-hours (kWh) per person, somewhat below the state average of 7,500 kilowatt-hours (kWh) per person.

Figure 63

## Electricity Consumption

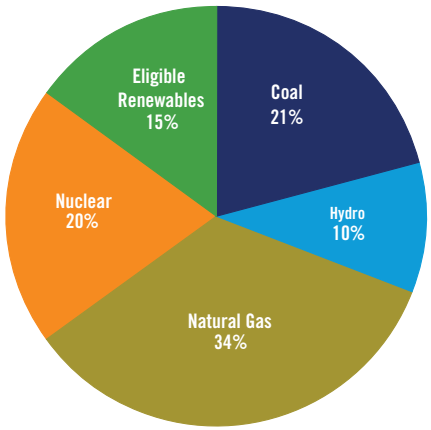



*Source: California Energy Commission*

Fossil fuels accounted for 55 percent of the total sources for electricity generation in Southern California, including natural gas (34 percent) and coal (21 percent) (Figure 64). Compared with the state's energy mix, Southern California had a higher share of renewable (15 percent vs. 11 percent). Both Southern California Edison and Los Angeles Department of Water and Power (LADWP) have set targets to reach 20 percent using renewable energy. Southern California relied more on nuclear (20 percent vs. 14 percent) but less on hydroelectric power (10 percent vs. 17 percent) than the state as a whole.

Figure 64

## Electricity Generation by Source, 2005




**Based on the combined mix of Southern California Edison and Los Angeles DWP*
*Source: California Energy Commission, Southern California Edison, Los Angeles Department of Water and Power, July 2006*

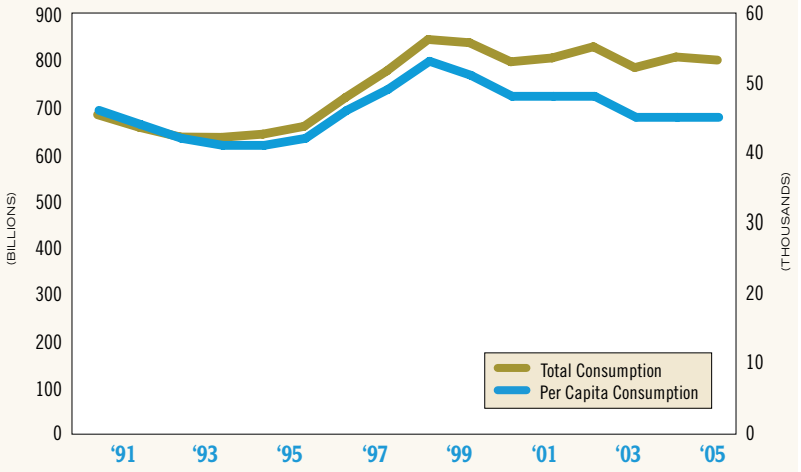
## Natural Gas Consumption

Californians consumed about 6.25 million cubic feet per day (MMcfd) of natural gas in 2005, half of which were used in electric generation. Only 16 percent of the total natural gas consumption was produced in California. The remaining was imported from the Southwest (36 percent) and Rockies (24 percent) in the U.S. and from Canada (24 percent). For natural gas use, the SCAG region is served by the Southern California Gas Company. A small portion of the region is served by a municipal gas utility, Long Beach Energy (part of the City of Long Beach). In 2005, the SCAG region consumed more than half (about 800 billions of cubic feet) of the natural gas consumed in the state excluding electricity generation use. Since 2000, the total non-electric generation use of natural gas in the region has been fluctuating slightly around 800-billion level and is projected to remain relatively constant for the next ten years. As to the per capita consumption of natural gas in the region, it has been on a gradually declining path since 1998 reaching about 45,000 cubic feet in 2005 (Figure 65).

In the region, residential was the largest user (33 percent) of natural gas followed by mining (32 percent). Among the total residential uses of natural gas, water heating and space heating each consumed about 44 percent.

Figure 65

**Natural Gas Consumption* (Cubic Feet)**




** Excluding the use for electricity generation*
*Source: California Energy Commission*

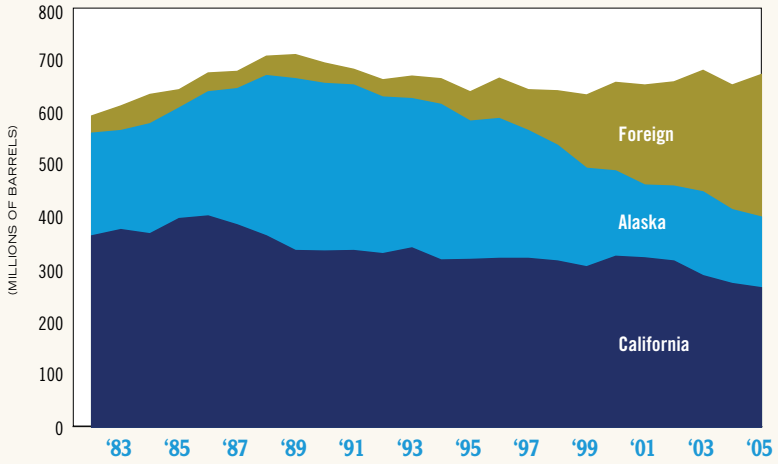
## Vehicle Fuel Consumption

*In 2005, more than 40 percent of the crude oil to California refineries came from foreign imports, exceeding for the first time the production from California (39.5 percent) (Figure 66). The share of foreign imports has been increasing rapidly from below 10 percent in 1995 to over 40 percent in 2005.* During the same period, production from California decreased from 50 percent to

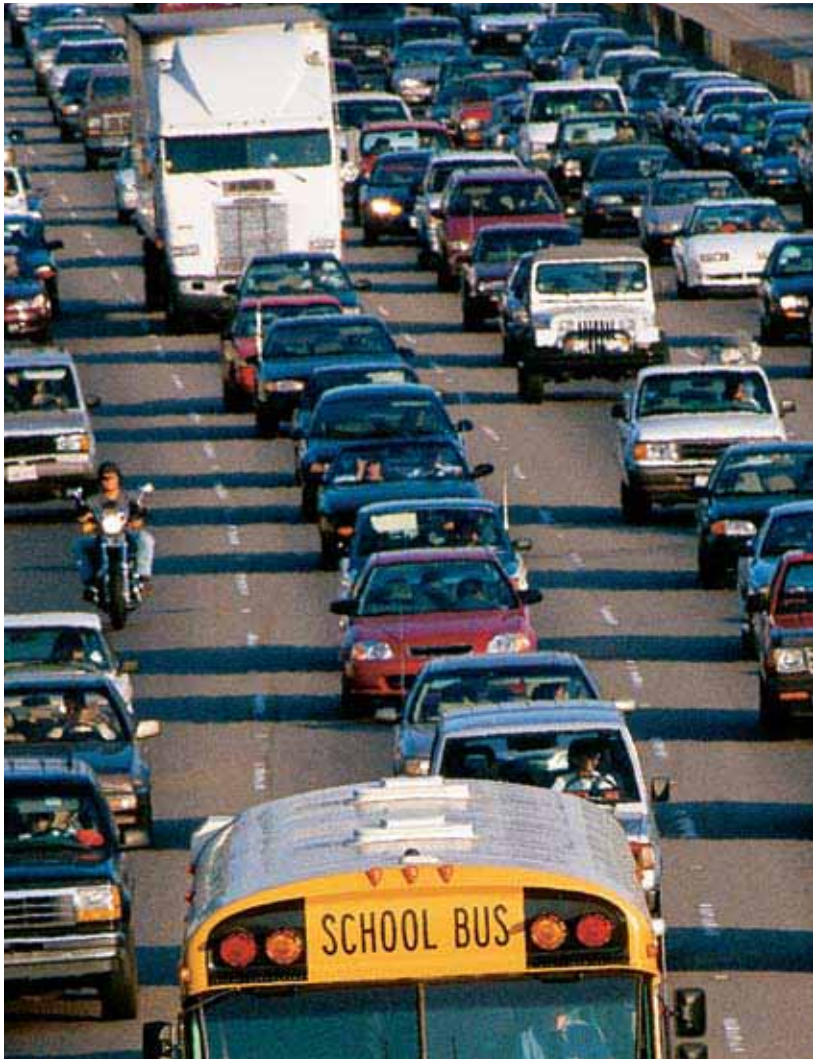
below 40 percent while imports from Alaska also decreased from 41 percent to 20 percent. Nationally, oil imports accounted for about 65 percent of the total consumption. Among the total petroleum use in the state, almost two-thirds were for vehicle fuel consumption including motor gasoline (54 percent) and distillate fuel (11 percent).

Figure 66

### Crude Oil Supply Sources To California Refineries



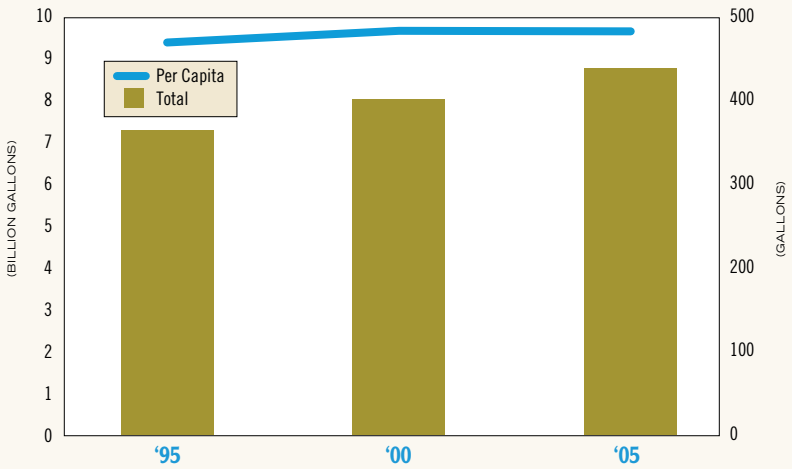

*Source: California Energy Commission*



In 2005, the region consumed about 8.8 billion gallons of vehicle fuels, an increase over 20 percent from a decade ago (Figure 67). However, per capita vehicle fuel consumption, though increasing slightly between 1995 and 2000, has since been relatively constant at about 485 (gasoline equivalent) gallons.

Figure 67

**Vehicle Fuel Consumption** (Gasoline Equivalent Gallons)



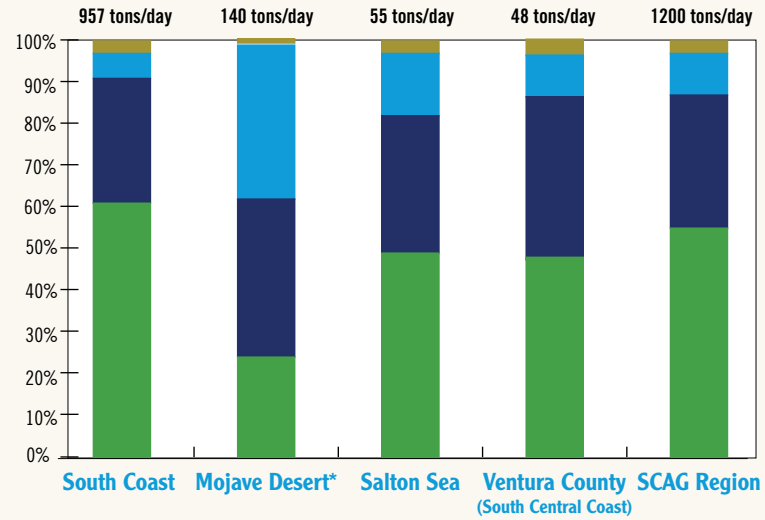

*Source: California Department of Transportation, 2005*
*California Motor Vehicle Stock, Travel and Fuel Forecast*

## Impacts on Global Warming

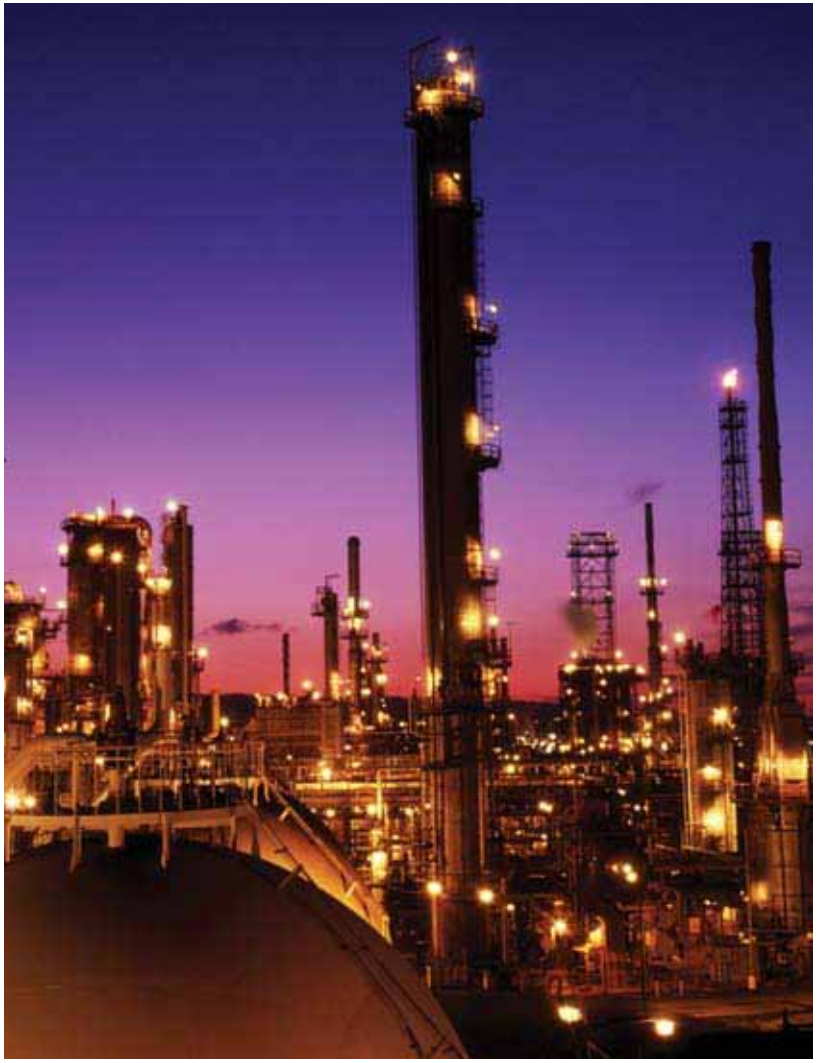
The combustion of fossil fuels (petroleum, natural gas and coal) to release their energy creates carbon dioxide ($CO_2$) emissions, the most significant greenhouse gas that affects global climate change and specifically global warming. This is in addition to fossil fuels' impacts on regional air quality including ozone pollution as described in the Air Quality Section. For example, the burning of fossil fuels for mobile sources in the region is responsible for more than 85 percent of total NOx emissions, a precursor of ozone pollution (Figure 68).

Figure 68

**NOx Emissions by Air Basin and Source, 2005**




** Excluding areas within Kern County that is outside the SCAG region*
*Source: California Air Resources Board*



Climate change is the shift in the "average weather" that a given region experiences. Currently, the Earth is warming faster than any time in the previous 1,000 years and the ten warmest years of the last century all occurred within the last 15 years and the global mean surface temperature has increased by $1.1^0$ F since the 19th century. Human activities are altering the chemical composition of the Earth's atmosphere through the release and build up of climate change emissions, predominantly $CO_2$, that absorb the heat. Specifically, the concentration of $CO_2$ in the atmosphere has risen about 30 percent since the late 1800s, and is estimated to reach between two to three times of its late 1800s level by 2100. Scenarios examined by national and international assessments indicate that temperatures in the U.S. will rise by about $5^0$ to $9^0$ F on average in the next 100 years.

Global warming poses a serious threat to the economic well-being, public health and natural environment in Southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea levels, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in $CO_2$ emissions from fossil fuel consumption per unit of Gross State Product. *However, in terms of total $CO_2$ emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is also a major contributor to the global warming problem.*

In 2000, California generated 473 million metric tons ($CO_2$ equivalent) emissions, an increase of 11 percent since 1990. It is projected to increase over 600 million metric tons ($CO_2$ equivalent) emissions in 2020 (Figure 69).

California Governor's Executive Order S-3-05 established statewide climate emission reduction targets as follows:

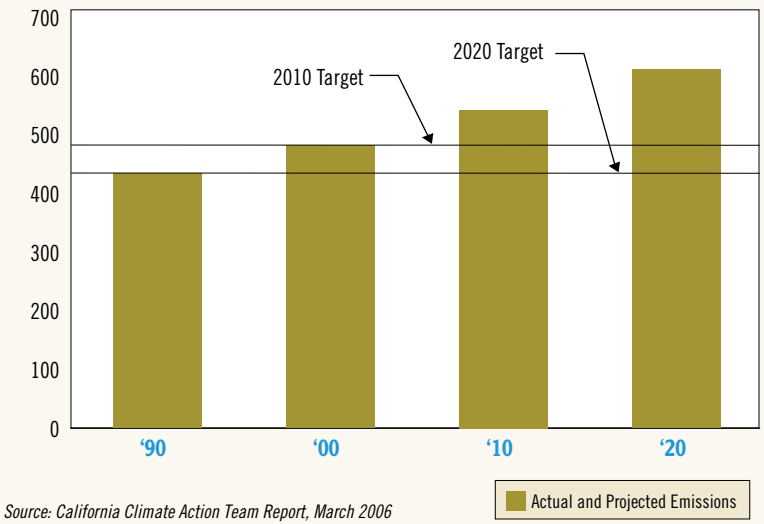
- By 2010, reduce emissions to 2000 levels;
- By 2020, reduce emissions to 1990 levels;
- By 2050, reduce emissions to 80 percent below 1990 levels.

In addition, state legislation AB 32 - California Global Warming Solutions Act passed into law in 2006 that also required the California Air Resources Board to adopt the statewide greenhouse gas emission limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020.

Among the climate change pollutants resulted from California's economic activities, 81 percent are $CO_2$ emissions from fossil fuel combustion (Figure 70). In addition, non-fossil fuel sources produced 2.3 percent of the total pollutants mainly due to cement production. Methane ($CH_4$) accounted for 6.4 percent of the total pollutants generated primarily from landfills, enteric fermentation and manure management. Nitrous Oxide ($N_2O$) accounted for another 6.8 percent largely due to mobile source combustion and agricultural soil management. Finally, other gases with high global warming potentials (GWP) accounted for the remaining 3.5 percent. These high GWP gases include use of substitutions of other gases (hydrofluorocarbons or HFCs) for ozone-depleting gases, electricity transmission and distribution (Sulfur Hexafluoride or $SF_6$), and semiconductor manufacturing (perfluorocarbons or PFCs and $SF_6$). It should be noted that the percentages of climate change pollutants associated with each gas were generally stable over the 1990 to 2002 period, except that the high global warming potential gas percentage rose somewhat.

Figure 69

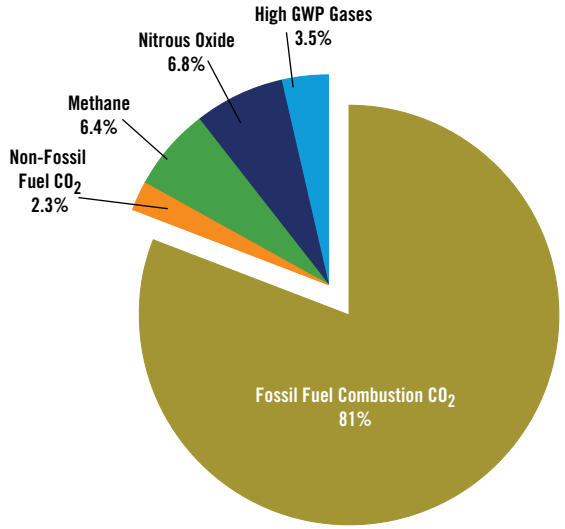
**California Climate Change Emission Trend and Reduction Targets**
Million Metric Tons ($CO_2$ Equivalent)




*Source: California Climate Action Team Report, March 2006*

Figure 70

**California Composition of Gross Climate Change Pollutants, 2002**




**GWP: Global Warming Potential*

*Source: California Climate Action Team Report, March 2006*

Among the different sectors in California, transportation is the largest source (41.2 percent) of climate change emissions followed by the industrial sector (22.8 percent). Electricity production, from both in-state and out-of-state sources, was the third largest source at 19.6 percent. The SCAG region is likely to have the similar pattern as the state.

# THE ENERGY DETENSIVE ECONOMY: CHALLENGES AHEAD FOR LOCAL GOVERNMENT

BY RONALD R. COOKE

## Introduction

Our local City Council recently held a public policy workshop on community development. After a brief introduction, attendees were divided into groups of 10 to 12 people and given the task of making a list of desirable land use priorities, community amenities, and development styles for our growing City. When we re-assembled, our lists were read to the audience. The results were remarkable. Along with the usual concerns about density, traffic and housing, there emerged a genuine apprehension about the consumption, cost and environmental impact of energy. Attendees believed community leaders are not giving sufficient consideration to energy in the local decision making process.

They are not alone. Energy has become a hot topic all over America. Thus far our lifestyle has assumed the *intensive* use of low cost and readily available energy. But we have now entered the age of the *energy detensive economy* – further economic growth will be interdependent with alternative forms of energy as well as increased energy efficiency and conservation. The focus of daily life will shift to the prudent use of a higher cost commodity.

Energy is becoming a strategic issue for local government. For example, the Portland, Oregon City Council has established a task force to assess the impact of energy resource depletion on 14 topics including Transportation, Land Use, Local Economy, Public Services, and Communication.[1] Denver, Colorado, co-sponsored a Conference on Peak Oil, and has launched Greenprint Denver to promote the importance of sustainable development and ecologically-friendly practices throughout the community. Greenprint policy objectives include energy efficiency in the private sector, increased public transit access and use, transit-oriented development, bike and pedestrian enhancements, energy-efficient affordable housing, and the construction of solar and methane power plants.[2]

*Energy has also become a key issue for environmentalists. Community leaders are being challenged.*

Local government can no longer make policy decisions based on the obsolete assumption we will always have abundant quantities of affordable energy.

## The Reality of Depletion

One vital reason can be summed in two words – oil depletion.

Much has been written about "Peak Oil". Many have tried to estimate the date when world oil production will peak and then begin to decline, causing chronic shortages and sharply higher prices. Most projections range from 2005 to 2025. Although the specific date may be speculative, the underlying facts are not. For more than 20 years, we have been using oil faster than we can find it.[3] US oil production peaked over 35 years ago. The decline of production is irreversible in 33 of the largest 48 producer nations. New discoveries in 2004 and 2005 were woefully inadequate. Consumption now exceeds new discoveries by more than 2:1. In order to sustain the world economy, exploration and production companies must add at least 350 Bbl (Billion barrels) of oil to the world's reserves between 2005 and 2024. Despite sharp increases in exploration, and the utilization of the best available technology, few believe we can achieve this goal. At some point in the near term future, the demand for oil will exceed the supply of oil.

*That's a fact.*

Furthermore, we need to distinguish between conventional crude oil and non-conventional oil. Conventional crude oil, together with Natural Gas Liquids from the same geologic structures, is typically found under land or shallow water, and constitutes over 90 percent of the oil we have used in the past. Unfortunately, much of the oil we have been using has come from a relatively small number of aging "super" fields. Many are in decline. Going forward, we will have to place greater reliance on non-conventional oil – oil derived from

deep sea resources, tar sands, polar wells, and so on – for an increasing percentage of the oil we use. It will be more expensive to find, produce, and transport this oil to the refinery. Much of it will be more costly to refine.

Political stability in the Middle East, Africa and South America is also a critical element of future oil production. Most of the world's known oil reserves lie within these geographic areas. Unfortunately, although Saudi Arabia has huge reserves of oil, its ability to provide a buffer for world oil stocks is almost gone. Iraq and Iran are embroiled in conflicts that may disrupt oil production, and sporadic conflict is not uncommon in Africa. Thus, even if depletion were not a factor in the oil market equation, the vulnerability and unpredictability of oil production will make it impossible to always balance supply with demand. Price volatility and sporadic shortages are inevitable.

Yes. There is more oil beneath the surface of our planet. But we are in a trap. We have used up most of the easy-to-get low cost oil. Resource nationalism exists. World oil has thus transitioned from a market driven by consumer demand to one limited by producer capacity. As a result, oil exporting countries are now able to control the price and the availability of an increasingly scarce commodity.

What happens when available oil production is no longer able to provide 40% of our total energy and 99% of our mobile fuels? The existing cost, mobility, and energy content of oil can not be duplicated by any known technology or natural resource. That means it is highly likely we will experience the economic and cultural impact of Peak Oil before we reach that magic date.

*It's time to face reality.*

### California Is On A Collision Course

According to the Energy Information Administration (EIA), California is the second largest consumer of energy in the nation. It ranks 4th in both crude oil reserves and crude oil production. California is the largest consumer of gasoline, and 2nd in distillate and jet fuel consumption. California has the third largest refining capacity in the nation.

We have developed our economy, and our lifestyle, on the basic assumption of unrestricted energy consumption.

Unfortunately for Californians, annual crude oil production peaked in 1985 at 394 million barrels. By 2005 in-State oil production had declined by 42 percent. To make up the difference, we Californians increased our oil imports from 50 million barrels in 1994 to more than 250 million barrels in 2005. We now depend on foreign suppliers for more than 42 percent of our oil, and that percentage is growing.

*Rapidly.*

So what does this all mean? Whether or not your gas station has enough gasoline or diesel fuel to sell depends on two factors:

- the outcome of events now unfolding in Alaska, California, Saudi Arabia, Ecuador, Iraq, and Canada which supply California refineries with most of the oil we process, and
- whether or not California can secure additional oil, gasoline, and diesel supplies from in-State, North American, or foreign resources.

Since there are severe limitations on the development of new in-State or North American oil resources, we Californians – like our counterparts in the other 49 States – will have to *compete* for declining oil resources in a world commodity market characterized by highly volatile prices and the constant threat of sporadic shortages.

*So let us summarize where we are.*

We Californians are planning to consume increasing quantities of a commodity that may, or may not, be available, at a price that many of us will not be able to afford. Does this make any sense?

But wait. California's energy challenges go way beyond oil. Consider these excerpts from the California Energy Commission's 2005 Integrated Energy Policy Report:

- "California is the sixth largest economy in the world. To meet the needs of its growing population, California's economy depends upon affordable, reliable, and environmentally sound supplies of electricity, natural gas, and transportation fuels. The challenge for California's policy makers is to manage an energy sector that is increasingly dependent on oil and natural gas and may face spiraling energy prices, potential supply shortages, and an inadequate and aging energy delivery infrastructure."
- "Despite improvements in power plant licensing, enormously successful energy efficiency programs, and continued technological advances, development of new energy supplies is not keeping pace with the state's increasing demand (for electricity)."

- " In the transportation sector, California's refineries cannot keep up with the mounting need for petroleum fuels and consequently depend upon increasing levels of imports to meet the state's needs. California also imports 87 percent of its natural gas supplies, which are increasingly threatened by declining production in most U.S. supply basins and growing demand in neighboring states."

- "As the state's demand for electricity increases, California could face severe shortages in the next few years. ……."[4]

The California Energy Commission's report contains some very chilling commentary. California is definitely on a collision course with an energy crisis. It's our inevitable destiny. We can no longer automatically assume we will have enough affordable energy to fuel our cars and trucks, heat and cool our homes, power our appliances and lights, or refrigerate and cook our food.

Welcome to the realities of the 21st Century. Thus far, we appear to be on a course not unlike the oil *Production Crisis* described in my book.[5] Periods of surplus alternate with intervals of shortage. Although prices remain volatile, they inevitably increase over time. Shortages and higher prices are recessionary. Unemployment and inflation increase while GDP declines. The opposite trend occurs when there is a surplus of oil (assuming no other contravening problems) because the world economy is able to recover. On the other hand, a scenario similar to the book's *Political Crisis* is also entirely possible. The social chaos of a Political-Security crisis would be immediate and devastating. Fuel shortages and price shocks, added to existing vulnerabilities in our economy, could trigger a depression. Urban families, particularly those whose income depends on driving great distances each day, will be more affected than rural families. Government reaction will necessarily focus on welfare and social services.[6]

But we need not be entirely pessimistic. We can avoid catastrophic change. Read the report by Robert L. Hirsch et al. for the Department of Energy (DOE)[7]. I present two key points from this excellent effort:

- "Intervention by governments will be required, because the economic and social implications of oil peaking would otherwise be chaotic. The experiences of the 1970s and 1980s offer important guides as to government actions that are desirable and those that are undesirable, but the process will not be easy."

- "Prudent risk management requires the planning and implementation of mitigation well before peaking. Early mitigation will almost certainly be less expensive than delayed mitigation."

Unfortunately, our civic institutions are ill-prepared to deal with the inevitable dislocation of declining energy resources. We continue to make planning decisions that encourage the intensive use of energy. Clogged freeway lanes, deficient public transportation, far distant suburbs, alienated shopping centers, and a frenetic lifestyle are the result. But it is time to face the inevitable. Community leaders and ordinary people must contemplate a basic question: Should we continue to assume a "business as usual energy intensive lifestyle for as long as possible (and thus risk a cataclysmic collapse), or should we take pre-emptive measures designed to ease the transition to an energy detensive society?

Our mechanized civilization has embraced the assumption we will always have unlimited quantities of affordable energy. But California can not drill its way out of the pending energy crisis, it can not isolate itself from world oil and natural gas markets, and it can not depend on technology to solve all of its problems. Yes. We all champion alternative energy solutions. And a few of them – like solar energy - hold great promise. But *none* of the proposed alternative energy solutions will provide sufficient energy to provide more than a fraction of the fuels and electricity we will need to sustain our *current* lifestyle.

*That means our lifestyle has to change! Along with essential elements of our culture.*

And that brings us to the real focus of this essay: what can local government do to help us through our pending energy crisis? What is the role and responsibility of municipal, county, and Regional political structures? Is local government obliged to develop a pro-active strategic community plan to manage the challenges that lie ahead?

*Yes. And the sooner, the better.*

## The Role of Local Government

An energy crisis will create significant challenges for local government. As we switch from cheap oil and natural gas to alternative energy resources, people within the SCAG region will soon discover there is insufficient energy to sustain their current lifestyle. If natural gas and propane become sufficiently

expensive - or unavailable - some will switch to wood and coal to heat their homes and cook their food. Increasing rates of inflation and unemployment will stress the welfare system. Constituents are not going to be happy about the loss of personal mobility, chronic shortages, insidious inflation, or declining employment opportunity. Expect a larger percentage of the population to fall below the poverty line. The declining availability of personal transportation, coupled with economic constraints, ensures that access to adequate health care will deteriorate. People will expect government to do more than it is logistically or financially capable of doing. Frustration will lead to a decreased commitment to diversity, social conflict on the streets and increased rates of crime.

So. What can local government do? We can moderate these risks. We can assume an energy detensive economy will drive social change, increasing the demand for social, medical, and community services. We must be willing to innovate a new model for the management and delivery of these services.

***First.*** Community leaders and local government staff must become thoroughly familiar with the energy issues that confront us. No sugar coating. No promises we can not keep. In particular, we must be sure we understand the ramifications of oil depletion because they underlie the inevitable conflict over personal mobility, how we heat our homes, and pay our bills. Attend lectures, conduct discussion groups, read books and browse the Internet for information. Make sure everyone participates. Ignorance makes poor decisions.

***Second.*** One of the most important jobs of local government will be communication. Lectures, conferences, books, visual media and printed materials must be available. The local library system must become a focal point of local communication. Again. Tell the truth. Many constituents will not understand the cause of their dislocation. Hence, one can expect opposition to government's response if it is not well explained.

***Third.*** Evaluate local government's response. SCAG's Regional Comprehensive Plan, and Local Government General Plans, can play an important role in initiating projects and programs, removing obstacles to energy conservation and efficiency initiatives, creating incentives for shared and public transportation, managing transportation pools, establishing self-sufficient neighborhoods, and fostering an environment of cooperation, experimentation, and urgency. Make sure both plans reflect the new energy reality. Every item must be examined. Does it assume unlimited quantities of cheap energy? If so, change it. Focus on the local economy. Make sure each planning decision will support the community in an energy detensive environment. Assume constituents will have to make lifestyle changes. Understand that Local and Regional government planning challenges and concerns will be substantially altered by trends in the availability and price of oil and natural gas. Issues of interest in 2006 will be supplanted by a wide range of new land use, service, and transportation demands by 2016. Re-evaluate land use policies. Key issues include: urban growth boundaries, integrated communities, residential density, localization of shopping, senior care and medical facilities, affordable housing, and personal versus public transportation options.

***Fourth.*** Local community organizations will need to step up and assume responsibility for many social and logistical services. Our culture has made a huge mistake. We have replaced much of the work that used to be done by local

charity organizations with officious government programs. We must reverse this process. Make sure civic groups, fraternal organizations, and religious institutions become part of the solution by tasking them to fund, staff and execute specific responsibilities. Encourage volunteer groups who agree to provide support to the infirm and elderly, educate and assist home owners with energy efficiency improvements, manage ride sharing and home delivery networks, develop community gardens, and so on. Don't get in the way. Avoid well-meaning regulations that discourage localization initiatives or the creation of neighborhood communities. Residents within the SCAG area can, and should, make a positive contribution to the needs of their own neighborhood community.

***Fifth.*** Create a strategic plan to identify, develop, and initiate appropriate responses to the energy challenges that lie ahead. Organize the plan around specific desirable outcomes. Set five, ten and 15 year objectives. Assign responsibilities. Recognize government will not be able to do everything that needs to be done. Create a dialogue among neighbors for their mutual support. Neighborhood Communities must learn self sufficiency.

***Sixth.*** Be sure there is a group within the SCAG organization that has the authority, mission and responsibility to drive the implementation of the strategic plan you create.

*Yes. We know the world is changing. We must change the way we see the world.*

## Actionable Response

SCAG and Local Governments can prepare for the inevitable energy challenges that lie ahead. Here are three key concepts.

### *The Neighborhood Community*

We have developed a culture around the assumption that large institutions operate as highly centralized organizations. Implicit in this concept is the use of vehicles to move people and things between a centralized core facility and a remote point of need. We must rethink our assumptions about community organization. We must replace the existing neighborhood model, which is often merely a collection of unrelated people who seldom talk with each other, with a working community of neighbors who work together to create a better life for themselves. The Neighborhood Community must become the focal point for local government operations. Although most urban areas already

have nascent Neighborhood Communities, suburban and rural parts of the SCAG region will need to develop these centers from scratch. Establish multiuse centers for every identified neighborhood. Here one can find a transportation center, local retail stores, personal and financial services, emergency and in-home medical facilities, child care for working moms, support programs for teens and seniors, library and communication services, and local government representation. People must be encouraged to take care of themselves within a group activity environment. Individuals become stakeholders with an interest in the outcome of daily operations. Encourage local groups to play a greater role in the provision of neighborhood services and support. For individual participants, the Neighborhood Community provides a frame of reference, serves as a surrogate extended family, reinforces peer group social values, and conveys a sense of emotional security.


### *Transportation*

When I was a kid, I could walk or ride a bicycle to almost everything I needed – the market, clothing store, barber shop, movies, school, bus station, and so on. Relocalization into Neighborhood Communities will encourage walking and bicycling. Accelerating fuel prices, will encourage a shift from personal vehicles to carpooling and public transportation. This suggests Governments must refocus their transportation capital expenditures from personal vehicles to public transportation systems, and the support of multi-occupant carpooling programs. It's time to get serious about *interconnected* light rail, railroad, local shuttle, express and mini-bus services. Let local entrepreneurs experiment with ride sharing options to complement the fixed route public transportation system.

If we do not have a debilitating oil shortage that will *force* dramatic changes in how we use transportation, and if we are willing to accept the transformation depletion will impose of our collective lifestyles, then the goals set forth in the following Exhibit are entirely realistic. By the end of 2011, people within the SCAG region would essentially return to the transportation profile they had in 2000. By 2016, driving alone would be reduced by 30 percent. Every Neighborhood Community must have its own public transportation center for transit stops and the coordination of local carpooling programs.

Exhibit 1

**SCAG Region Transportation Modes** (How Do We Get To Work?)

| | 2005 | 2011 | Change vs. 2005 | 2016 | Change vs. 2011 | Change vs. 2005 |
|---|---|---|---|---|---|---|
| Carpooling* | 11.4% | 14.3% | 25.4% | 18.0% | 25.9% | 57.9% |
| Public Transit ** | 4.5% | 6.0% | 33.3% | 10.5% | 75.0% | 133.3% |
| Walked | 1.9% | 2.5% | 31.6% | 3.6% | 44.0% | 89.5% |
| Work at Home | 4.2% | 7.0% | 66.7% | 12.0% | 71.4% | 185.7% |
| Drive Alone | 76.7% | 68.5% | -10.7% | 53.9% | -21.3% | -29.7% |
| Other Means | 1.3% | 1.7% | 30.8% | 2.0% | 17.6% | 53.8% |
| **TOTAL** | **100.0%** | **100.0%** | | **100.0%** | | |

** Carpooling is 2 or more persons per vehicle.*

*** Excludes Taxi Cab, includes minibus in 2016*

*Data excludes persons living in an institution, military base, or dormitory.*

The upside of meeting these goals is that people within the SCAG region would reduce their fuel demand by more than 2.5 million gallons per day, and vehicle emissions by 20 to 25%. Traffic congestion would sharply decrease. The downside has to do with lifestyle: greater use of public transportation and carpooling means we better plan to live closer to where we work.

### *Land Use, Zoning and Building Codes*

Local governments must review their land use, zoning and building codes with one specific question in mind: does each code optimize the consumption of our energy resources? Energy intensive development must be replaced by energy *detensive* projects. It makes no sense to permit the development of *any* project that assumes the unrestricted use of affordable motor fuels. Zoning codes must focus on ending urban sprawl, the creation of Neighborhood Communities, encouraging mixed use projects, permitting home and community based businesses, altering road specifications to accommodate bicycles and pedestrians, and the generation of electricity from renewable resources. And we can no longer turn our noses up at the thought of converting sewage into fertilizer, re-using grey water for landscaping, or the creation of open spaces for community and private gardens. Property owners must be encouraged to participate in energy rating programs in order to reduce their consumption of electricity and fuels for heating and air conditioning. Remove the barriers to the use of new materials and construction techniques. Require all new construction to meet energy detensive guidelines.

For every planning decision, we must answer two simple questions. Where will we get the mobile, stationary, and heating fuels to sustain the proposed development? How do mass transit systems, electric power distribution, "green" building codes, and other energy considerations figure into the decision process? Our planning process, guidelines, and objectives must reflect the new reality of an energy detensive world.

*There is much to be done.*

## Conclusion

We are a voracious consumer of energy. We have developed an energy *intensive* economy and lifestyle. Our culture assumes energy will always be inexpensive and readily available. Our values, laws, regulations, social customs, ambitions, and social progress have been inexorably linked the ever-increasing consumption of coal, oil and natural gas. Material abundance and population growth mirror energy consumption. The freedom of personal mobility is ingrained into our psyche. These things, we believe, are a natural right.

*They are **not**.*

We are being challenged. We are challenged to change the way we think of energy. We will **not** be able to replace all of the oil and natural gas we use with alternative fuels. We will **not** have a "business as usual" future. We **do** have to change our economic system and social structure in order to deal with the realities of an energy constrained world. And we **will** transition to a more sustainable lifestyle.

Southern California is vulnerable to an energy shortage. A long term, forever, chronic, downtrend in energy consumption because it is no longer affordable or readily available is coming. We are going to learn to live in an energy *detensive* world. Our energy intensive lifestyle will give way to a daily routine that consumes *less hydrocarbon energy*.

*Detensive. This word describes our energy future.*

By the time you read this essay, the price of gasoline may be less than $2.50 a gallon, or it may be more than $4.00 a gallon. Short term fluctuations in price are to be expected. Although we can make the case that "Peak Oil" will not occur until after 2020, a dispassionate analysis of world events suggest it will happen much sooner. No matter what the timing, common sense dictates we must prepare for the inevitable. Local government can make a positive contribution to the successful creation of localized, self-sustaining, neighborhood communities; interconnected public transportation systems, and the development of an energy efficient infrastructure. Community leaders must be willing to challenge conventional wisdom with pro-active adaptation and practical flexibility. Existing assumptions, policies, codes and regulations may not be appropriate in an energy detensive world. We must be willing to review our infrastructure investment decisions within the context of an energy detensive environment and a genuine desire to work toward energy independence. Localization requires we pay attention to addressing a better balance between local jobs and housing. And finally - we must pro-actively include civic, fraternal, and religious organizations in our long term planning for community services.

*The sooner we start the review process, the greater our potential success.*

*Ronald R. Cooke*
*The Cultural Economist*

## Endnotes

[1]Portland's 93-page briefing book may be found at www.sustainableportland.org, or by doing an Internet search on "Peak Oil Task Force Briefing Book".

[2] Details on Denver's Greenprint agenda can be found at http://www.greenprintdenver.org

[3] We have also been using natural gas faster than we can find it since 1991.

[4] The full text of the California Energy Commission's 2005 Integrated Energy Policy Report is available on the Internet.

[5] If you want a better understanding of oil depletion and peak oil, most of the information you need can be found on the Internet. Start with my Blog at www.tce.name. Read my essays found in "Energy" and "Federal Energy Policy", browse through "The Oil Depletion Report", and then cruise through the WEB sites listed in the "Links Worth Exploring" sidebar of the Energy Blog. It's all free and most of the people who sponsor these sites are honest, thoughtful, straight-up individuals who happen to have a genuine concern about the future of the human race.

[6] On July 19, 2006, Federal Reserve Chairman Ben Bernanke commented that economic moderation "seems underway". Although high oil prices were a concern, and despite the fact the core rate of inflation had risen at an annual rate of 3.6 percent over the prior 3 months, future increases should be moderated by declining economic activity. Real GDP was projected to grow at a rate of 3.25 to 3.5 percent for 2006. Unemployment would be in the range of 4.8 to 5 percent. The Federal Reserve's projections, of course, assume the oil market will not be disrupted by a production or political crisis. That assumption will be critically tested before the end of 2007.

[7] *Peaking of World Oil Production: Impacts, Mitigation, and Risk Management,* published by the U.S. Department of Energy, National Energy Technology Laboratory, February 2005; Robert L. Hirsch, SAIC, Project Leader, Roger Bezdek, MISI, and Robert Wendling, MISI.

"Between 2003 and 2005, there were slight improvements in the math scores for the 7th graders in the region."

# QUALITY OF LIFE

## Education

*Why is this important?*

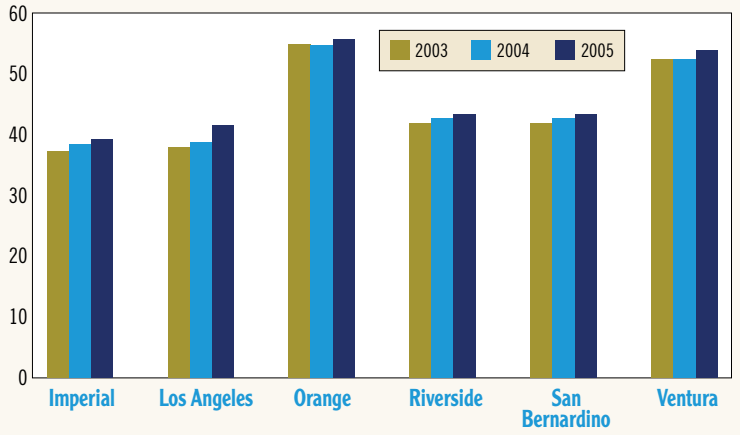
Student performance is measured through three indicators: 1) test scores for 7th graders, 2) high school dropout rates, and 3) percent of high school graduates completing courses required for the University of California (UC) or California State University (CSU) entrance. High school dropouts are severely disadvantaged in competing for quality jobs. Performance on the last indicator reflects the potential level of success in pursuing college education by high school graduates.

*How are we doing?*

Between 2003 and 2005, there were slight improvements in math scores throughout the region relative to the nation. As to the reading test scores, only Los Angeles County achieved some slight improvement during the same period. *In 2005, the 7th graders in the region continued to perform below the national median in reading and math test scores except in Orange and Ventura counties (Figures 71 and 72).* Test scores are affected by several factors including student/teacher ratio on which California continues to have the second highest in the nation. It should be noted that California ranked 44th in math at both 4th and 8th grades. It ranked 48th in reading at 4th grade and 49th in reading at 8th grade.[1]

Figure 71

**Math Test Scores for 7th Graders**
(National Percentile Rank of Average Student Score)




*Source: California Department of Education*

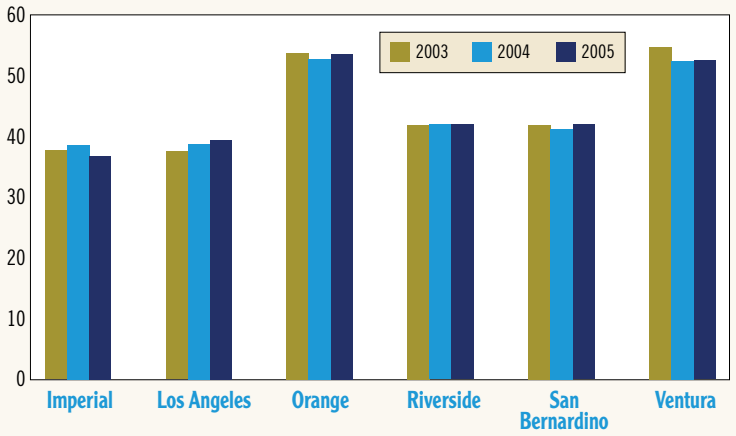
Between 2004 and 2005, dropout rates for high schools increased significantly in San Bernardino, Riverside and Ventura counties (Figure 73). *For San Bernardino County, its dropout rate increased continuously from about 12 percent during 2000-2001 to almost 20 percent during 2004-2005.* While Los Angeles County's dropout rate decreased from 19 to 15 percent, San Bernardino County had the highest dropout rate in the region in 2005.

The dropout rate declined slightly at the state level between 2004 and 2005. In 2005, both San Bernardino (20 percent) and Los Angeles (15 percent) counties experienced much higher dropout rates than the state average (13 percent). Within the region, Orange and Imperial counties achieved the lowest dropout rates at about 5 percent. Between 2000 and 2005, dropout rates in Orange County declined steadily. It should be noted that in the 2002-2003 school year, the California Department of Education started using the National Center for Education Statistics dropout rate criteria.

Figure 72

**Reading Test Scores for 7th Graders**

**(National Percentile Rank of Average Student Score)**

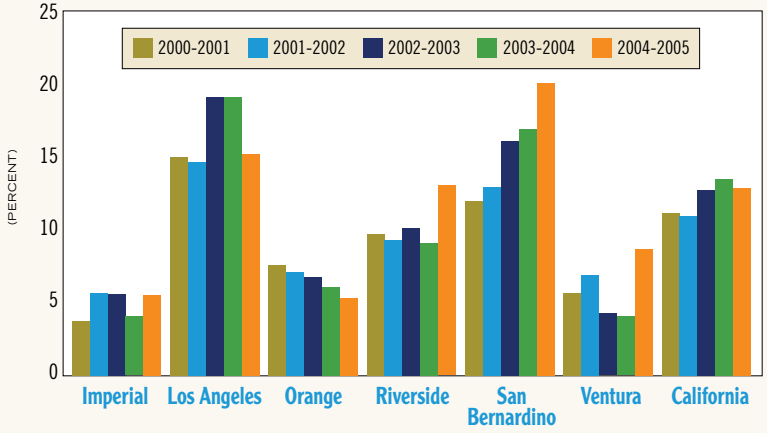



*Source: California Department of Education*

African American and Hispanic high school students across the region, when compared with their White and Asian peers, had significantly higher dropout rates (Figure 74). The disparity was most pronounced in Los Angeles and San Bernardino counties. For example, in 2005, the dropout rate for African American students in Los Angeles County reached 23 percent, and Hispanic students with 18 percent compared with 8 percent for non-Hispanic Whites and 5 percent for Asians.

Figure 73

**Dropout Rates in Public High Schools**




*Source: California Department of Education*

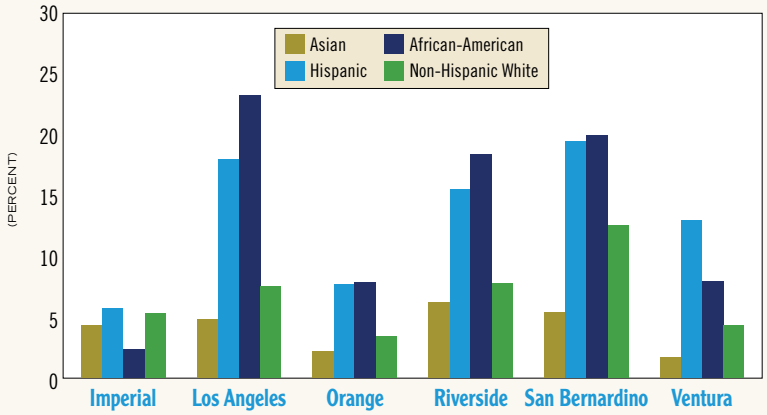
A recent national study found that socioeconomic status - which is based on parents' income and education – rather than race or ethnicity is the key indicator of dropout.[2] Specifically, African American and Hispanic youth are no more likely to drop out of high school than their white or Asian peers of similar family income and education. The higher percentage of African American and Hispanic students dropping out of high school is primarily because they are overrepresented in the lowest income groups. In addition, though many dropouts (close to 60 percent) eventually do earn a high school credential (in most cases a GED certificate), less than 10 percent earn a postsecondary degree.[2]

As to the percentage of high school graduates completing courses required for University of California (UC) or California State University (CSU) entrance, while Orange and Los Angeles counties made some progress in 2005, Ventura county experienced lower performance. When comparing 2005 with 2000, only Los Angeles, Orange and Imperial counties made some improvements. In 2005, every county in the region had less than 40 percent of high school graduates complete courses required for UC or CSU entrance (Figure 75).

There were also similar patterns of racial and ethnic disparities in the region (Figure 76). In each of the six counties in the region, Asian students consistently had the highest percentage in completing courses required for UC or CSU entrance, while Hispanic students consistently had the lowest. For example, while 60 percent of Asian graduates in Riverside County completed courses required for UC or CSU entrance, only 43 percent of the non-Hispanic White students, 29 percent of the African students and 26 percent of the Hispanic students achieved the same. Among Hispanics, two-year community colleges are the most frequently used institutions of higher education.

Figure 74

**Dropout Rates by Race/Ethnicity in Public High Schools, 2004-2005**

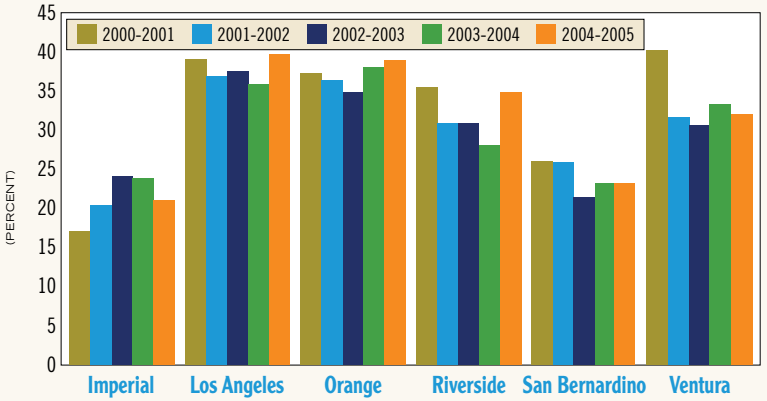



*Source: California Department of Education*

When compared with other states, California has one of the lowest percentages of high school seniors enrolling in 4-year colleges.[3] Factors contributing to the low performance of the state include, among others, lack of college preparatory curriculum along with teachers and counselors with adequate training.

Figure 75

**High School Graduates Completing Courses Required for UC or CSU Entrance**



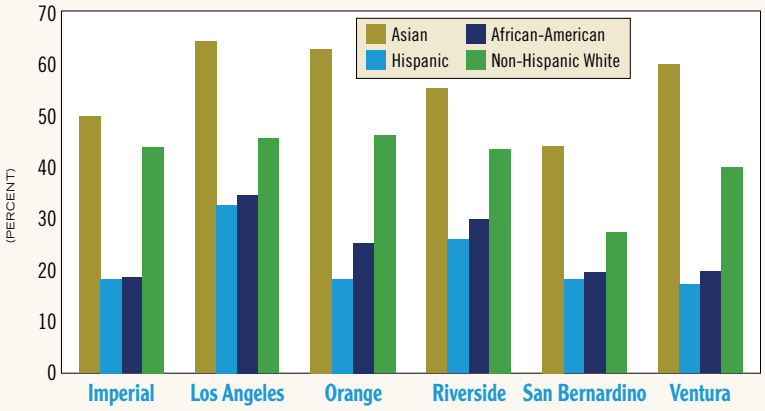

*Source: California Department of Education*

*Between 2000 and 2005, there were noticeable improvements in educational attainment in the region consistent with national trends. During this period, the percentage of adults with at least a high school degree increased from 74 to 77 percent while the percentage of adults with at least a bachelor's degree increased from 25 to 27 percent. Nevertheless, among the nine largest metropolitan regions,*

*the SCAG region remained in last place in the percentage of adults (77 percent) with at least a high school diploma, and for at least a Bachelor's degree (27 percent) (see Figure 90 page 155).*[4] San Francisco Bay Area had the highest percentage of adults with least a Bachelor's degree (41 percent) .

Figure 76

**High School Graduates Completing Courses Required for UC or CSU Entrance by Race/Ethnicity (2004-2005)**




*Source: California Department of Education*

Within the region and between 2000 and 2005, the costal counties generally achieved more improvements in educational attainment relative to the Inland Empire. For example, in Ventura County, the percentage of adults with at least a high school degree increased from 80.1 to 83 percent while the percentage of adults with at least a bachelor's degree increased from 26.9 to 29.8 percent. However, in San Bernardino County, the percentage of adults with at least a high school degree increased only from 74.7 to 75.9 percent while the percentage of adults with at least a bachelor's degree increased from 16.8 to 17.5 percent. In 2005, Orange County continued to have the highest percentage of adults with at least a bachelor's degree (34.9 percent), an increase of almost 3 percent since 2000. However, less than 12 percent of adults in Imperial County achieved the same.

## Public Safety

### *Why is this important?*

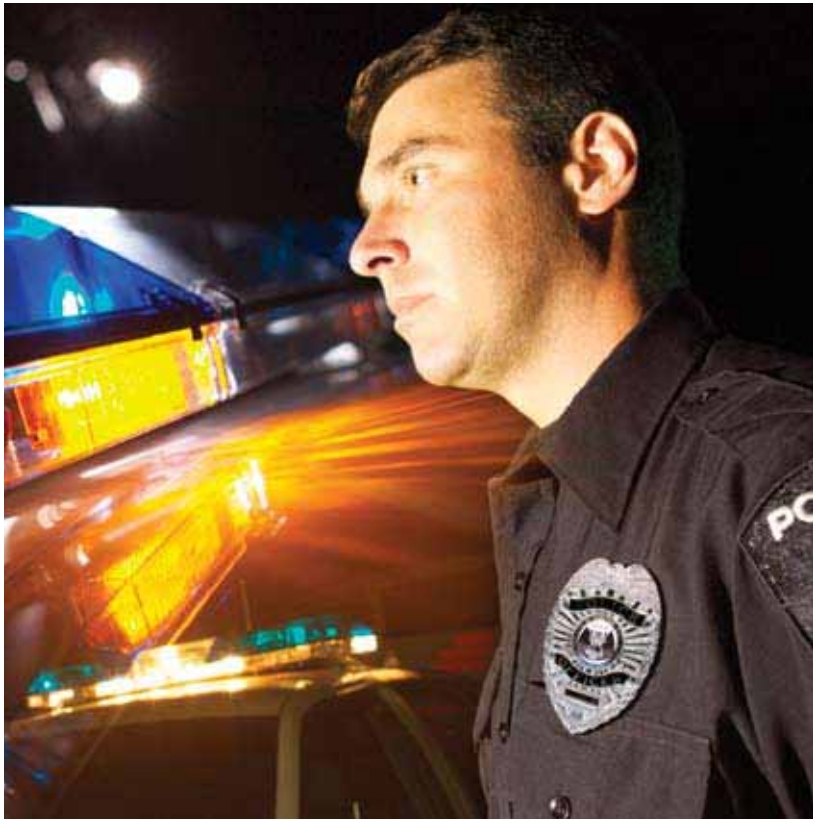
Crime-related activities consume an enormous amount of valuable social and economic resources. The social costs are substantial if less quantifiable, including pain and suffering of crime victims and their families and weakening of community cohesion. The economic costs include loss of productivity due to death or disability resulting from crime, medical costs, and loss of property values in neighborhoods with high crime rates.

*How are we doing?*

## Violent Crimes

In 2005, the violent crime rate in the region declined by almost 11 percent from 2004, larger than the 9 percent reduction during the previous period. At the state level, violent crime declined by about 5 percent between 2004 and 2005 (Figure 77). Violent crime rates in both the region and the state peaked in 1992 and have been declining since then, except for a slight increase in 2000. In 2005, violent crime rate in the region was less than 40 percent of the 1992 level. In addition, the gap between the region and the state in violent crime rates has been narrowing significantly. In 1992, the violent crime rate in the region was 30 percent higher than that in the state. In 2005, the violent crime rate in the region was only 3 percent higher than that in the state.

Violent crimes include four types: homicides, forcible rapes, robberies and aggravated assaults. In 2005, among the 96,140 violent crime incidents, 54,797 (or 57 percent) were aggravated assaults, 35,799 (37 percent) were robberies, 4,084 were forcible rapes (4 percent) and 1,460 (1.5 percent) were homicides. From 2004 to 2005, though the total number of aggravated assaults and forcible rapes declined, there were slight increases in homicide and robbery. During this period, the total number of homicides in the region increased slightly from 1,414 to 1,460. Los Angeles County continued to account for almost three-quarters of all homicides in the region.

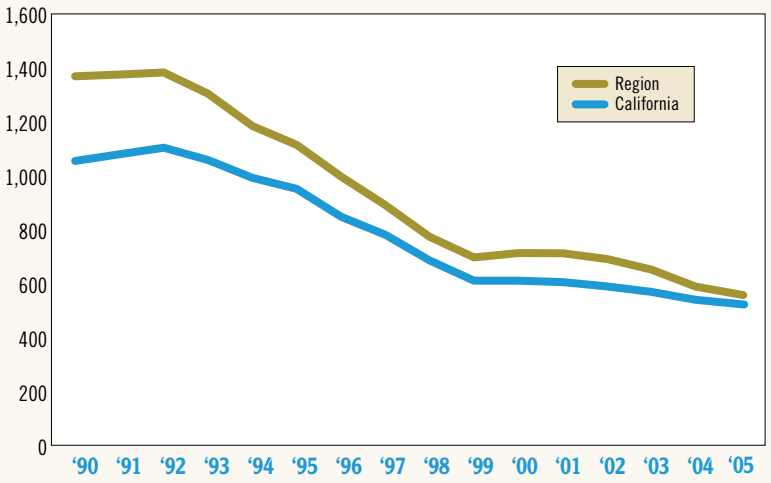


Within the region, Los Angeles County achieved the most significant reduction in violent crimes of 14 percent, followed by San Bernardino (-3.4 percent) and Riverside (-2.4 percent) counties (Figure 78). Imperial County, after a 14

percent reduction between 2003 and 2004, saw its violent crime rate increase by 11 percent in 2005. Violent crime rates also increased in Ventura County by almost 9 percent. Almost three-quarters of the violent crimes took place in Los Angeles County. Ventura and Orange counties consistently have the lowest rates of violent crimes in the region and among the large metropolitan areas in the nation (see Figure 91 page 156).

Figure 77

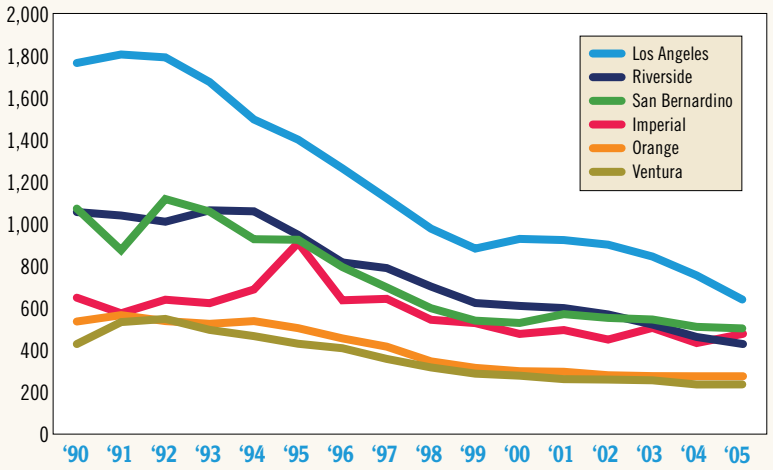
**Violent Crimes** (Per 100,000 Population)




*Source: California Department of Justice*

Figure 78

**Violent Crimes by County** (Per 100,000 Population)




*Source: California Department of Justice*

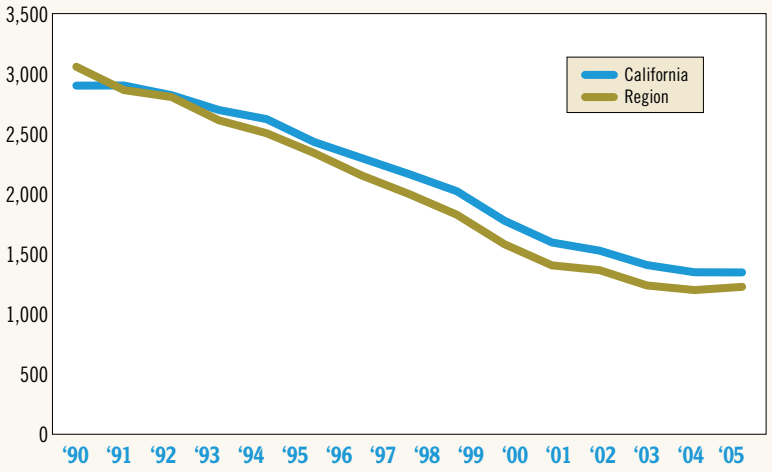
## Juvenile Felony Arrests

A juvenile felony offense is defined as a crime that is punishable by death or imprisonment for those aged 10 to 17. From 2004 to 2005, the juvenile felony arrest rate in the region increased by about 3 percent following a 2-percent increase in the previous period. This was in contrast to the trend of continuous decline between 1990 and 2003. Nevertheless, the juvenile felony

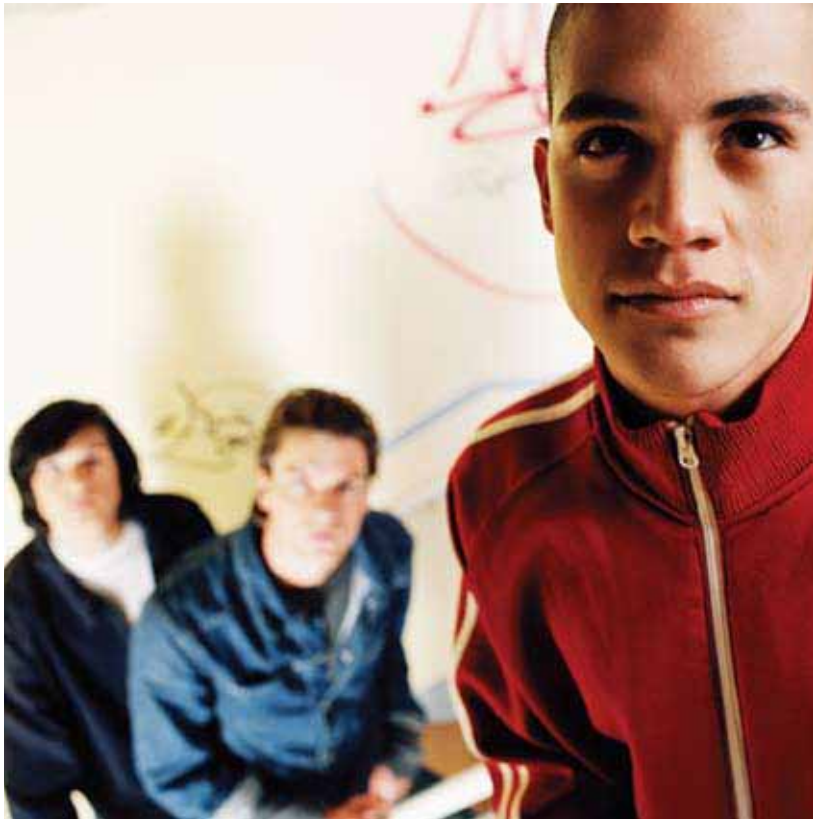
arrest rate in the region in 2005 was only about 40 percent of the 1990 level. At the state level, juvenile felony arrest rate increased slightly by 1 percent between 2004 and 2005 (Figure 79).

Figure 79

**Juvenile Felony Arrests** (Per 100,000 Population, Aged 10-17)




*Source: California Department of Justice*

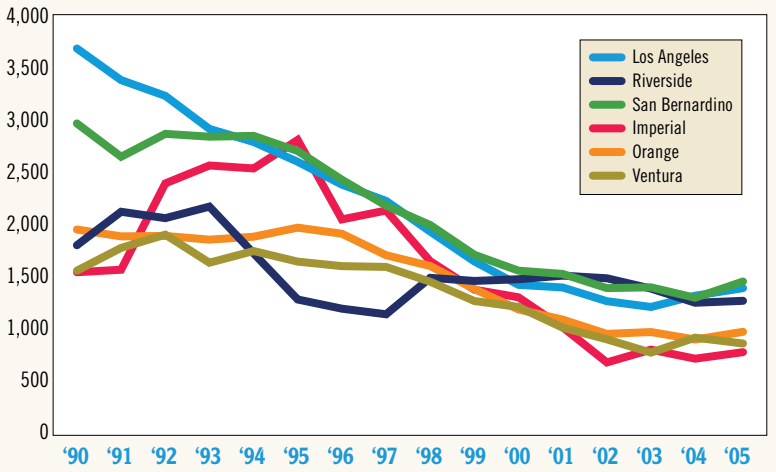


Within the region, juvenile felony arrest rates increased in Imperial (7 percent), Orange (5 percent), Los Angeles County (4 percent) and San Bernardino (3 percent) counties (Figure 80). Only Ventura (-6 percent) and Riverside (-3 percent) achieved reductions. Since 2000, Los Angeles, Riverside and San Bernardino counties have had higher rates in juvenile felony arrest than the other three counties (Orange, Ventura and Imperial).

In 2005, the region had 29,204 juvenile felony arrests. Among them, 5,675 arrests (or 19 percent) were for burglary, 5,207 arrests (18 percent) for theft (including motor vehicles) and another 4,446 arrests (or 15 percent) for assault. In addition, 3,173 arrests (or 11 percent) were for drug law violation. More than three quarters of the total juvenile arrests were males.

Figure 80

**Juvenile Felony Arrests by County** (Per 100,000 Population, Aged 10-17)




*Source: California Department of Justice*

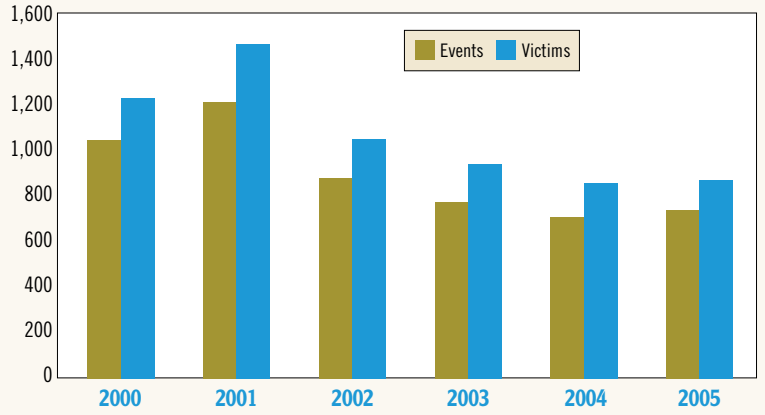
## Hate Crimes

Between 2004 and 2005, the number of hate crime events and victims in the region increased 4 percent and 2 percent respectively, reversing the trend of decline between 2001 and 2004 (Figure 81). Hate crimes can be in the form of violent crimes (65 percent) or property crimes (35 percent).[5] As to the motivations for hate crimes, statewide data indicated that about 66 percent of the events in 2004 were due to race/ethnicity/national origin bias followed by about 18 percent for sexual orientation bias and 15 percent for religious bias. About 30 percent of the hate crimes events took place around residences, another 27 percent on highways/streets, 11 percent in schools/colleges, 8 percent in parking lots/garages and 6 percent in churches/synagogues/temples.

The year 2001 was the peak year in hate crimes in the last five years due primarily to the September 11 terrorist attacks. Within the region, Los Angeles County experienced disproportionately higher hate crime incidences. For four consecutive years, about 70 percent of all hate crime events and victims were in Los Angeles County.

Figure 81

### Hate Crime Activities




*Source: California Department of Justice*

"In 2005, the standing of the SCAG region among the nine largest metropolitan regions remained essentially the same as in 2000 with respect to the basic socioeconomic well-being."

# METROPOLITAN REGIONS

In order to fully assess the progress of Southern California, it is useful to compare the performance of the SCAG region with other large metropolitan regions in the nation. Currently, there are nine metropolitan regions in the nation with more than 5 million residents (Figure 82). They are also designated by the U.S. Census Bureau as Combined Statistical Areas (CSAs).[1] Four are located in the Northeast (New York, Washington, DC, Philadelphia and Boston), two in the Midwest (Chicago and Detroit), one in the South (Dallas) and two in the West (SCAG region and San Francisco Bay Area). In 2005, only two had population exceeding 10 million, the New York region (21.9 million) and the SCAG region (17.8 million). Total population in the nine largest metropolitan regions exceeded 90 million in 2005, about a third of the nation's population.

## Socio-Economic Indicators

### Population Growth

Between 2000 and 2005, among the nine largest metropolitan regions, the SCAG region achieved the largest population increase of approximately 1.3 million people. Southern California also experienced the 2nd highest growth rate (7.7 percent) following Dallas (12.5 percent).

Figure 82

## Population by Metropolitan Region (Thousands)

| | | Population | | Population Increase | |
|---|---|---|---|---|---|
| | | | | 2000 - 2005 | |
| Rank | Metropolitan Region Name | 2000 | 2005 | Number | % Change |
| 1 | New York-Newark-Bridgeport, NY-NJ-CT-PA CSA | 21,361.8 | 21,903.6 | 541.8 | 2.5% |
| 2 | **SCAG Region*** | **16,516.0** | **17,785.4** | **1,269.4** | **7.7%** |
| 3 | Chicago-Naperville-Michigan City, IL-IN-WI CSA | 9,312.3 | 9,661.8 | 349.6 | 3.8% |
| 4 | Washington-Baltimore-Northern Virginia, DC-MD-VA-WV CSA | 7,572.6 | 8,125.7 | 553.0 | 7.3% |
| 5 | San Francisco-Oakland-San Jose, CA CSA | 7,092.6 | 7,168.2 | 75.6 | 1.1% |
| 6 | Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA | 6,207.2 | 6,372.8 | 165.6 | 2.7% |
| 7 | Boston-Worcester-Manchester, MA-NH CSA | 7,298.7 | 7,427.3 | 128.6 | 1.8% |
| 8 | Dallas-Fort Worth, TX CSA | 5,488.0 | 6,171.3 | 683.3 | 12.5% |
| 9 | Detroit-Warren-Flint, MI CSA | 5,357.5 | 5,428.0 | 70.5 | 1.3% |
| | **TOTAL** | **86,206.7** | **90,044.2** | **3,837.4** | **4.5%** |

** The SCAG region includes Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura counties.*

*With the exception of Imperial, the other five counties belong to the Los Angeles-Riverside-Orange Combined Statistical Area (CSA).*

*Source: U.S. Census Bureau, 2000 Census and July 1, 2005 population estimates*

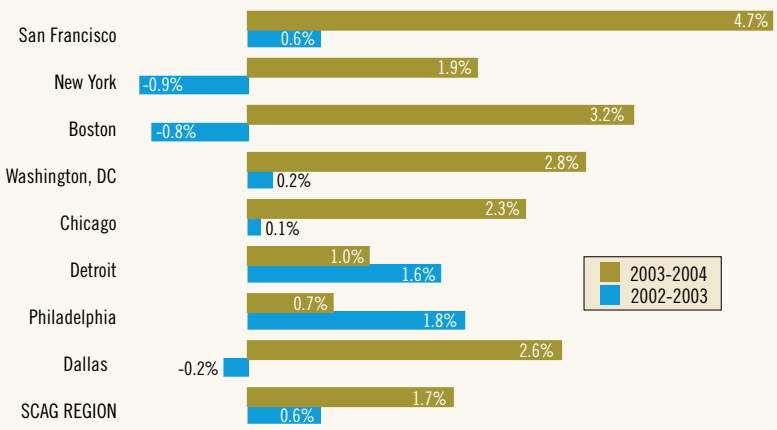
## Average Payroll Per Job

In 2004 (the most current official data available at the regional level), the average payroll per job in the region increased by 1.7 percent from the previous year after adjusting for inflation, following a modest improvement of 0.6

percent in 2003.[2] Between 2003 and 2004, each of the nine largest metropolitan regions achieved increases in their average payrolls per job in contrast to the previous period during which three regions suffered losses. The rate of increase in the SCAG region (1.7 percent) was slightly below the average of the nine largest metropolitan regions at 2.3 percent. The San Francisco Bay Area achieved the largest increase of 4.7 percent between 2003 and 2004, rebounding from a sharp decline of equal magnitude just two years ago.

Figure 83

**Average Payroll Per Job by Metropolitan Region**
(Percent Change)*

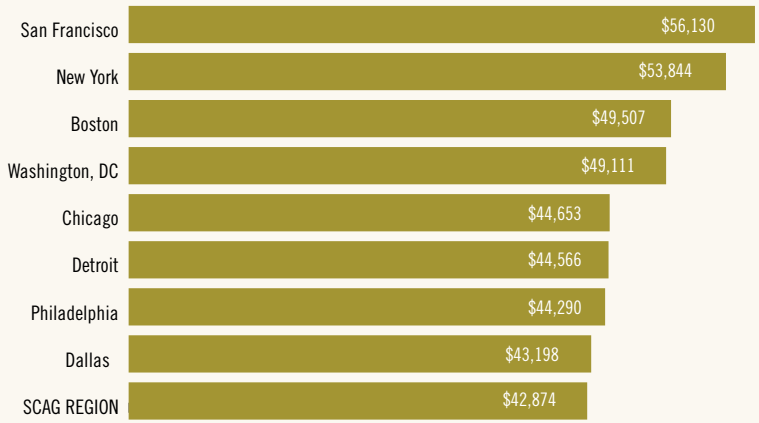



*With inflation adjustment based on the U.S. Bureau of Labor Statistics
Source: U.S. Bureau of Economic Analysis

The SCAG region in 2004 ranked last among the nine largest metropolitan regions in average payroll per job at $42,874. The San Francisco Bay Area continued to have the highest average payroll per job at $56,130 followed by New York. It is interesting to note that the nine regions fall into three tiers as to their average payrolls per job. The first tier includes the San Francisco Bay Area and New York regions with average payrolls per job above $53,000. The second tier includes Boston and Washington, DC regions with average payrolls per job just above $49,000. The third tier includes Chicago, Detroit, Philadelphia, Dallas and the SCAG region with average payrolls per job generally between $43,000 and $45,000.

Figure 84

### Average Payroll Per Job by Metropolitan Region, 2004



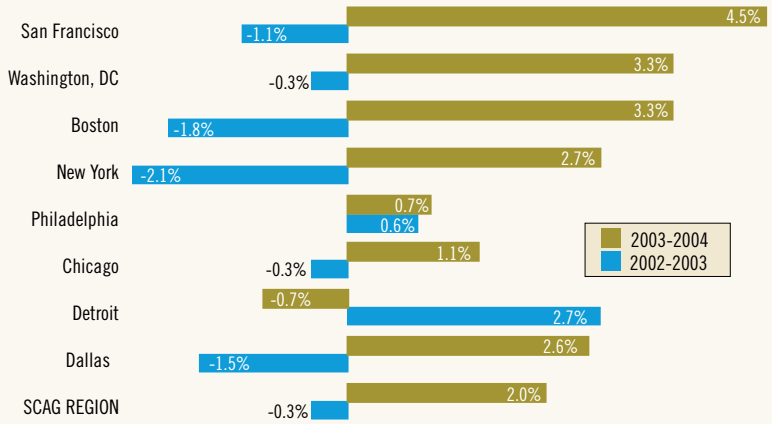

*Source: U.S. Bureau of Economic Analysis*

## Income

In 2004 (the most current official data available at the regional level), the region's real personal income per capita of $33,165 was a 2 percent increase from the 2003 level. This represented the first gain after two consecutive years of losses in real per capita income. Between 2003 and 2004, each of the nine largest metropolitan regions in the nation (except Detroit) experienced a significant recovery of their per capita income. Notably, the San Francisco Bay Area achieved an increase of 4.5 percent in its per capita income, rebounding from a 1.1-percent loss in the previous year. The SCAG region performed about the same as the average of the nine largest metropolitan regions in the nation. Data on per capita personal income in 2005 are still not available and are scheduled to be released in May 2007 by the U.S. Bureau of Economic Analysis. However, the SCAG region's per capita income is estimated to increase by approximately 1 percent or less from its 2004 level.

Figure 85

### Per Capita Personal Income by Metropolitan Region
(Percent Change)*

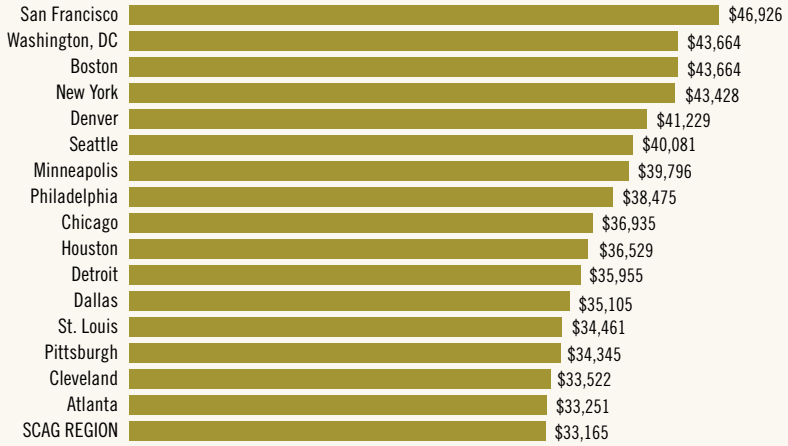



**With inflation adjustment based on the U.S. Bureau of Labor Statistics*
*Source: U.S. Bureau of Economic Analysis*

Among the 17 largest metropolitan regions in the nation, the SCAG region continued to rank last in terms of per capita income in 2004 and is estimated to remain there in 2005. Over the past three decades, the SCAG region's per capita income ranking dropped from the 4th highest in 1970 to 7th in 1990, and 16th in 2000.

Figure 86

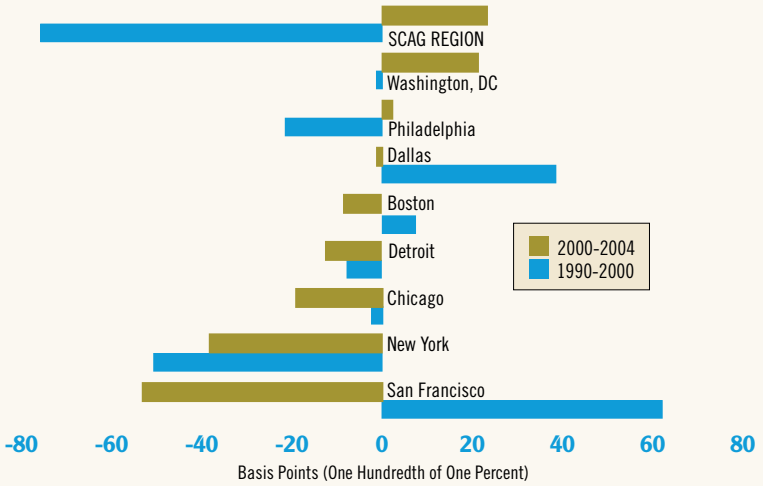
**Per Capita Income by Metropolitan Region, 2004**




*Source: U.S. Bureau of Economic Analysis*

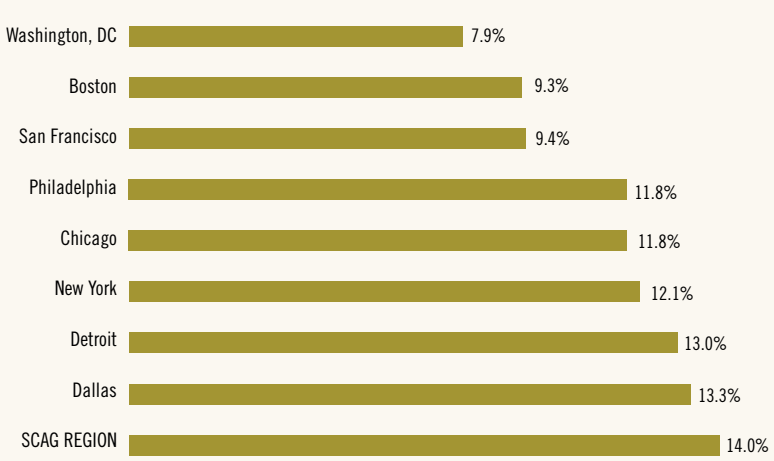
Between 2000 and 2004, the SCAG region performed at a better level in its growth of total personal income than the per capita personal income. During this period, SCAG region's share of the total personal income in the nation increased by 0.22 percent, followed by the Washington DC region (0.21 percent). Among the nine largest metropolitan regions in the nation, all the other seven experienced declining shares during the four year period. The San Francisco Bay Area suffered the worse performance with a sharp decrease of almost 0.53 percent in its share, while New York region experienced declines of 0.38 percent. However, during the 1990s, the SCAG region suffered the largest loss in its national share of 0.76 percent while the San Francisco Bay Area achieved the largest gain of 0.62 percent.

Figure 87




*Source: U.S. Bureau of Economic Analysis*

Figure 88




*Source: U.S. Census Bureau, 2005 American Community Survey*

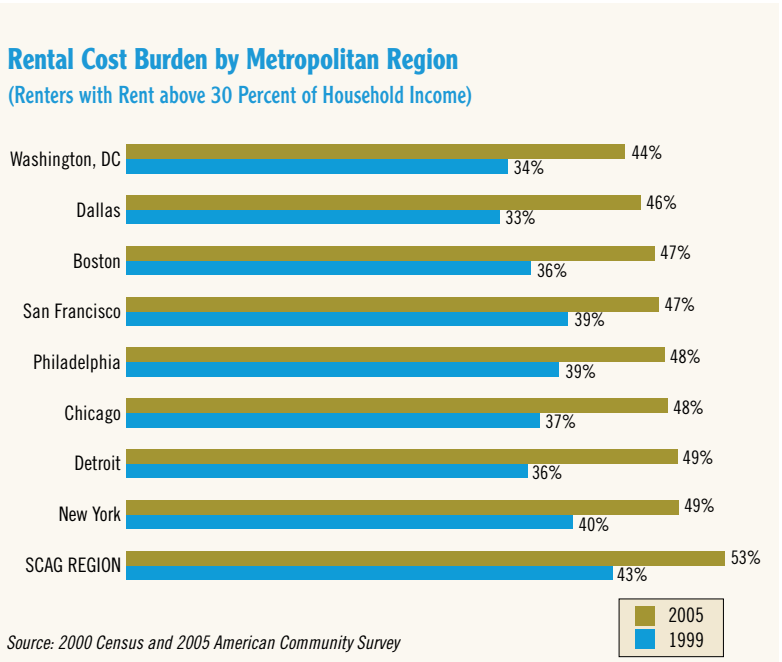
## Poverty

In 2005, the SCAG region continued to have the highest poverty rate (14 percent) for all people among the nine largest metropolitan regions in the nation followed by the Dallas region (13.3 percent), while the Washington DC region achieved the lowest poverty rate of only 7.9 percent.

## Housing

Among the nine largest metropolitan regions in the nation, the SCAG region continued to have the highest percentage (53 percent) of rental households with monthly rent at or greater than 30 percent of household income. Following the SCAG region was the New York region, with 49 percent of renters spending 30 percent or more of their incomes on rent.

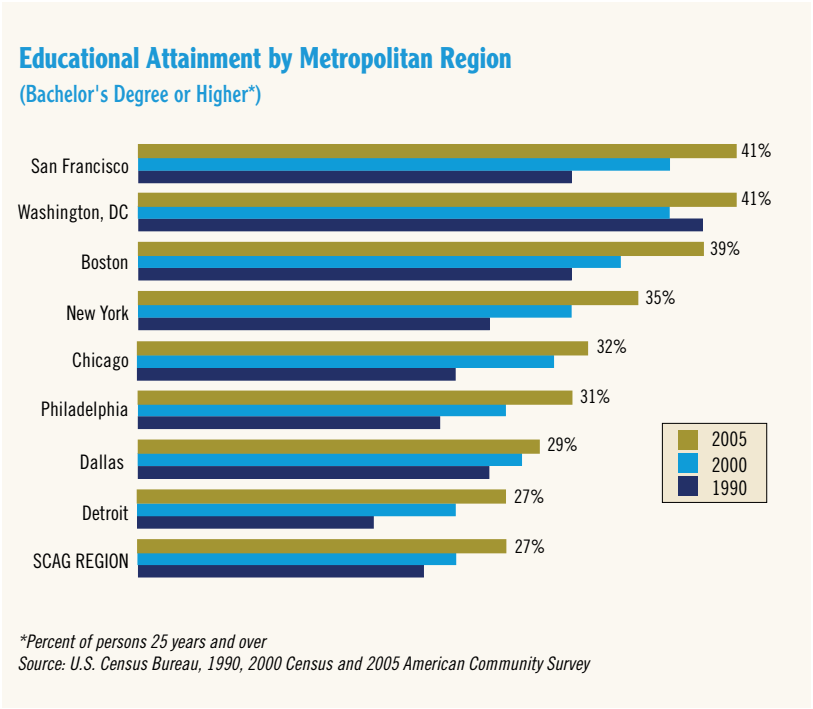
Figure 89




## Education

Between 2000 and 2005, there were noticeable improvements in educational attainment in the region consistent with the national trends. During this period, the percentage of adults with at least a high school degree increased from 74 to 77 percent while the percentage of adults with at least a bachelor's degree increased from 25 to 27 percent. Nevertheless, among the nine largest metropolitan regions, the SCAG region remained in last place in the percentage of adults (77 percent) with at least a high school diploma, and for at least a Bachelor's degree (27 percent). San Francisco Bay Area had the highest percentage of adults with least a Bachelor's degree (41 percent).

Figure 90

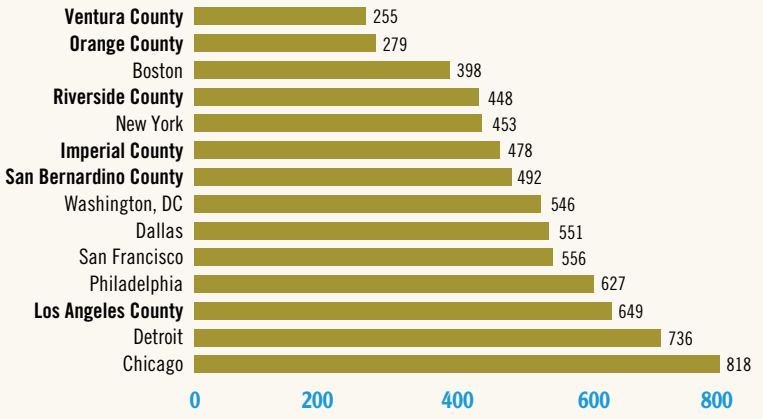


## Crime

Violent crime rates in Los Angeles County, though reduced by a half since 1990, were the third highest in large metropolitan areas in the nation following Chicago and Detroit. Orange and Ventura Counties had the lowest violent crime rates among the large metropolitan areas.

Figure 91

### Violent Crimes by Metropolitan Area, 2005 (Per 100,000 Population)




**Based on Metropolitan Statistical Area unless noted otherwise. Chicago data is based on Cook County data.*

*Source: FBI 2005 Uniform Crime Report; Illinois State Police 2005 Uniform Crime Report*

# Transportation

## Carpool Share of Commuting

Since 1980, carpool shares of commuting have generally been declining across the nine largest metropolitan regions in the nation (except between 2004 and 2005). The SCAG region has maintained the highest carpool share since 1990. In 2005, the SCAG region maintained the most extensive High-Occupancy Vehicle Lane (HOV) system, accounting for more than 20 percent of the total HOV lane miles in the nation. Between 1980 and 2005, the SCAG region experienced the smallest losses (4.5 percentage points) in carpool share of commuting while the other eight largest regions experienced an average loss of almost 9 percentage points.

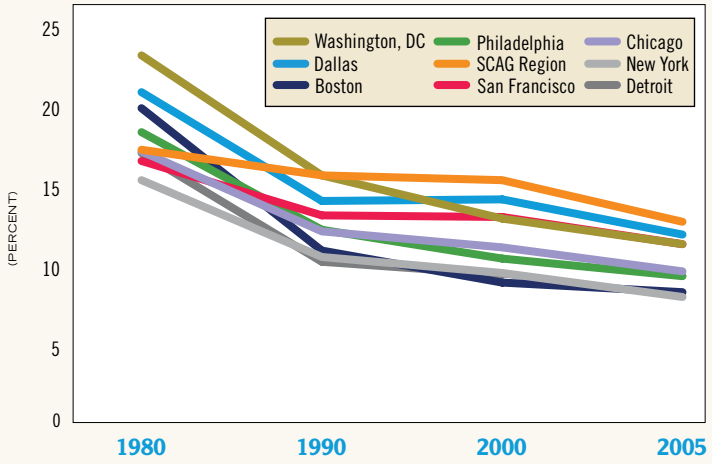
## Highway Congestion

In 2003, people traveling on the roadways in Los Angeles /Orange counties experienced a total of 93 hours of delay per person, the highest among the metropolitan areas in the nation.[3] Nevertheless, between 1993 and 2003, the congestion level stayed almost unchanged in Los Angeles/Orange counties while increasing significantly in other large metropolitan areas. In the Inland Empire, travelers experienced a total of 55 hours of delay per person in 2003, the ninth highest among the metropolitan areas in the nation.

Figure 92

### Carpool Share of Commuting by Metropolitan Region

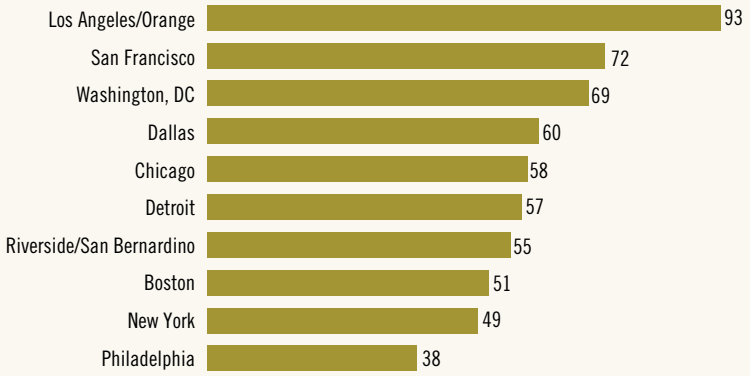
(Workers 16 Years and Over)




*Source: U.S. Census Bureau, 1980, 1990, 2000 Census and 2005 American Community Survey*

Figure 93

## Annual Hours of Delay per Traveler by Metropolitan Area, 2003

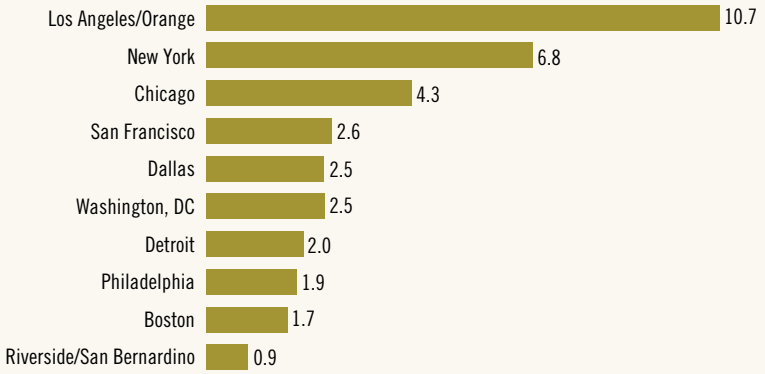



*Source: Texas Transportation Institute*

Figure 94

## Total Congestion Cost by Metropolitan Region, 2003

(Billion Dollars)

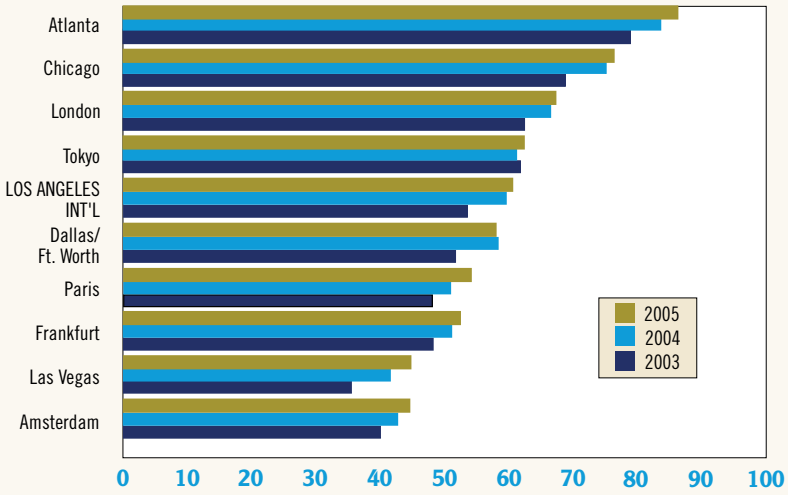



**Includes the costs from delay as well as additional fuels used.*
*Source: Texas Transportation Institute*

In 2003, total cost incurred due to congestion in the SCAG region was more than $12 billion, significantly higher than any other metropolitan area in the nation.[4]

Figure 95

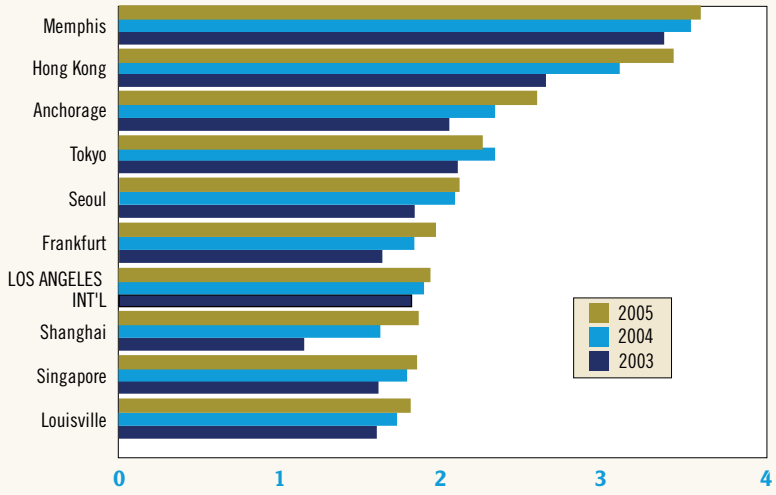
**Top 10 Passenger Airports in the World** (Total Passengers in Millions)




*Source: Airports Council International*

Figure 96

**Top 10 Cargo Airports in the World** (Cargo Volumes in Million Metric Tons)




*Source: Airports Council International*

## Airports

In 2005, among the ten largest airports in the world, LAX ranked 5th in passenger traffic behind Atlanta, Chicago, London and Tokyo.

LAX was the 7th largest cargo airport in 2005. In 2000, LAX ranked 3rd and has since been overtaken by Tokyo, Anchorage, Seoul and Frankfurt in total cargo volume.

# ENDNOTES

## Executive Summary

1. For more information about the SCAG Compass Blueprint (2% Strategy), please visit www.scag.ca.gov or www.socalcompass.org
2. For more information about the Regional Strategy for Goods Movement as well as SCAG's other planning initiatives and activities, please visit www.scag.ca.gov

## Population

1. In addition to domestic migration, the other two components contributing to population growth are natural increases (births over deaths) and net foreign immigration. Between 1990 and 2005, natural increases and net foreign immigration generally had much smaller year-to-year variations than domestic migration. Hence, the variations in domestic migration largely determined the fluctuation of annual population growth in the region.
2. U.S. Bureau of Labor Statistics.
3. California Department of Finance.
4. The 2005 State of the Region Report is available at http://scag.ca.gov/publications.
5. U.S. Census Bureau, 2005 American Community Survey.
6. Myers, D., Pitkin, J., & Park, J. 2005. *California Demographic Futures, Summary Report*. Population Dynamics Group, School of Policy, Planning and Development. University of Southern California.
7. Ramakrishnan, S. Kathick and Hans P. Johnson. 2005. *Second Generation Immigrants in California*, Public Policy Institute of California.
8. U.S. Census Bureau, 2005 *American Community Survey*.
9. Southern California Association of Governments, *2007 RTP Draft Integrated Forecast*.

## The Economy

1. U.S. Bureau of Economic Analysis. *Regional Economic Information System*.
2. Council of Economic Advisers. March 2006. *Economic Indicators*.
3. Cooper, James. *Business Week, Business Outlook*, April 17, 2006
4. Data on employment by sector discussed in this section are based on the *Labor Market Information* published by the California Employment Development Department.
5. Los Angeles County Metropolitan Transportation Authority. 2006. *Multi-county Goods Movement Action Plan, Draft Technical Memorandum 3: Existing Conditions and Constraints*.

6. Center for the Continuous Study of the California Economy, *California Economic Growth*, 2004 Edition, p. 8-8.

7. The 2005 average payroll per job information is based on data from the *Quarter Census of Employment and Wages*, California Employment Development Department.

8. Please note that the set of 17 largest metropolitan regions used in this report is different from that used in the previous State of the Region Report. Specifically, Minneapolis, St Louis, Pittsburgh and Atlanta have replaced Miami, Cincinnati, Portland and Sacramento to be among the 17 largest regions in the nation.

9. U.S. Census Bureau. *American Community Survey*, 2004 and 2005.

10. Ibid.

11. Southern California Association of Governments. *The State of the Region 2002*, p. 26, Figure 26, available: http://www.scag.ca.gov/publications/

12. Southern California Association of Governments. *The State of the Region 2004*, p. 35, Figure 23, available: http://www.scag.ca.gov/publications/

13. Southern California Association of Governments. *The State of the Region 2004*, p. 35-36, Figures 24 to 26, http://www.scag.ca.gov/publications/

14. U.S. Census Bureau. 2006. *Income, Poverty and Health Insurance Coverage in the United States: 2006*. Current Population Reports.

15. Ibid.

16. U.S. Census Bureau, *American Community Survey*, 2005.

17. All taxable sales data in this section are from the California State Board of Equalization.

18. Data on direct international trade employment are from the *International Trade Trends and Impacts, the Los Angeles Region*, published by the Los Angeles Economic Development Corporation in 2005. Direct international trade employment includes activities related to moving commodities in and out of the customs district and does not include any manufacturing activities.

19. Los Angeles Economic Development Corporation. 2005. *International Trade Trends and Impacts, the Los Angeles Region*.

## Housing

1. Los Angeles Times, July 20, 2006.

2. U.S. Census Bureau.

3. The Census Bureau has provided three sets of homeownership data for selected metropolitan/county areas with different temporal coverage: the decennial census, the annual American Community Survey (ACS) since 2000, and the Current Population Survey (CPS) since 1986. For a given metropolitan/county area, homeownership estimates may be different from different sources. It should be noted that the ACS homeownership estimates are generally somewhat lower than the CPS estimates at the national, state and county levels.

In the 2005 State of the Region Report, annual homeownership data was based on the CPS because it's the only source with annual data since 1990 for counties within the region except Imperial. However, beginning in 2005, the ACS includes homeownership data annually for each of the six counties in the region. The ACS also had a much larger sample size than the CPS. Hence, in the 2006 State of the Region Report, it compared the ACS data in 2005 and 2000, except for Imperial and Ventura counties for which the comparisons are between the 2005 ACS and the 2000 Census.

4. U.S. Census Bureau. American Community Survey, 2000 and 2005.
5. Ibid.
6. Ibid.
7. U.S. Census Bureau. American Community Survey, 2005.
8. California Center for Border and Regional Economic Studies. 2004. *Imperial Valley Housing Market: A Preliminary Analysis*. San Diego State University – Imperial Valley Campus.
9. Johnson, H. P., & Bailey, A. 2005. *California's Newest Homeowners: Affording the Unaffordable*. Public Policy Institute of California.
10. *Los Angeles Times*, July 20, 2006.
11. U.S. Census Bureau, *American Community Survey*, 2000, 2004 and 2005.
12. Ibid.

## Transportation

1. U.S. Census Bureau. *American Community Survey*, 2004 and 2005.
2. Ibid.
3. Orange County Transportation Authority. *2006 Long Range Plan*.
4. Federal Highway Administration. 2005. *An Initial Assessment of Freight Bottlenecks on Highways*.
5. Texas Transportation Institute (TTI). *2004 Urban Mobility Report*. Since the publication of the 2004 Urban Mobility Report in 2005, TTI has decided to delay its annual update until 2007. Hence, the 2004 Urban Mobility Report containing 2003 data was still the most current available with respect to comparison among the largest metropolitan regions regarding travel time index, average delay per traveler and total cost of congestion.
6. Federal Highway Administration. 2006. *Urban Congestion Report*.
7. U.S. Bureau of Transportation Statistics. *Transportation Statistics Annual Report 2004*.
8. National Highway Traffic Safety Administration. 2006. *2005 Traffic Safety Annual Assessment – Early Results*.
9. U.S. Bureau of Transportation Statistics. *National Transportation Statistics 2002*. p.148.

10. Ong, P. and Haselhoff, K. 2005. *Barriers to Transit Use*, Southern California Public Opinion Survey, SCS Fact Sheet, Vol. 1, No. 8, UCLA Lewis Center for Regional Policy Studies.
11. U.S. Census Bureau.
12. Southern California Association of Governments. 2004, *Destination 2030*, p.138.
13. U.S. Census Bureau.
14. Los Angeles Economic Development Corporation. 2006. *International Trade Trends and Impacts, the Los Angeles Region*.
15. Southern California Association of Governments. 2005. *Port and Modal Elasticity Study*.
16. Husing, J. E. 2004. *Logistics and Distribution: Answer to Regional Upward Mobility*.

## The Environment

1. California Air Resources Board. *The California Almanac of Emissions and Air Quality, 2006 Edition*.
2. The attainment schedules for various parts of the region include: Imperial County's portion of the Salton Sea Air Basin (June 2007), Ventura County (June 2010), Western Mojave Desert Air Basin (June 2010), Coachella Valley (Riverside County's portion of the Salton Sea Air Basin), and the South Coast Air Basin (June 2021).
3. South Coast Air Quality Management District.
4. Ibid.
5. Ibid.
6. Ibid.
7. California Air Resources Board. *The California Almanac of Emissions and Air Quality, 2006 Edition*.
8. Ibid.
9. Ibid.
10. Among the 19 $PM_{2.5}$ monitoring stations in the South Coast Air Basin, $PM_{2.5}$ samples were collected every day at 6 stations, every 3 days at 12 stations and every six days at one station.
11. South Coast Air Quality Management District.
12. SCAG staff estimates based on various water management plans in the region.
13. Metropolitan Water District, *2005 Urban Regional Water Management Plan*.
14. All beach closure data in this section are based on *Testing the Waters: A Guide to Water Quality at Vacation Beaches*, published by the Natural Resources Defense Council, 2006.
15. California Integrated Waste Management Board, available: http://www.ciwmb.ca.gov/Landfills/tonnage/

The CIWMB obtains disposal information from returns filed with the California State Board of Equalization by disposal facility (landfill) operators. The figures reflect the amount of waste that is landfilled, or disposed of, in the SCAG region, as reported by each facility operator, rather than the total amount of waste generated in the region.

16. California Integrated Waste Management Board, 2004, *Statewide Waste Characterization Study*.

17. California Energy Commission.

## Quality of Life

1. National Assessment of Educational Progress. 2005.

2. Almeida, Cheryl. 2006. *Making Good on a Promise: What Policymakers Can Do to Support the Educational Persistence of Dropouts*.

3. UC All Campus Consortium on Research for Diversity. 2006. *California Educational Opportunity Report*.

4. U.S. Census Bureau, *2005 American Community Survey*.

5. California Department of Justice, *Hate Crimes in California, 2005*.

## Metropolitan Regions

1. The Combined Statistical Area (CSA) generally includes very similar county coverage as the Consolidated Metropolitan Statistical Area (CMSA) used in the previous State of the Region reports. For county coverage of the CSAs, please visit http://www.whitehouse.gov/omb/bulletins/fy2006/b06-01_rev_2.pdf.

2. The 2004 average payroll per job and per capita income data are still the most current data available for the largest metropolitan regions even though preliminary 2005 data is available for the SCAG region.

3. See note 5 under Transportation.

4. Ibid.

# LIST OF MAPS



*The Thomas Brothers Network was used in SCAG maps.*

# LIST OF FIGURES

# ACKNOWLEDGEMENTS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# MISSION STATEMENT

Leadership Vision Progress

Leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians.

## The Association will accomplish this Mission by:

- Developing long-range regional plans and strategies that provide for efficient movement of people, goods and information; enhance economic growth and international trade; and improve the environment and quality of life.
- Providing quality information services and analysis for the region.
- Using an inclusive decision-making process that resolves conflicts and encourages trust.
- Creating an educational and work environment that cultivates creativity, initiative, and opportunity.

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