Appendix C8

Congestion Management Process

Background

Between 2005 and 2008, CMP activities in the OWP centered on the development of the Metropolitan Transportation Plan 2035 (MTP2035). The following sections include discussion of the MTP2035 technical planning process conducted by SACOG in concert with local, state, and federal agency partners in the Sacramento region.

- Congestion & the Need for Capital Road Investments
- Congestion Management Process Technical Analysis & the MTP2035
- Summary of MTP2035 Plan Performance in Relation to the Congestion Management Process
- Implementing the MTP2035 & Ongoing Congestion Management Process Activities

Congestion and the Need for Capital Road Investments

COMMUTE PATTERNS TODAY AND TOMORROW

Home-to-work commuting comprises only 22 percent of all trips made in the Sacramento region, but these trips are important economically and in their peak period impact on the transportation system. One way to look at commuting is to understand that it adds about a third more trips on top of the general background of urban travel during the two peak periods 6-9 a.m. and 3-6 p.m. Commute trips tend to be lengthier and use freeways and major arterials more, intensifying their effect on the regional system. Although only 22 percent of all resident person trips are part of a commute to or from work, commuting accounts for nearly 30 percent of all ***vehicle trips*** and 47 percent of all resident ***vehicle miles of travel.***

The main commute factor is that, for most people, the commute trip is the longest trip of the day, but in reality most commute trips are shorter than media attention on extra-long commutes would imply:

- Overall average commute trip length is 12.5 miles.
- One-third of workers live in the same community area where they work, and their commute trips average less than 5 miles.
- 75 percent of commute trips are shorter than 15 miles, and 90 percent are shorter than 25 miles.

- 5 percent of commute trips are 35 miles or longer.
- Approximately 4 percent of workers have no commute—they work at home.
- Most of those who live near the northern or eastern urban edge work in Rancho Cordova, Roseville, or other nearby suburban areas, while those who live in the inner suburbs commute to all three job centers; for example:
  - More than one-half of downtown Sacramento commuters come from close adjacent areas: South Sacramento, Eastern Sacramento County area, North Sacramento, Natomas, and West Sacramento.
  - 9,000 workers commute from Natomas into downtown Sacramento, while 14,000 workers commute to jobs in Natomas from areas further east or north.
  - Two-thirds of workers who live in Folsom/El Dorado Hills commute no further west than Rancho Cordova.
  - Two-thirds of workers in Placer County commute no further east or south than Citrus Heights, Arden or Carmichael.

One key factor in commute patterns is the need by 2035 to get about 150,000 workers into and back from downtown Sacramento. This central city commute pattern, common in most large urban regions around the country, presents a peak capacity challenge to the core of both the region's highway and transit systems.

- The growth pattern through 2035 focuses on aggressive housing growth in the downtown, while adding sufficient employment to retain the area as the central employment center for the region. Thus, the growth increment through 2035 has a 1.6 jobs to housing ratio, bringing the end-state ratio in 2035 down to 6 jobs per housing unit (compared to 9 jobs per household today).
- These significant land use changes greatly increase the number of downtown workers who can take short walk, bike or transit trips to work, but many workers still will commute to work in downtown Sacramento in 2035. There will also be more people who travel from throughout the region to the existing and future cultural attractions typical of the downtown of a region's largest city. Providing good transportation access in and out of a healthy downtown in a metropolitan area is always one of the central challenges of a metropolitan transportation plan.

A second key factor in commute patterns is river crossings. The American River is a geographic barrier across the urban area, which is exacerbated by a structural imbalance in jobs and housing; there are approximately 70,000 more jobs than workers south of the American River. In fact, because of choices related to balancing of desired housing, earning potential, schools, and many other factors, more than 200,000 workers, almost 25 percent of the workforce, actually do commute across the river daily. That number is expected to grow to 285,000 by 2035.

- The largest shares of the increase in cross-American River commute flows will occur between Natomas/North Sacramento and downtown Sacramento.

- With minimal added capacity across the American River, workers living in the Arden/Carmichael/Fair Oaks/Orangevale shift away from downtown Sacramento, which decreases some travel demand crossing close to downtown. However, that shift is more than balanced out by increasing travel to Rancho Cordova, Folsom, and El Dorado Hills on more easterly crossings.
- Workers crossing the Sacramento River will increase from about 60,000 to over 100,000 between 2005 and 2035, with most of the increase flowing between West Sacramento and the central areas of Sacramento.

A third key factor in commute patterns is the critical role of U.S. 50 as an economic corridor; 440,000 jobs today and 710,000 in 2035 (46 percent of the region's jobs) lie along the corridor. Many of these workers use the freeway for part of their commute, and U.S. 50 is also the key freeway for commercial trips within the region.

- U.S. 50 runs full in both directions during peak hours morning and afternoon, one of the very few freeways in the region that does so. In fact, as of 2006, morning peak traffic outbound toward Rancho Cordova slightly exceeds traffic inbound toward downtown Sacramento.
- By 2035, the I-80/Route 65 corridor – Natomas-North Sacramento-Roseville-Lincoln – begins to look similar to U.S. 50 as a second key economic activity corridor, for both jobs (500,000 jobs along the corridor) and commercial trips.

A fourth key factor in commute patterns is the continuing growth of Rancho Cordova and Roseville as edge cities, with strong jobs and housing growth. Commuting into both Rancho Cordova and Roseville increases by 76,000, verifying their place among the region's three main job centers. This leads to a tiered commute pattern. About 65% of downtown Sacramento commuters come from close adjacent areas – South Sacramento, Sacramento County East Area, North Sacramento, Natomas, West Sacramento – and jobs in those areas in turn must be filled by commuters from areas further out. Most of those who live near the northern or eastern urban edge work in Rancho Cordova, Roseville, or other nearby suburban areas, while those who live in the inner suburbs commute in all directions, to all three job centers.

- In Rancho Cordova, 45 percent of its new jobs are expected to be filled by resident workers in Rancho Cordova. The remaining 55 percent primarily travel in from Vineyard, areas of Southeast Sacramento County, Folsom and El Dorado Hills.
- About one-third of the new jobs in Roseville are expected to be filled by resident workers in Roseville. The remaining two-thirds travel in from the Lincoln/Rocklin/Granite Bay area, and from areas in northern Sacramento County.
- Commute patterns and economic interactions strengthen between Roseville and Rocklin/Lincoln and between Rancho Cordova and Folsom/El Dorado Hills, with growing commutes both ways.
- 70% of workers who live in Folsom/El Dorado Hills commute no further west than Rancho Cordova or Sac. County East Area, and 70% from Lincoln and Rocklin commute no further south than Roseville, North Sacramento, or Citrus Heights.

A fifth key factor in commute patterns is a noticeable change in the heaviest one-way commutes between community areas from 2005 to 2035, pointing out corridors that need new capacity looking ahead.

- Figure 10-1 shows major one-way commute corridors in 2035 contrasted to 2005; only two of the current eleven heaviest corridors increase significantly (by more than 25 percent) from 2005 to 2035, but six new corridors appear on the list due to substantial new commute growth.
- Figure 10-2 shows where one-way commutes between community areas increase by more than 5,000 per day from 2005 to 2035; only two of the twelve corridors (marked *) already carry at least 10,000 commutes per day in 2005, so heavy commuting does spread out to new corridors.
- Eastern Sacramento County Area, North Sacramento, South Sacramento, and East Sacramento contain nine of the eleven areas with the highest number of outbound commuters in 2005. However, none of these four areas are expected to experience much commuter growth in the future. It would be appropriate to assume that congestion levels out of these areas today will stay relatively constant to 2035.

A sixth key issue in commute patterns is the current reliance upon private automobile travel for commute trips. During peak commute hours, when congestion is highest and the transportation system is used at greatest capacity, 92 percent of person trips are made in private vehicles (either by a single occupant vehicle or a carpool/vanpool) and 82 percent of person trips are made by people driving alone.

Other travel modes are a small share of overall travel. Sharing a ride is more common in off-peak periods, while travel by public transit is highest in the peak periods, but even then only carries three percent of trips. Bicycling and walking is slightly lower during the peak period than during the middle of the day, but the five percent of commuters that bicycle or walk is still more than use public transit.

CONGESTION

Congestion may affect economic development: too much congestion can be a factor in shifting development from one area of the region to another (or more rarely to other regions).

- Increasing traffic congestion is an inescapable result of robust economic activity and life in modern metropolitan areas, but it is not an economic benefit.
- If workers cannot access their jobs because of congestion or lack of public transit options, businesses may choose to relocate elsewhere, either to the outer edges of the region where these issues are not yet severe, or to perhaps other regions.
- Excessive congestion delay due to lack of road capacity irritates the public, wastes time, drives up neighborhood cut-through traffic, impedes business interactions (especially for trucking), can undermine property values, and reduces choice of where to live and work.

- The Texas Transportation Institute reports the average loss to congestion delay at $520 per person per year in the 75 largest urban areas, with Sacramento coming in at a loss of $374 per person per year.

The statement, "We cannot build our way out of congestion," is essentially correct, because large metropolitan regions lack the resources, community will, and ultimately the space to provide for uncongested travel by auto.

- Extensive roadway capacity does not solve congestion: cities with the largest highway systems – Los Angeles, Houston, San Diego, Atlanta - also have some of the nation's worst traffic congestion. Similarly, good transit alone does not solve congestion: cities with the best transit systems – New York, Washington DC, Boston, San Francisco Bay Area – also have some of the nation's worst traffic congestion.

- Sacramento, with a population greater than 2 million, has reached the size and activity level where congested auto travel would be the expected norm, and accessibility replaces mobility as a dominant transportation objective. The willingness of people to continue driving under extreme congestion in Los Angeles, the Bay Area, and other large metropolitan areas shows that lack of road capacity and congestion are not primary factors in travel behavior. People in urban areas today expect and accept congestion to some degree, and readily tolerate a 20- to 40-minute commute.

Interstates 5 and 80, Route 99 and U.S. 50 all experience up to 15 miles of congestion during morning and afternoon commute times, equating to 15 to 30 minutes of trip delay.

- U.S. 50 east of downtown Sacramento now carries more traffic outbound in the morning peak than inbound, and has become the region's first section of freeway with two-way congestion both morning and afternoon.

- By 2035, I-80 will have two-way congestion, too.

- Some of Sacramento's worst congestion occurs on crosstown suburban arterials: Watt Avenue, Sunrise Boulevard, Florin Road, and Douglas Boulevard. As in other U.S. metropolitan areas, Sacramento has developed major suburban travel patterns, but lacks peripheral highways or high capacity transit system to serve them.

Congestion is presently more of an issue for local traffic than for interregional travel. Local traffic far outweighs both interregional traffic and truck traffic at critical congestion areas in the urban core. Interregional traffic comprises about 16 percent of daily traffic on Interstate 5 through downtown Sacramento, and about 12 percent on Interstate 80 through Roseville. Interregional traffic affects local commute congestion on Friday evenings, when pass-through recreational traffic tends to be concentrated.

Congestion and delay can be triggered on a regular basis by peak auto demand that exceeds capacity, and on an ad hoc basis by traffic incidents or distractions.

- About 50 percent of congestion delay comes from areas where demand has reached or exceeded capacity, usually due to system features that constrict capacity: freeway on ramps, slow vehicles, hills or grades, limited sight distance, and signals, bus stops, driveways, turn movements, pedestrians and bicycles on arterials.

- About 50 percent of congestion delay occurs from incidents where capacity is compromised: accidents, stalled vehicles, spilled loads, roadside distractions, police stops, work zones, and weather.
- Although traffic may increase gradually over time, and the roads may seem fuller, congestion appears at about 85 percent of road capacity and worsens dramatically with an increase of only a few hundred autos in the peak period.

When corridors become congested, travel modes all complement each other, serving specific types of trips, instead of competing.

- Autos and bus transit both depend on roads; bicycling and walking typically also use road corridors, so when a corridor becomes congested it is important to accommodate all travel modes effectively so travelers have real choices.
- Carpooling, various forms of transit, and bicycling each offer certain time, cost, convenience, and personal comfort advantages as an alternative choice to driving, and can become more attractive for certain drivers and certain trips.
- In the downtowns of major cities such as San Francisco and Chicago, pedestrian congestion often exceeds vehicle congestion.

Strategic road expansion yields benefits, even if it does not reduce or eliminate congestion, but land use and travel effects become critical decision factors.

Congestion Management Process Technical Analysis & the MTP2035

TECHNICAL ANALYSIS

As part of the MTP development and ongoing CMP agency efforts, technical committees comprised of local public works agencies and transit operators made specific recommendations considered by the Board of Directors. Input was also incorporated from SACOG advisory committees, including the Regional Planning Partnership, the Transit Coordinating Committee, the Bicycle and Pedestrian Advisory Committee, and the Transportation Demand Management (TDM) Task Force.

Collaborations between local agency partners included the development of county-scale transportation scenarios that were developed in late 2005 through the spring of 2006 for each SACOG county. The range of investments was taken from existing plans and new proposals developed through agency collaborations. Maps and supporting data for each scenario were then prepared for a series of 17 workshops held during the first half of 2006 to gather citizen feedback on priority investments to consider. The scenarios reflected different emphases on specific investments in roads, transit, bicycle and pedestrian modes, and transportation programs.

Following this effort, **SACOG staff and agency partners combined the most popular and well-performing county investment priorities into regional scenarios.** The objective was to create distinct investment scenarios that expand travel choices and met CMP objectives in a cost-effective manner**. The regional scenarios were provided as nine corridors for consideration at the Tall Order workshops in November 2006.** The TALL Order workshop scenarios offered citizen planners the chance to identify their investment priorities while grappling with the hard choices and financial trade-offs required to plan our region's transportation future.

Throughout the workshop period, SACOG provided results of various investment scenarios through a variety of CMP performance measurements. These consistently reported measures included percentage of travel by mode, vehicle miles traveled per household, vehicle miles traveled per household in congestion, transit share of commute trips, and other statistics related to new miles of roads, rail transit and bus transit. The performance measurements were made available in electronic and print formats for review by the general public, agency partners and the SACOG Board of Directors.

Increased communication between SACOG and local agencies over the course of the MTP process led to a more comprehensive project list than in previous MTPs and performance measures to track through ongoing CMP efforts. Local agency plans were reviewed by SACOG during 2006 for the purpose of studying plan alternatives, and again in early 2007, when agencies were asked to nominate projects through a Call for Projects request for scopes, costs, and schedules as well as priorities and information on developer-funded projects. Since the regional plan takes into account local funds-including developer fees and developer-built projects – as well as regional, state, and federal funds, projects that local agencies intend were considered through multiple rounds of review. SACOG fit as many agency priorities as possible into the Plan, given the constraint of reasonably expected revenues.

Projects nominated by local agencies were then analyzed against the citizen priorities identified through the public outreach, technical performance, and financial constraint requirements. The result is a draft staff recommendation that reflects strong performance and financial realities.

SACOG staff provided the technical analysis for the Plan, prepared materials for the MTP workshops, recruited more than 250 facilitators from agency partners, met with interest groups, and the public, and in the end drafted this Final Plan for the Board of Directors. The staff also provided:

Financial forecasts of amounts and types of funds expected to be available between 2008 and 2035. Federal statutes require that regional transportation plans be limited to improvements that can be afforded with funds "reasonably expected to be available." Issues arising from the forecasting of and limitations on funding are discussed in detail in Chapter 12 on Financial Stewardship and Appendix B1.

Information from the regional transportation model and other data sources. SACOG's population, housing, and employment projections for the region-based on the cities' and counties' land use plans Board approved growth projections-along with its transportation model, allow evaluation of the impacts of changes to the transportation system. Appendix D2 gives the assumptions that are used for land use projections. Chapter 4 details the results of the transportation modeling performed for this Plan.

PLAN SCENARIOS FOR TECHNICAL ANALYSIS AND PUBLIC INPUT

Following the identification of need, SACOG planning efforts focused on designing future transportation system alternatives that functioned well. Among the CMP technical analysis activities summarized above, a key focus was on the development of investment alternatives. These alternatives were presented at the Tall Order 3 workshops held across the SACOG region on the night of November 16, 2006. At the center of the Tall Order 3 was a planning game exercise that offered citizen planners the chance to identify their investment priorities while grappling with the hard choices and financial trade-offs required to plan our region's transportation future.

In addition to projecting revenues and identifying region-wide road, public transit, and non-motorized investment priorities, SACOG staff and agency partners analyzed a series of project alternatives for nine focus corridors. Without added road capacity or transit investment, the nine regional corridors identified below are anticipated to have severe congestion by 2035. Project alternatives were identified for these nine corridors in accordance to CMP objectives.

The nine corridors that were a focus of CMP analysis:

- **Southern Sacramento County Corridor**
- **Elk Grove – Rancho Cordova – El Dorado Corridor**
- **U.S. 50 Corridor**
- **Eastern Sacramento County Corridor**
- **Eastern I-80 Corridor**
- **Highway 65 and South Placer**
- **Sutter & Yuba Counties Corridor**
- **Yolo County to Sacramento County Corridor**
- **Northern Sacramento County Corridor**

Summary of MTP 2035 Plan Performance in Relation to the Congestion Management Process

BACKGROUND

Because the MTP2035 is a long-range transportation plan, the degree to which it enhances the performance of the region's transportation system over time is a key measure of success. Through the course of the entire MTP process and SACOG's ongoing Congestion Management Process (CMP), the performance focus has been on a set of four critical indicators:

- *Vehicle Miles Traveled* (VMT) on the region's roadways
- The level of *congestion and delay* for all travelers, but especially roadway congestion
- *Transit ridership* and the share of trips made by transit modes
- Travel by *non-motorized travel modes* (bike and walk) and the share of trips made by those modes.

In part, the focus on these indicators began with the adoption of the Metropolitan Transportation Plan for 2025 (MTP2025) in July 2002. Although adopted unanimously by the SACOG Board, the Board was extremely concerned about several worrisome projections presented in that plan:

- VMT growth continuing to outstrip population growth. The plan was based on a projected population growth of 49 percent between 2000 and 2025, but VMT was projected to grow by about 65 percent over the same period. This meant that the average household needed to drive 8 percent more vehicle miles in order to live, work and play in the Sacramento region. Given the air quality problems in the region, and the strong relationship between vehicle emissions and VMT, this trend was a great concern.
- Roadway congestion growth far in excess of growth in VMT. Even with all of the investments in the MTP2025, roadway congestion experienced by the average household was expected to increase by 58 percent. Total region-wide VMT on heavily congested roadways was expected to increase by 230 percent.
- Transit ridership increases, but not by much. The region-wide transit mode share was projected to increase from 1.0 to 1.2 percent of all trips, even with a large increase in transit service.
- Loss in non-motorized mode share. The percentage of trips made by bike and walk modes was projected to decrease from 6.9 percent to 6.6 percent.

The level of concern about these projections was one of the reasons for the initiation of the Blueprint process. The Board hoped that a more comprehensive vision of land use and transportation viewed as an inter-related system would result in better region-wide performance and fulfillment of CMP objectives. This section of the MTP provides an accounting of the progress made in addressing these concerns and reversing these trends.

ANALYSIS FRAMEWORK AND TOOLS

In evaluating the performance of MTP2035 and the ongoing CMP efforts, two points of reference are used for each key indicator:

- What have been the historic trends for each indicator? How do the projections for MTP2035 affect the historic trends? For each key indicator, actual historic trend data are presented, along with future projections for MTP2035.
- How does MTP2035, taken as the combined effects of a more compact growth projection, and a proposed package of transportation investments to 2035, compare to what would have unfolded using the prior growth projections and current 2006 MTP? This alternate point of comparison is defined as the "No Project" alternative.

The main tools used for the transportation analysis of MTP2035 are SACOG's PLACE3S land use scenario software and databases, and its regional travel demand models. SACOG has been at the forefront of development and application of travel demand modeling tools, and throughout the Blueprint project SACOG undertook research and development activities to evaluate and improve the ability to capture land use/transportation interrelationships using computer models.

SACOG currently maintains two regional travel demand forecasting models: the Sacramento Regional Travel Demand Model (SACMET)1, and the Sacramento Regional Activity-Based Simulation Model (SACSIM)2.

SACMET is a traditional "four-step" travel demand model, originally developed by SACOG in 1994, with major updates 1996, 1999, and 2001. SACMET was used for travel forecasts for the 1996, 1999 and 2002 MTP's. A post-process to more fully capture land use and transportation effects of density, diversity (mix of use), design, and destination (the 4D's) was developed by SACOG in 2002, as part of the Blueprint project. SACMET + 4D's post-processing has been used for regional travel forecasts for the MTP workshops, evaluation and screening of preliminary project alternatives, and for evaluation of the final MTP.

SACSIM is a newly developed activity-based tour model. While SACMET represents land use data in a system of 1503 traffic analysis zones (TAZ's) with median size of 300 acres, SACSIM represents land uses at parcel level. SACSIM represents travel activities as "tours" or series of trips connecting activities a person engages in during the course of a normal day. These aspects of SACSIM are cutting-edge features for a regional travel model and have the potential for capturing more aspects of land use and transportation interactions, as well as the effects of demographic changes – like aging of the population – on travel.

Both SACMET and SACSIM are fully operational travel demand models, with validation results well within published guidelines for regional travel demand models. Both models are being maintained and used to allow for comparison of results, and to allow more time to refine and fully understand and utilize SACSIM as a tool for transportation planning. Over time, SACOG expects to move from SACMET to SACSIM as the primary platform for regional travel forecasts. At this

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[1] SACMET is documented in "Model Update Report: Sacramento Regional Travel Demand Model Version 2001 (SACMET01)", March 2002, with changes and modifications since 2002 documented in technical memoranda.

[2] SACSIM is currently documented in technical memoranda only. Comprehensive documentation is being prepared. It should be noted that the "simulation" refers to simulation of travel activities, not simulation of traffic operations.

point in its development, it is believed that SACSIM may be slightly less sensitive to some 4D's land use factors than is SACMET + 4D's, which results in the more conservative SACSIM forecasts. SACMET results are provided in addition to SACSIM where noted on tables and figures.

Vehicle Miles Traveled

A "VMT" is literally one vehicle traveling on a roadway for one mile. Regardless of how many people are traveling in the vehicle, each vehicle traveling on a roadway within the Sacramento region generates one VMT for each mile it travels. For this report and most of SACOG's technical analysis, VMT is estimated and projected for a typical weekday.

VMT is and has been a primary indicator of travel for policy-makers and transportation professionals for decades. The primacy of this measure is due to several factors:

First**, it is relatively easy to measure** by counting traffic on roadways at different locations. It is one of the few measures of transportation performance which has been consistently and comprehensively monitored and documented over time in the Sacramento region.

Second, **VMT bears a strong and direct relationship to vehicle emissions –** with very few exceptions, more VMT in the Sacramento region will result in more emissions from vehicles into the air we breathe.

Third, **VMT can be influenced by policy in a number of different ways.** By providing more attractive alternatives to driving alone, VMT can be reduced by shifting from vehicle to non-vehicle modes (i.e. from a car trip to a bike or walk trip), or from low occupancy to higher occupancy vehicles (i.e. from a single-occupant vehicle trip to a carpool or transit trip). VMT can be influenced by land use patterns as well. A better mix of residential, employment, education, and service uses in an area can allow people to accomplish their daily activities with less driving, and consequently, less VMT.

Fourth, **VMT correlates with congestion.** The more miles people are driving their vehicles, the more vehicles there are on the roadways at any given time, and higher numbers of vehicles eventually result in congestion.

OBSERVED DATA AND HISTORIC TRENDS IN VMT

Observed VMT is collected by Caltrans as part of the Highway Performance Monitoring System (HPMS). HPMS is based on a sampling approach, in which a sample of roadways of different types (freeway, rural highway, principal arterial, etc.) are counted, and statistically expanded to estimate total VMT in different areas within the State. Table 4-1 provides a county-by-county tabulation of VMT within the SACOG region for the 1995 through 2005. Figure 4-2 provides a year-by-year portrait of total VMT growth over that time period.

- Daily VMT in the SACOG region has grown by 28 percent over 10 years, from 43 million per day in 1995 to 55 million per day in 2005.
- Over this same period, the total number of dwelling units in the SACOG region increased 21 percent, from 683,000 to 829,000.
- The average annual growth rate in VMT over this period was 2.5 percent per year.

- The comparable growth rate for dwelling units in the region over the same period was 2.0 percent per year.
- To put these differences in context, the number of dwelling units would double in 35 years at 2.0 percent annual growth; VMT would double 7 years sooner at 2.5 percent growth.

It was the continuance of this historic trend which was one subject of great concern in the MTP2025: that plan was based on population projections growing at 1.6 percent per year, with that plan resulting in VMT growing at 2.0 percent per year.

VMT and MTP2035

Table 4-2 and Figure 4-2 provide a tabulations and illustrations of historic and projected VMT growth for MTP2035 and for No Project conditions.

Daily VMT in the SACOG region is projected to grow from 55 million in 2005 to about 85 million in 2035. This represents an increase of about 53 percent over that time period. The projected increase in dwelling units over the same time period is 60 percent.

The VMT growth rate through 2035 is projected to decrease from the historic growth rate of 2.5 percent per year to 1.4 percent per year. Moreover, the VMT growth rate is projected to be lower than the population growth rate of 1.6 percent. This represents a major reversal of the historic trend in VMT and population growth in the region.

The No Project alternative, which combines the pre-Blueprint projected growth allocation, extended out to 2035, and the current 2006 MTP (a minor update of MTP2025) package of transportation investments, would result in a total VMT in 2035 of nearly 91 million, or nearly 6 million more than the MTP2035 projection. This represents an increase from 2005 of 64 percent, or an annual growth rate of 1.7 percent.

OTHER DIMENSIONS OF VMT IN THE SACOG REGION

Table 4-2 and Figure 4-2 illustrate changes in total, region-wide VMT for the MTP2035 and No Project scenarios. Other dimensions of VMT growth and change have been the focus of analysis and public discussion throughout the MTP. One such VMT measure is household VMT. Household is VMT defined as all of the VMT generated by residents of households in the SACOG region in the course of their daily activities. Household VMT is a subset of total VMT, and excludes VMT generated by commercial vehicles (e.g. trucks, delivery vans, construction vehicles, etc.), and VMT generated by "external travelers" (i.e. travelers passing through the region, or travel to the SACOG region by residents of other regions).

One reason household VMT is of such interest is that it is believed to be more responsive to both land use changes and transportation system changes than are commercial vehicles or external travelers. Commercial vehicles and external travel are influenced by factors outside of the SACOG region, such as national trends and markets for goods movement, growth and development in neighboring regions, etc. Household VMT is a measure that focuses more on factors that can be controlled within the SACOG region.

Table 4-3 provides a tabulation of household, commercial vehicle, and external VMT in the SACOG region for 2005 and 2035. **Average household VMT (i.e., the household VMT divided by the number of household**) is **projected to decrease from its 2005 average of 51.7 miles to about 46.3 to 48.7 miles for MTP2035, a decrease of 6 to 10 percent.** The 2035 No Project scenario was projected to increase from 2005 to 52.9. MTP2035 is 8 to 12 percent lower than the 2035 No Project scenario.

Table 4-1. Daily VMT in SACOG Region, 1995-2005

County	Daily VMT (in 1000's) /1/			Average Annual Growth Rates		
	1995	2000	2005	'95-'00	'00-'05	'95-'05
El Dorado /3/	3,186	3,687	3,987	3.0%	1.6%	2.3%
Placer /3/	6,614	7,603	9,343	2.8%	4.2%	3.5%
Sacramento	25,226	27,582	32,145	1.8%	3.1%	2.5%
Sutter	1,937	2,141	2,374	2.0%	2.1%	2.1%
Yolo	4,630	5,055	5,683	1.8%	2.4%	2.1%
Yuba	1,519	1,655	1,849	1.7%	2.2%	2.0%
Total	43,112	47,723	55,381	**2.1%**	**3.0%**	**2.5%**
SACOG Region Dwelling Units /2,3/	683,204	732,440	828,885	**1.4%**	**2.5%**	**2.0%**

Source: SACOG, July 2007

Notes

/1/ 1995 and 2000 data from "Assembly of Statistical Reports", California Department of Transportation.
2005 data from "California Public Road Data", California Department of Transportation.

/2/ California Department of Finance.

/3/ Excludes Tahoe Basin. Adjustments to county totals by SACOG.

Figure 4-1. Daily Vehicle Miles Traveled in SACOG Region, 1995-2005

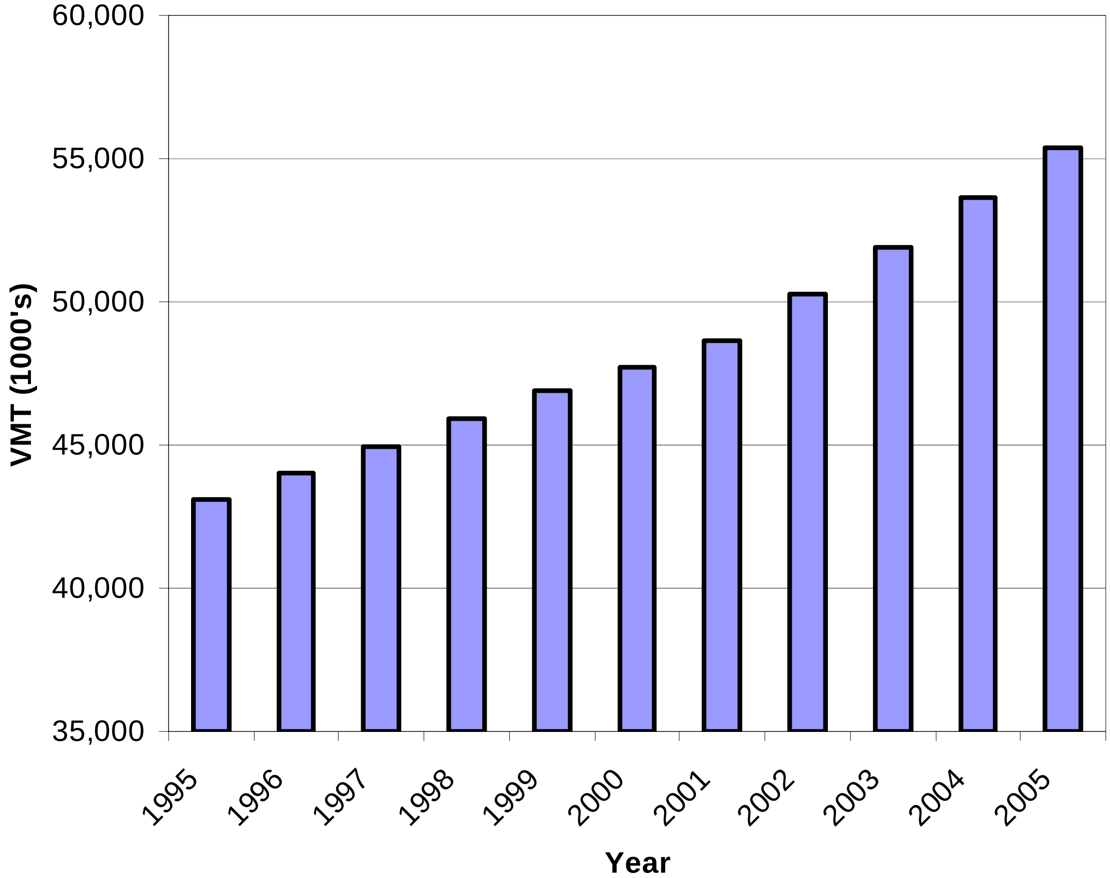


Table 4-2. Daily VMT in SACOG Region, 1995 to 2035

County	Weekday VMT by Year (in 1000's) /1/				VMT Average Annual Growth Rates				No Project Comparison /4/	
	1995	2005	2018	2035	'95-'05 (Actual)	'05-'18 (w/ MTP)	'18-'35 (w/ MTP)	'05-'35 (w/ MTP)	2035	'05-'35 Growth Rate
El Dorado /3/	3,186	3,987	4,934	5,581	2.3%	1.7%	0.7%	1.1%	5,961	1.3%
Placer /3/	6,614	9,343	12,507	15,996	3.5%	2.3%	1.5%	1.8%	17,087	2.0%
Sacramento	25,226	32,145	40,446	48,162	2.5%	1.8%	1.0%	1.4%	51,444	1.6%
Sutter	1,937	2,374	3,092	3,635	2.1%	2.1%	1.0%	1.4%	3,883	1.7%
Yolo	4,630	5,683	7,020	8,261	2.1%	1.6%	1.0%	1.3%	8,824	1.5%
Yuba	1,519	1,849	2,563	3,244	2.0%	2.5%	1.4%	1.9%	3,465	2.1%
SACOG Region Total	43,112	55,381	70,562	84,879	**2.5%**	1.9%	1.1%	**1.4%**	90,664	**1.7%**
SACOG Region Dwelling Units /2/	683,204	828,885	1,042,054	1,324,352	**2.0%**	1.8%	1.4%	**1.6%**	1,351,598	**1.6%**

Source: SACOG, October 2007

Notes:

/1/ 1995 and 2005 data from California Department of Transportation, based on HPMS reports. 2018 and 2035 are from SACOG forecasts of travel demand in the SACOG region.

/2/ 1995 and 2005 dwellings from California Department of Finance, adjusted by SACOG to exclude Tahoe Basin 2018 and 2035 dwellings from SACOG projections, adjusted to include Tahoe Basin.

/3/ Excludes Tahoe Basin. Adjustments to county totals by SACOG.

/4/ "No Project" = 2006 MTP Projects + Pre-Blueprint Land Use Growth Allocation

Figure 4-2: Daily Vehicle Miles Traveled in the SACOG Region, 1995 - 2035

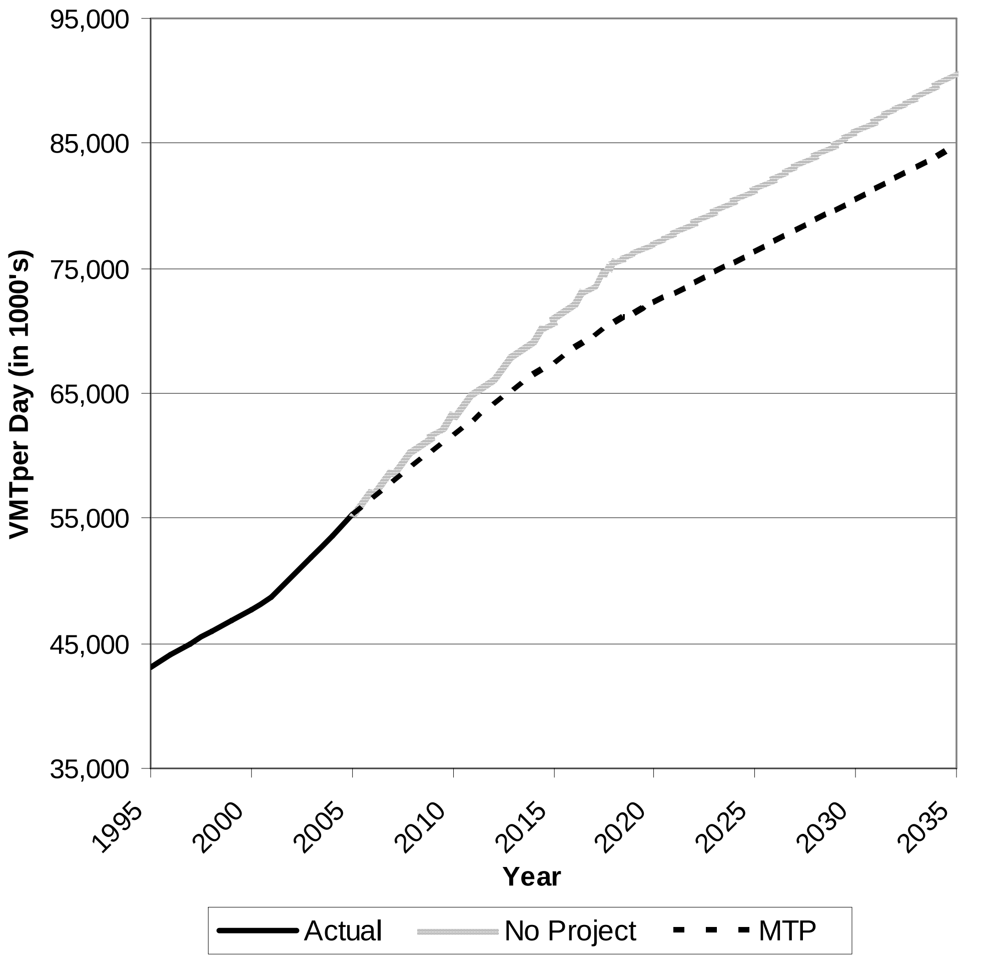


Table 4-3. Household, Commercial Vehicle, and External VMT, 2005 - 2035.

VMT Indicator	Year / Scenario 2005	2035 w/ MTP Low – High /3/	2035 No Project
Total Households in SACOG Region /1/	787,441	1,258,134	1,284,018
Total Household VMT (in 1000's) /2/	40,695	***58,261*** to 61,271	67,860
Comm'l Vehicle, External VMT (in 1000's)/2/	14,686	23,608	22,804
Total VMT (in 1000's)	55,381	***81,869*** to 84,879	90,664
Average Household VMT	51.7	***46.3*** to 48.7	52.9
% Change in Avg. HH VMT from 2005	n/a	***-10%*** to -6%	+ 2%
% Difference in Avg. HH VMT from No Project	- 2%	***-12%*** to -8%	n/a

Source: SACOG, October 2007

Notes:

/1/ Households = occupied dwelling units.

/2/ VMT estimates by source based on SACOG's travel demand model.

/3/ Range is based on SACMET + 4D's and SACSIM travel model forecasts. SACMET+4D's results in ***bold italics***

Roadway Congestion and Delay

Roadway congestion is an indicator with a much less specific and determined definition than VMT. **In general, congestion occurs on roadways when the number of drivers who wish to use a particular route exceeds the capacity of that route.** The typical signs of congestion are stop-and-go driving conditions on freeways, lines of drivers and vehicles waiting to get through a traffic light or from a ramp onto a freeway, and the accompanying frustration experienced by those drivers and passengers.

"Delay" in general refers to time wasted traveling on congested facilities. However, to quantify that delay requires some presumption of what time it should take to travel on a particular route, or a standard travel time which drivers and passengers should expect. Setting a standard by which delay can be quantified is a subjective exercise. For example, some might define a standard travel time as "free-flow" or totally uncongested conditions. The standard for freeways by this definition might be 60 mph, and the "standard" travel time would be 1 minute for a one-mile stretch of freeway. If the actual travel speed, with congestion, was 40 mph, the travel time would be 1.5 minutes, and the delay for each driver and passenger in that condition would be 30 seconds. Others may define the standard as modest or "tolerable" level of congestion. For the same one-mile stretch of freeway, someone might define 35 mph as the standard for measurement of delay—this is approximately the speed of travel for optimal throughput on a freeway lane. With the same actual travel speed of 40 mph, no delay would be experienced, because the actual speed is higher than the standard.

For this and other reasons, SACOG has always focused more on the presence of congestion on roadways rather than amount of delay. Specifically, SACOG estimates and tracks how much of the total VMT occurs on roadways that are at or above their reasonable capacities. **SACOG defines a congested VMT (CVMT) as a VMT that occurs on roadways with volume-to-capacity ratios of 1.0 or greater.** An example of CVMT is a vehicle and its drivers and passenger going westbound on I-80 in the morning commute period between Madison Avenue and the I-80/Capital City Freeway "Split," or on Hazel Avenue between Madison and Winding Way during commute hours.

OBSERVED DATA AND HISTORIC TRENDS IN ROADWAY CONGESTION AND THE C.M.P.

While VMT has been consistently and comprehensively monitored in the SACOG region since the mid-1990's, monitoring of congestion and delay inform CMP activities. Three sources are presented here.

Delay data have been collected by Caltrans, primarily on freeway facilities, since 1998. Caltrans defines 35 mph as a travel speed standard for freeways, with delay calculated as the difference between actual travel time and travel time at 35 mph for the vehicles on the roadway segment in question. Caltrans does actual field data collection for this measure on an annual basis. Freeway delay by this measure is presented in Table 4-4 and Figure 4-3.

- Observed delay has generally increased from 1998 to 2006, although the year-by-year measures sometimes go down as well as up.

- Vehicle delay on freeways was estimated to be as low as 2.0 million hours in 1998 to as high as 5.5 million in 2005.
- Over the years 1998 to 2006, the total increase in vehicle delay was 75 percent, or an annual growth rate of 7 percent. As a point of comparison, growth in VMT over same period was 2.7 percent per year, less than one-half the rate of growth in vehicle delay.

Delay estimates have been made for the Sacramento urbanized area (as well as most other urbanized areas in the U.S.) by the Texas Transportation Institute (TTI) annually since 1990 (Table 4-4 and Figure 4-4). Although not the product of actual field data collection, this source is presented because it is a well-vetted, consistently applied estimation approach. The standard for delay in the TTI reports is "free-flow" conditions, compared to 35 mph for the Caltrans measure. TTI considers arterial and surface street conditions as well as freeways. Finally, TTI attempts to account for vehicle occupancy, and estimate passenger delay, rather than vehicle delay. For all of these reasons, the TTI measure is a much bigger number than the Caltrans measure, but it shows similar growth.

- Annual hours of passenger delay was estimated to increase from 15.7 million hours in 1990 to 35.9 million hours in 2003, a total increase of 128 percent.
- The growth rate in congestion over the years 1990 to 1998 was 4 percent (compared to VMT growth of 2.2 percent over the same period).
- In the time period from 1998 to 2003, congestion growth was sharply higher, increasing an average of 10 percent per year, compared to 2.7 percent growth in VMT over the same period.
- **Over the longest period in the data series (1990 to 2003), delay grew by an average of 7 percent per year compared to 2 or 3 percent growth in VMT over the same period.**

Using its travel demand models, SACOG estimates congested VMT; backcasts to 1995 are provided on Table 4-4. Again, this measure does not attempt to estimate delay, but only the VMT that occurs on heavily congested roadways.

- Congested VMT was estimated to have grown from 2.1 million to 3.4 million between 1995 and 2005.
- The growth rate in congested VMT during these years was 5 percent, compared to about 7 percent for the longest span in the Caltrans and TTI measures. Because these other measures focused on delay, which accounts for time delay in extremely congested roadways, the growth rate is somewhat higher.

By all measures, growth in congestion is at least double the growth rate in VMT, and triple the growth rate in dwelling units over comparable time periods. It makes sense that congestion and delay grow faster than VMT: A roadway operating near capacity experiences little or no congestion or delay, but addition of a few more vehicles and VMT leads to congestion and delay, not just for the new vehicles, but also for all other vehicles using the road

CONGESTED VMT AND THE MTP2035

Estimates of congested VMT in the future were made using SACOG's travel demand models, and are shown in Table 4-5 and Figure 4-5.

Congested VMT was estimated to increase from 3.4 million daily miles in 2005 to 7.8 million in 2035 with MTP2035. This is a total increase of 127 percent, and an average annual increase of 2.8 percent over the same time period. This increase is significantly higher than the growth in VMT (1.4 percent) or in population growth (1.6 percent) in the region.

The growth rate in congested travel, however, is considerably reduced over the course of the planning period. The historic growth rate is approximately 5 percent per year. This rate decreases marginally to 4.5 percent in the early years of the planning period (2005 to 2018), and drops dramatically to 1.5 percent per year in the later years of the planning period (2018 to 2035).

The performance of MTP2035 is also dramatically better than the No Project alternative. By 2035 with the No Project alternative, total congestion nearly quadruples to over 13.5 million miles per day. This is a growth rate of 4.7 percent per year, a continuation of the recent growth in congestion.

OTHER DIMENSIONS OF CONGESTED TRAVEL IN THE SACOG REGION

Table 4-6 provides a tabulation of household, commercial vehicle, and external congested VMT in the SACOG region for 2005 and 2035. Analogous to the household VMT measure presented in Table 4-3 above, Table 4-6 provides a tabulation of average household congested VMT (i.e. the household congested VMT divided by the number of households). **Congested VMT per household is projected to increase from its 2005 average of 3.3 miles per household to 3.7 to 3.8 miles per household for MTP2035, an increase of 12 to 15 percent. The 2035 No Project scenario, however, was projected to increase from the 2005 average to approximately 7 miles per household, an increase of 115 percent from 2005.**

Table 4-4. Congestion in the SACOG Region, 1990-2006

Congestion Indicator	Year							Average Annual Growth Rates /3/					
	1990	1995	1998	2000	2003	2005	2006	'90 to '98	'98 to '03	'98 to '05	'90 to '03	'95 to '05	'98 to '06
Annual Freeway Veh.Hours of Delay (in 1000's)/1/	n/a	n/a	1,952	2,435	3,307	5,458	3,419	n/a	+ 11%	+ 16%	n/a	n/a	+ 7%
Annual \Passenger Hours of Delay (in 1000's) /2/	15,745	17,206	22,196	26,337	35,929	n/a	n/a	+ 4%	+ 10%	n/a	+ 7%	n/a	n/a
Daily Congested VMT /4/	n/a	2,099	n/a	2,679	n/a	3,419	n/a	n/a	n/a	n/a	n/a	+ 5%	n/a

Source: SACOG, July 2007

Notes:

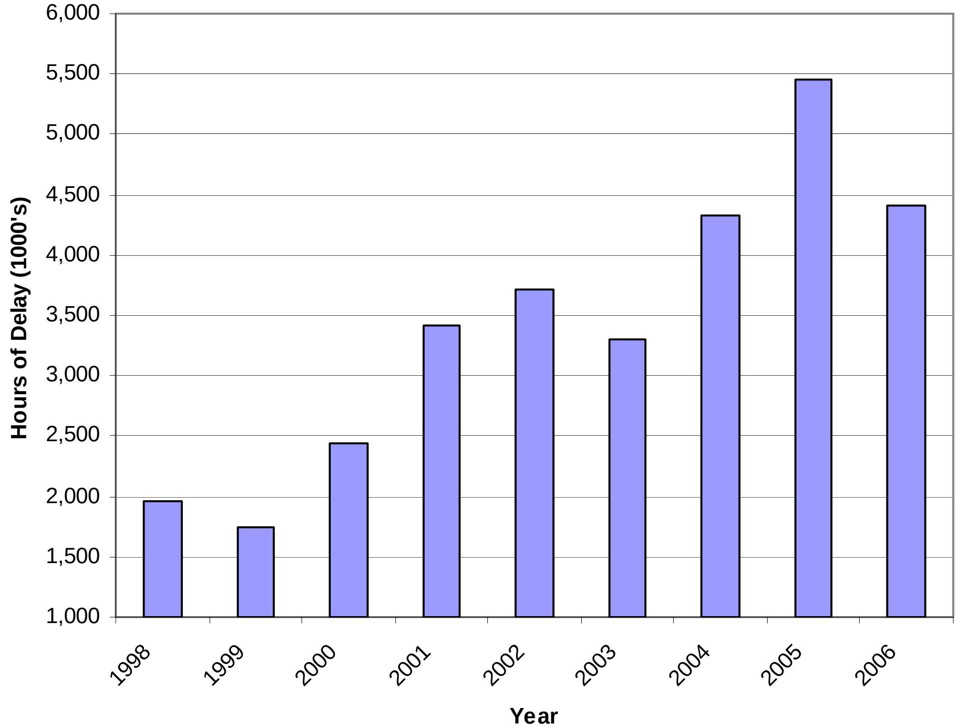
/1/ "Highway Congestion Monitoring Program Reports", California Department of Transportation, District 3. Delay defined as the time difference between observed travel time and 35mph on freeways within District 3.

/2/ "Urban Mobility Report", Sacramento County, Texas Transportation Institute, 2005. Delay difference between free flow conditions and estimated actual conditions for freeways and arterial roadways within the Sacramento urbanized area.

/3/ Growth rates not provided for some years due to unavailability of data for the indicators.

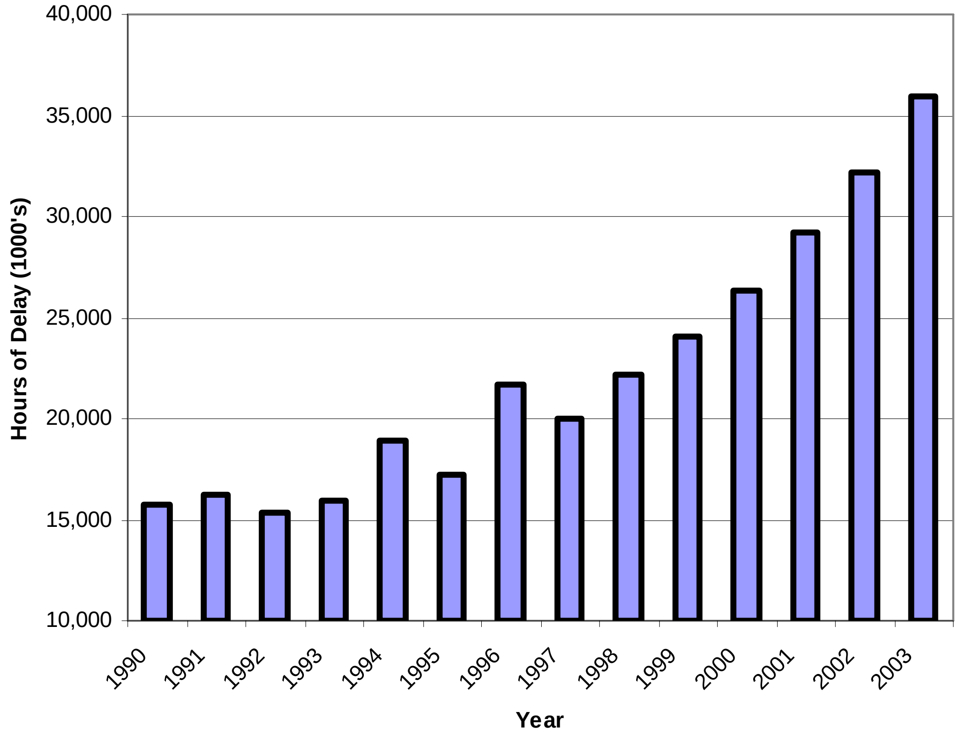
/4/ The 2005 CVMT comes from SACOG's travel demand model. Years 1995 and 2000 were back-casted from 2005 based on a portion of the long term growth rate in delay from the TTI and Caltrans datasets.

Figure 4-3. Annual Vehicle Hours of Delay on Freeways, Caltrans District 3 Area, 1998-2006



Source: SACOG, October 2007

Figure 4-4. Annual Passenger Hours of Delay on All Roadways, Sacramento Urbanized Area, 1990-2003



Source: SACOG, October 2007

Table 4-5: Roadway Congestion in SACOG Region, Forecasted to 2035

Year		Total VMT (in 1000's)	Congested VMT (in 1000's) /1/	% of VMT Congested
1995	(Actual)	43,112	2,099	4.9%
2005	(Actual)	55,381	3,419	6.2%
2018	(w/MTP)	70,562	6,047	8.6%
2035	(w/MTP)	84,879	7,795	9.2%
Average Annual Growth Rates				
'95 to '05	(Actual)	2.5%	5.0%	
'05 to '18	(w/MTP)	1.9%	4.5%	
'18 to '35	(w/MTP)	1.1%	1.5%	
'05 to '35	(w/MTP)	1.4%	2.8%	
No Project Comparison /2/				
2035	(No Project VMT)	90,664	13,478	14.9%
'05 to '35	(No Project Growth Rate)	1.7%	4.7%	

Source: SACOG, October 2007

Notes:

/1/ 2005 CVMT was estimated by SACOG based on congestion monitoring data base year travel model outputs. 1995 CVMT was back-casted from 2005 by SACOG based on the long term measured growth in delay. 2018 and 2035 from SACOG forecasts of travel demand in the region.

/2/ "No Project" = 2006 MTP Projects + Pre-Blueprint Land Use Growth Allocation.

Figure 4-5. Daily Congested Vehicle Miles Traveled, SACOG Region, 1995 - 2035

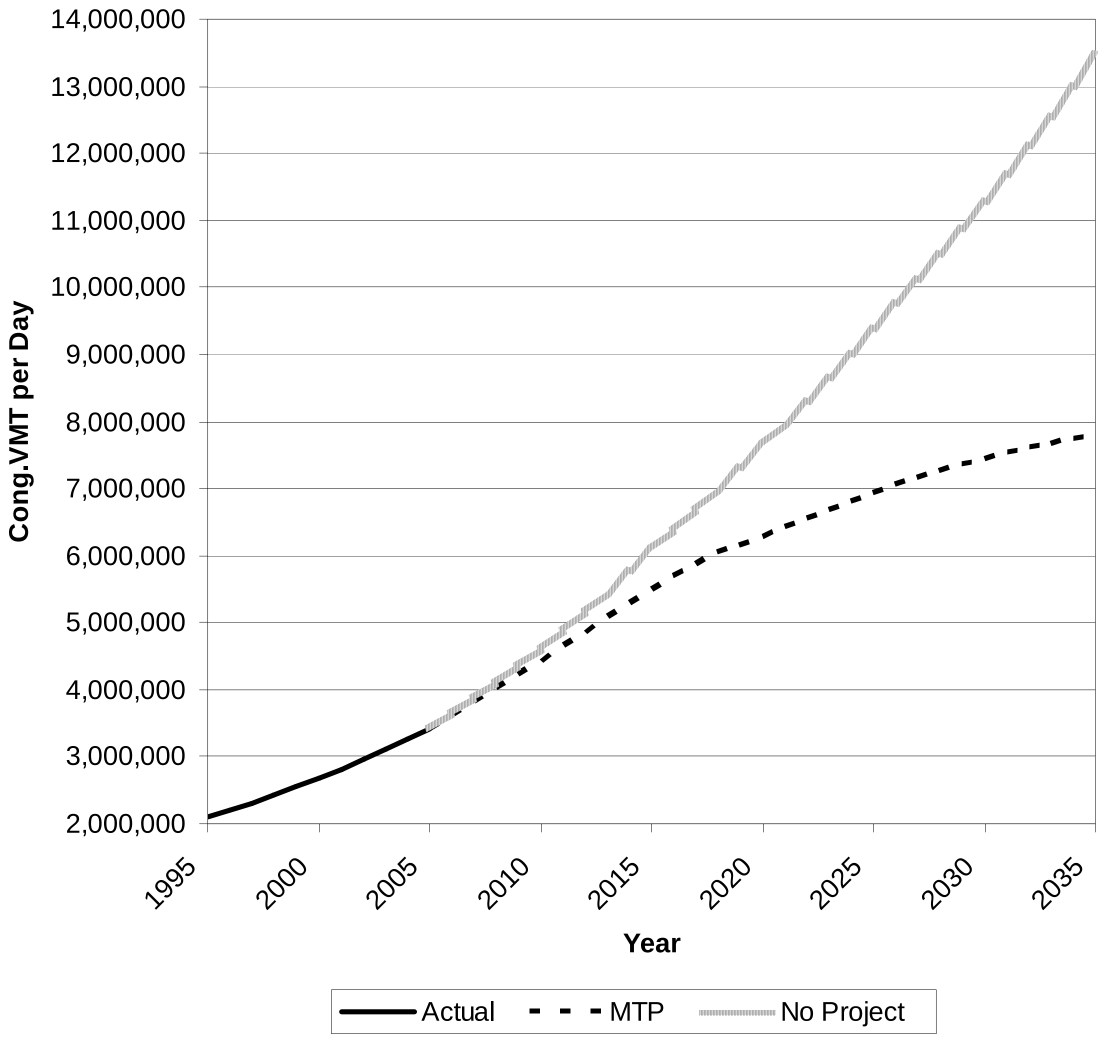


Table 4-6. Household, Commercial Vehicle, and External Congested Travel, 2005 - 2035.

Congested Travel Indicator	Year / Scenario 2005	2035 w/ MTP Low – High /3/	2035 No Project
Total Households in SACOG Region /1/	787,400	1,258,100	1,284,000
Total Household CVMT (in 1000's) /2/	2,585	***4,647*** to 4,817	9,043
Comm'l Vehicle, External CVMT (in 1000's)/2/	834	***2,872*** to 2,977	4,435
Total CVMT (in 1000's)	3,419	***7,519*** to 7,795	13,478
Average Household CVMT	3.3	***3.7*** to 3.8	7.0
% Change in Avg. HH CVMT from 2005	n/a	***+12%*** to +15%	+ 115%
% Difference in Avg. HH CVMT from No Project	- 53%	***-47%*** to -46%	n/a

Source: SACOG, October 2007

Notes:

/1/ Households = occupied dwelling units.

/2/ CVMT estimates by source based on SACOG's travel demand model.

/3/ Range is based on SACMET + 4D's and SACSIM travel model forecasts. SACMET+4D's results in ***bold italics***

POLICIES AND STRATEGIES FOR STRATEGIC EXPANSION

With the region expecting significant growth in population by 2035, it must expand the system commensurately. With neither funding nor political will to expand the system at the same rate as the projected population growth, road and transit expansion must be carefully targeted to achieve the region's growth and quality of life objectives. This MTP would triple transit service, tailored to surrounding land uses, to bring in riders who now drive and more fare revenues to support operation of the larger system needed to do that.

Complete streets, designed for walking, bicycling and transit as well as autos, can offer good alternatives to driving locally, and reduce need for overall road expansion. Regardless, roads must also be expanded strategically, to provide good access for infill development, support bus transit, and confine congestion to peak commute hours (a standard condition for robust urban economies nationwide). This region is unlikely to support significant freeway widening or new freeways, so it must conserve a portion of existing freeway capacity for trucking and interregional travel by providing alternatives for regional and local travel. The following policies and strategies lay out SACOG's investment priorities for regional funds - to support regional programs, regional-scale system expansion, compact urban land uses, and equitable expenditures over time – and guide decisions about system expansion.

1. **Policy: SACOG acknowledges and supports preservation of the existing road and highway system as the top priority for local public works agencies and Caltrans, and expects to help them secure adequate funding sources for the necessary work.**

   1.1. **Strategy:** Encourage and support Caltrans in seeking traffic management and safety improvements along with highway rehabilitation projects from the State Highway Operations and Protection Program. Ensure that both urban and rural needs are targeted.

   1.2. **Strategy:** Consider public/private partnerships and competitive service contracts for maintenance and operations, for a more efficient system.

   1.3. **Strategy:** Expect local agencies to examine and consider traffic operational strategies and investments as temporary improvements to buy time or develop lower-cost ultimate alternatives for capital projects for road expansion, with SACOG to consider such projects as a high priority for regional funding.

2. **Policy: SACOG supports the development and implementation of corridor system management plans as a method of integrating transportation system operational management and regional planning so as to maximize system efficiency and effectiveness.**

   2.1. **Strategy:** Participate in the development and implementation of corridor system management plans for the following corridors:

   - Interstate 80: SR 113 to Sierra College Blvd.

- Highway 50: Interstate 80 to Camino
- SR 99: San Joaquin County Line to Highway 50, Interstate 5 to SR 20
- Interstate 5: Hood-Franklin to Metro Airport
- SR 65: Interstate 80 to SR 70

2.2. **Strategy:** Encourage all stakeholders to actively participate in the development and implementation of each CSMP.

2.3. **Strategy:** Coordinate SACOG transportation modeling and data collection activities with the travel forecasting and analysis activities associated with each CSMP.

3. **Policy: SACOG intends to preserve some capacity on major freeways within the region for freight and other interregional traffic by providing additional capacity for local and regional traffic on major arterials running parallel to the major freeways. The complementary arterial and freeway expansions intend to better separate local and interregional traffic, but no lane restrictions (e.g. truck-only lanes) to the freeways are proposed. Under current state program structure, SACOG expects to carry the main responsibility, shared with Caltrans, to fund interregional projects at the edge of the region when growing demand for traffic to, from, and through the region warrants expansion of interregional routes.**

3.1. **Strategy:** Seek to coordinate regional truck routes for large trucks, and expect local agencies to include truck access policy and strategies in mixed use and large commercial/industrial developments.

3.2. **Strategy:** Support rail and highway investments that route freight around, not through, the region.

3.3. **Strategy:** Open up interregional highway capacity only when goods movement and non-commute traffic warrants it. Evidence of this need can also occur when local roadways bear the burden of goods movement activity diverted from congested highways.

4. **Policy: Support road and transit expansion investments that are supportive of 2035 MTP land use patterns.**

4.1. **Strategy:** Focus on ensuring the arterial system performs well for the increased number of local trips, to support infill and compact development from smarter land uses without pushing it outward because of overly congested conditions, providing a strong grid network (which offers alternative routes) wherever land uses and barriers allow.

4.2. **Strategy:** Support corridor mobility investments along major arterials that serve modes of travel through combining road capacity improvements with operational improvements to support smart growth. Supportive investments include enhancements for high-capacity transit, technology deployment and safer intersections.

5. **Policy: Prioritize transit investments that result in an effective transit system that serves both transit dependent and choice riders.**

5.1. **Strategy:** Transit expansion should be targeted at land use patterns that will generate transit ridership and improve the cost recovery rates for transit service.

5.2. **Strategy:** Pursue transit expansion using a wide spectrum of services; each best suited to particular travel markets, considering but not limited to light rail, streetcar, express bus, Bus Rapid Transit, local service bus, neighborhood shuttle bus, dial-a-ride, assisted paratransit for the disabled, subscription bus and jitney.

5.3. **Strategy:** Consider the full life-cycle cost of transit options covering both equipment and operations, the relative value of broader area coverage versus high capacity for a limited corridor, and more routes versus higher frequency, for each situation.

5.4. **Strategy:** Develop trunk transit corridors between communities and local transit circulation within communities, to attract riders both for commuting and local activities.

5.5. **Strategy:** Develop local transit services that serve local travel patterns and meet high-capacity trunk transit lines with timed transfers.

5.6. **Strategy:** Design commute transit as a door-to-door system, with full or limited express routes, short waits at transfers, and walk access or good distribution at each end.

5.7. **Strategy:** Develop a bus and carpool lane system for key commuter corridors and expand transit service to use it.

5.8. **Strategy:** Address commute congestion with transit first/carpool second strategies for downtown Sacramento, and carpool first/transit second strategies for suburban job centers until employment density indicates a shift, to switch drivers into empty seats in both transit and autos.

5.9. **Strategy:** Seek to build good bus transit service with heavy established ridership as a precursor to investment in rail transit, to ensure return on the high capital investment for rail.

5.10. **Strategy:** Factor in the benefit of rail transit as a permanent investment, with stronger ability to attract Transit Oriented Development patterns around it, where local smart growth planning and the real estate market already promise development dense enough to support rail investment.

5.11. **Strategy:** When a transit route or service fills to capacity, examine complementary service of another type as an alternative simply to adding capacity to the route that is full.

5.12. **Strategy:** When planning high-capacity transit corridors, consider expanding support facilities, such as access sidewalks and walkways, passenger shelters, transfer stations, next-bus notification signs, signal preemption and park-and-ride lots, as part of development along the route.

6. Policy: SACOG intends to invest funds that are at SACOG's discretion, as long as the existing funding and program structure remains essentially as it is today, following these policy guidelines:

6.1. Continue to use funds coming through SACOG to fund regional objectives for air quality, community design, transportation demand management, and bicycle & pedestrian programs. The funding level should be proportionally at least as great as programming levels since the regional programs began in 2003.

6.2. Continue to help fund regional-scale investments that include local projects, with the priorities identified below. The funding level should be consistent proportionally with programming levels since the regional programs began in 2003.

- Main state highways and key trunk arterials that access them, including bus and carpool lanes; rail and bus transit running with 15 minutes or shorter peak frequency, also including express commuter services; traffic operations strategies; crossings of rivers and other barriers; and complete streets in community activity centers; completion of freeway segments (or gap closure) including freeway to freeway connectors;

- Other key arterial connections; transit dependent services; interchange capacity; transit walk access; bike and sidewalk connections; and port, airport and rail access;
- Other major arterials; other transit services; improvements to designated freight routes; jurisdictional equity; and retrofit programs;
- Intends to invest in all three priorities over life of the plan, considering funding levels available, delivery of projects, and opportunities for funding leverage;
- Set aside funding, while investing regional funds for regional objectives, a small proportional share of available money for equity (using local priorities) and secondary goals (such as a retrofit program; and

6.3. Equity funding to allow local agencies to fund road maintenance & rehabilitation or safety projects with regional funds in lieu of a capacity project.

- Expect to maintain approximate equity among cities and counties, and within counties, across several funding and program cycles.
- Evaluate the benefits of the project to the population the project serves as well as the population of the submitting jurisdiction.
- Equity is primarily determined by identifying the difference between funds received from SACOG and those that would be realized by a formula. Consideration should also include the difference between funds received from all State and Federal sources (not just those funds distributed by SACOG) and those that would be realized by formula.

CMP IMPLEMENTATION IN THE MTP2035

Monitoring MTP implementation efforts will require a collection of CMP activities described in the SACOG's Overall Work Program (OWP). It is a system constructed of parts of existing, workable systems including monitoring and evaluation of the multimodal transportation system through the performance measures discussed in this chapter. As part of the forthcoming 2008/2009 OWP, SACOG is committed to review and update of the agency's CMP.