REPORT

DATE: March 6, 2008

TO: Community, Economic, and Human Development Committee (CEHD)
Regional Council

FROM: Lynn Harris, Manager, Community Development, Planning & Policy Department
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SUBJECT: Recommend Approval of the 2008 RTP Growth Forecast to the Regional Council

EXECUTIVE DIRECTOR'S APPROVAL:

RECOMMENDED ACTION:

Recommend approval to the Regional Council of one of the options below for the 2008 RTP Growth Forecast.

Presented here are three Growth Forecast Options (A, B, and C) to be considered for use in the 2008 RTP Growth:

> ***Option A***: Adopt the Draft Policy Growth Forecast for the 2008 RTP with integrated land use policies/strategies.
>
> ***Option B***: Adopt the Draft Baseline Growth Forecast for the 2008 RTP with a statement of advisory land use policies/strategies.
>
> ***Option C***: Adopt the Draft Baseline Growth Forecast for the 2008 RTP.

BACKGROUND:

Since 2005, under direction from the Community, Economic and Human Development Committee (CEHD), SCAG staff in collaboration with subregions and local jurisdictions has been moving forward the Integrated Growth Forecasting process for the 2008 Regional Transportation Plan (RTP).

One of the accomplishments of this process was the development of the Draft Baseline Growth Forecast used as the starting point for the assessment of alternative land use forecast distribution through scenario development. On August 30, 2007, after a comprehensive review of scenario performance results, the CEHD Committee directed staff to develop the Draft Policy Growth Forecast based on adopted policies evident in the region. On November 1, 2007, CEHD approved the release of both the 2008 RTP Draft Baseline Forecast and Draft Policy Growth Forecast for public review and comment.

A memorandum from SCAG's Executive Director, containing information about recent development and comments related to the 2008 RTP growth forecasts, was prepared and presented to the Regional Council and Policy Committees on February 7, 2008. As indicated in this Report, both the Draft Baseline Growth Forecast and Draft Policy Growth Forecast use the latest available estimates and assumptions of population, households, employment, land use, travel, congestion, and economic activity. Therefore, both the Baseline

Growth Forecast and the Policy Growth Forecast meet the legal requirements of the 2008 RTP regarding the use of the latest available estimates and assumptions.

Use of either the Draft Policy Growth Forecast or the Draft Baseline Growth Forecast demonstrate a positive finding for the draft 2008 RTP conformity analysis (see Appendix A: Emission Analysis using both Draft Policy Growth Forecast and Draft Baseline Growth Forecast). The final and formal conformity finding will be based upon the adopted RTP and its incorporated growth forecast.

A growth forecast is an estimate of future conditions. The methodology used in developing each forecast is described below. It should be noted that whichever forecast is used for the RTP, only the regional forecast totals and the county level totals will be adopted. Both forecasts have the same regional totals (see Table 1). The performance measure results noted further in this Report are a result of assumptions of differing growth patterns after 2015. The selection of which forecast to use is based, in part, on the Regional Council's policy direction on how far they feel the RTP should encourage the integration of transportation infrastructure investments (i.e. the network) and land use (i.e. estimates of future growth patterns). Both forecasts have been evaluated and tested for reasonableness and capacity at the small area level.

Although both forecasts are transportation efficient, the Policy Growth Forecast performs better on protecting environmentally sensitive areas and rural lands. In addition, the Policy Growth Forecast better reflects some infill sites around transit areas, and, based on staff's analysis of the Integrated Growth Forecast workshop results, reflects local government trends toward amending general plans to accommodate such growth. The Baseline Growth Forecast better reflects local land use vision as dictated by current General Plans and reflects that many local jurisdictions are incorporating the regional land use policies into their local plans.

The remainder of the Report summarizes the differences between the Baseline and Policy Growth Forecasts, identifies the land use policies adopted by CEHD, summarizes the RTP performance measure results accredited to land use integration and presents a summary of Public Comments received regarding the forecasts.

2008 RTP Draft Baseline Growth Forecast

The Baseline Growth Forecast for the 2008 RTP represents a growth forecast based on current and expected demographic and economic trends, as well as previously adopted local land use policies within the SCAG region. Population, households and employment were projected using standard, high-level forecasting techniques and models. These are the best tools that are currently available for making reliable long-term forecasts. The distribution of the high level forecasts is guided by 2006 local land use policy as expressed by participants in the outreach process.

Development of the Baseline Growth Forecast includes the following recent county input:

1. **Imperial County:** the 2035 consensus total population, household, and employment growth projections at Traffic Analysis Zone (TAZ) and city levels agreed upon by SCAG, IVAG, and Caltrans District 11.
2. **Los Angeles County:** the 2035 total population, household, and employment growth projections at census tract and city levels provided by subregions/cities.

3. **Orange County:** the Adopted 2006 OCP 2035 total population, household and employment projections at census tract, city, and county levels. This forecast was reviewed and approved by each city and the county, with formal adoption by the OCCOG.
4. **Riverside County:** The 2006 RCP 2035 population, household, and employment projections at census tract, city, and county levels. This forecast was reviewed by each city and the county, and they were adopted by CVAG, WRCOG and the Riverside County Board of Supervisors. Through this process, there is consensus on the level and distribution of the growth among the 24 cities, the county and the tribal nations that participate in the two Councils of Governments.
5. **San Bernardino County:** the 2035 household and employment projections at census tract, city, and county levels provided by SANBAG.
6. **Ventura County:** the 2035 total population, household, and employment growth projections at census tract and city levels provided by VCOG.

In addition, this technical forecast at the regional level was presented to SCAG's Plans and Programs Technical Advisory Committee on various occasions to ensure technical consistency and integrity with major variables such as population, employment, household, and to build upon this bottom-up process by summing up all local/subregional projections.

Option B and Option C both call for the Baseline Growth Forecast to be used in the RTP. The difference is Option B includes the statement of advisory policies and strategies to guide future growth and Option C does not. By including the statement of advisory policies Option B attempts to point the way for the future from a policy, rather than technical standpoint. Both options will meet air quality conformity requirements as described further in this Report.

The Baseline Growth Forecast, as noted above, was comprehensively reviewed in the region and, as such, is both compliant with local plans and transportation efficient. However, the level of input received from local governments varies considerably across the region and there are a sizeable number of outdated local general plans in the region. However, notwithstanding such outdated and permissive plans, many localities have been limiting growth in environmentally sensitive areas. Examples include:

- In Ventura County, the Baseline Growth Forecast allocates considerably more growth outside of the SOAR boundaries than anticipated by local jurisdictions.
- In the Santa Monica Mountains between Malibu and Agoura Hills, the Baseline Growth Forecast includes thousands of housing units. Based on comments at the workshops, few new housing units should be located in these areas.
- In the San Bernardino foothills, the Baseline Growth Forecast includes more than 2,000 housing units in an area with little growth potential according to workshop participants.
- In several cases, the Baseline Growth Forecast underestimates infill sites compared with local plans or intentions, according to various estimates produced from SCAG demonstration projects.

Thus, the forecast development process continued with a new round of public outreach and additional forecast development techniques known as "scenario building" to better apply the technical baseline forecast to existing and future conditions using CEHD adopted policies.

2008 RTP Draft Policy Growth Forecast

The Draft Baseline Growth Forecast and its strong technical foundation was the starting point for extensive scenario development and alternatives analysis to explore the range of future growth possibilities in Southern California. The Draft Policy Growth Forecast is a result of applying lessons learned from scores of scenarios, modeled and analyzed, into a realistic future urban form that incorporates existing and emerging development patterns that maximize the benefits of existing and planned transportation investments.

Local input was central to this process through 15 Integrated Growth Forecast Workshops held in the Fall of 2006. These workshops were used to exchange information, establish potential areas of consensus, and identify areas that needed additional analysis. Over 400 local stakeholders representing 157 cities and all six counties within the SCAG region participated in the workshops. This process led to the development of the Workshop Scenario which showed mixed results toward improving mobility and air quality in the SCAG region.

In response, a further series of scenarios was developed to test potential policies and trends identified at the workshops. These scenarios explored the range of limits of these emerging trends beginning with the Baseline Growth Forecast and ending with the most aggressive plausible growth assumptions. Each scenario tested the full impacts of housing and employment density changes within strategic opportunity areas throughout the region. The series of scenarios that became the Growth Policy Forecast pulled back from the outer reaches of the spectrum of scenarios and used a criterion of reasonableness to be implemented.

Based on the findings from these scenarios, CEHD developed and adopted a set of nine policies to guide a "realistic" future growth alternative representing development types found throughout the SCAG region. These policies seek to enhance the Baseline Growth Forecast by way of a redistribution of growth at the county, subregion, city, and small area level to address the serious transportation and air quality challenges facing the region today and in the future.

The resulting Draft Policy Growth Forecast was founded on these nine policies and refined through a series of reality checks performed through local collaborations during the last three years. A primary source of this research includes the dozens of Demonstration Projects in which SCAG partnered with local jurisdictions to support local planning initiatives consistent with regional goals. An additional analysis was performed where SCAG worked with seven cities to explore, in depth, the relationship between local general plans, the RTP and demographic trends.

The nine policies are summarized below.

- **Identify regional strategic areas for infill and investment**
  Identify strategic opportunity areas for infill development of aging and underutilized areas and increased investment in order to accommodate future growth.
- **Structure the plan on a 3-tiered system of centers development**
  Identify strategic centers based on a 3-tiered system of existing, planned, and potential, relative to transportation infrastructure.

- **Develop "complete communities"**
  Create mixed use districts or "complete communities" in strategic growth areas, through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other wherein most daily needs can be met within a short distance of home.
- **Develop nodes on a corridor**
  Intensify nodes along corridors with people-scaled, mixed use developments to create vibrant, walkable communities with localized access to amenities, further reducing reliance on the automobile for a variety of trips.
- **Plan for additional housing and jobs near transit**
  Plan for additional housing and jobs within reach of the transit network to reduce auto use and support more multi modal travel behavior.
- **Plan for a changing demand in types of housing**
  Shifts in the labor force will likely induce a demand shift in the housing market for additional development types such as multi-family and infill housing in central locations, appealing to the needs and lifestyles of changing populations.
- **Continue to protect stable existing single family areas**
  Continue to protect stable existing single family neighborhoods as future growth and a more diverse housing stock are accommodated in infill locations near transit stations, in nodes along corridors and in existing centers.
- **Ensure adequate access to open space and preservation of habitat**
  Ensure access to open space and habitat preservation despite competing quality of life demands driven by growth, housing and employment needs, and traditional development patterns.
- **Incorporate local input and feedback on future growth**
  Continue public outreach efforts and incorporate local input through the Integrated Growth Forecast to improve the accuracy and feasibility of pursuing regional plans at the local level.

In some cases, the resulting Policy Growth Forecast deviates from local plans in order to increase transportation efficiency. This is true in both infill sites and in new development areas. A few examples are shown below:

- The area west and south of Santa Clarita in Los Angeles County shows a reduction of about 6,000 housing units in the Policy Growth Forecast when compared to the Baseline.
- The south Coachella Valley shows a significant reduction of housing units to the shores of the Salton Sea in the Policy Growth Forecast when compared to the Baseline.
- Orange County had the most consistent results when comparing the Baseline to the Policy Growth Forecast providing an example of jurisdictions already widely implementing many of the approved regional growth policies. They have the lowest consumption of vacant land, the least development in environmentally sensitive areas and the most aggressive infill plans.

RTP Performance Measure Results

SCAG's transportation model provides a consistent method of comparison between the forecast alternatives. Following are a series of tables showing the performance differences between the Draft Baseline Growth Forecast and the Draft Policy Growth Forecast. Key observations[1] (see Table 1 through Table 4) from modeling output regarding the 2008 RTP Draft Policy Growth Forecast compared to the Draft Baseline Growth Forecast are summarized below.

- The Draft Baseline Growth Forecast and Draft Policy Growth Forecast are consistent prior to 2015
- When land use strategies such as robust growth at rail and bus station areas, in employment centers, and around existing transit facilities are applied, coastal counties (e.g. Los Angeles, Orange, and Ventura) will have higher population, household, and employment growth after 2015 (Table 1).
- The Draft Policy Growth Forecast results in reductions in both per capita VMT and per household VMT in every county in the region (Table 2). There are no such VMT reduction benefits regionwide using the Baseline Forecast.
- The Draft Policy Growth Forecast compared to the Draft Baseline Growth Forecast is estimated to reduce region-wide VMT by 20.8 million (3.6%); VHT by 882,417 (4.4%); and congestion delay by 436,916 (6.1%) (Table 3).
- Every county benefits from reductions in VMT, VHT, and delay using the Draft Policy Growth Forecast (Table 3).
- The Draft Policy Growth Forecast is estimated to increase transit boardings by 124,207, or 3.9% (Table 4).
- Combining the planned network investments and land use strategies in the Draft Policy Growth Forecast, it is estimated that all VMT reductions, 48% of the vehicle hours traveled reductions, and 30% of delay reductions are attributed to the land use strategies (Table 4).
- The Draft Policy Growth Forecast shows a minor negative impact on arterial speed during PM peak (-1.6%).

Additional VMT Reductions from Effects of 4Ds

Because the types of land use development patterns featured in the Draft Policy Growth Forecast are much localized, SCAG's conventional 4-step regional travel model can not fully capture these innovative land use effects on travel behavior. These effects, measured in such dimensions as *density*, land use mix (*diversity*), and pedestrian and transit-compatible *design*, are commonly referred to as the 3Ds of local land use, and have been shown to have an important influence on household vehicle ownership, substitution of walking for driving, and reduced trip lengths and VMT.

[1] These estimated mobility and transit benefits attributable to the policy growth forecast will change slightly depending on final plan and its associated network investment.

In addition, auto dependency for regional travel is strongly influenced by the proximity to and quality of regional transit. This effect is generally measured in terms of Regional Transit Accessibility, and when transit accessibility is high – as facilitated by an integrated regional transit network and intensified development around transit nodes – households are also observed to own fewer vehicles and generate less VMT. Because of its complementary importance, transit accessibility has come to be referred to as the "4th D".

The 4D modeling results (not included in the conformity analysis) show that an additional 8.6 million daily VMT region-wide over what has already been calculated through the SCAG regional transportation model (20.8 million) can be further reduced. This finding applies only to the Policy Growth Forecast because, as mentioned above, there are no measurable VMT reduction benefits regionwide using the Baseline Forecast.

The potential for increased VMT reductions in the RTP and a sound approach to measure VMT reduction at the regional and local level may become more important in the future as VMT reduction is being considered as a primary factor in measuring greenhouse gas reduction. Additionally, pending legislation developing competitive criteria for award of grants and loans from the infrastructure bonds contemplates a VMT measurement of reduction factor.

Written Comments Received Regarding the Growth Forecast

Several opportunities have been provided for formal public review. The Draft RTP has been circulated as have a Notice of Preparation of an Environmental Impact Report (EIR) and a preliminary draft EIR. Immediately following this Report is a summary of the written input received on both documents that addresses the Growth Forecast Options. The following lists the number of comments received by county:

Imperial County: 1
Riverside County: 5
San Bernardino County: 2
Orange County: 36
Ventura County: 0
Los Angeles County 8
Other: 13

The majority of comments reveal concerns that the Draft Policy Growth Forecast does not reflect a local perspective, is perhaps too aggressive in its implementation strategy, and is not enforceable by SCAG. The majority of the comments that address the Draft Baseline Growth Forecast are supportive, reflecting a comfort level with the trend analysis which is perceived to better reflect local growth visions and consistency with the existing status of general plans.

Conversely, the State of California, Department of Justice commended SCAG in a letter dated October 19, 2007 for its "smart growth development scenarios" approach and encouraged SCAG "to show further leadership by identifying a comprehensive and coordinated land use and transportation strategy to reduce emissions of greenhouses gases…." The US EPA Region IX commended SCAG in a letter dated February 19, 2008 for integrating transportation and land use policy saying "…additional housing and jobs near transit and identifying regional strategic areas for infill and investment is commendable and will also assist in decreasing VMT and related pollutant emissions."

All of the above comments received will be available in complete form at the March CEHD meeting.

FISCAL IMPACT:

Development of the Draft 2008 RTP Integrated Growth Forecast and transportation modeling assessment are adequately programmed and budgeted in following work elements of the FY 07-08 Budget:

08-055.SCGS1 Regional Growth Forecasting and Policy Analysis (Staff)
08-065.SCGS1 Compass Blueprint Implementation (Consultant)
08-065.SCGC1 Compass Blueprint Implementation (Staff)
08-070.SCGS1 Regional Transportation Modeling Support (Staff)

Reviewed by: Lynn Harris
Division Manager

Reviewed by:
Department Director

Reviewed by:
Chief Financial Officer

Summary of Growth Forecast Comments

County/Subregion	Summary of Comment
Imperial County	County has more growth potential than projected.
North Los Angeles County	No comment
LA City Subregion	No comment
Arroyo Verdugo	No comment
San Gabriel Valley Asoc.	No comment
Westside Cities	No comment
South Bay Cities Assoc.	No comment
Gateway Cities	Adopt baseline forecast
Las Virgenes, Conejo COG	No comment
Orange	Adopt baseline forecast
West Riv. COG	Adopt baseline forecast
Coachella Valley COG	Adopt baseline forecast
SANBAG	Adopt baseline forecast
Ventura COG	No comment

Local Jurisdiction	Summary of Comment
City of Los Angeles	1) Use Baseline Growth Forecast; 2) Not sufficient time to assess full impact from policy forecast
City of Burbank	Concern about policy growth forecast at small areas
City of Rolling Hills Estate	Concern with population forecast because of newly proposed development projects
City of Lakewood	Growth assigned to Golf Course.
City of Cerritos	Concern about policy growth forecast at small areas
21 cities from Orange County	Adopt baseline forecast--OCP2006 Projection
Cathedral City	Ensure additional growth in the Coachella Valley, Imperial Valley and eastern Riverside and San Bernardino high desert areas.

Other Agency/General Public	Summary of Comment
Transportation Corridor Agencies	Concern with policy growth forecast
LA Metro	SCAG growth forecast is lower than 2004 RTP Growth forecast in major transit investment areas
LA County	Suggest use locally specific data provided by LA County
Riverside County/RCTC	Adopt baseline growth forecast, keep policy growth forecast as advisory
Orange County	Adopt OCP 2006 Projection
OCTA	Adopt OCP 2006 Projection
BIA	1) Baseline Growth Forecast is not business as usual; 2) Adopt Baseline Growth Forecast
LAWA	Policy forecast may cause conflict with "decentralized aviation policy"
AQMD	TOD/Center development may have EJ impacts from health perspectives
US EPA	Incorporate both policy and Envision cencepts in the RTP
Caltrans District 12	Use Baseline Gorwth Forecast as basis for the 2008 RTP
The Public Law Center	EJ concerns re low income housing associated with TOD development
Torress Martinez Desert Cahuilla Indians	Need to work with SCAG to address challenges from growth
Citizens United to Save South Pasadena	Previous growth policy cause existing challenges
NAIOP SoCal	Adopt baseline growth forecast, consistent with OCP06
Sate of California, Department of justice	1) Recommend SCAG identify smart growth development scenarios that reduce vehicle emissions associated with new development, 2) fully embrace the opportunity in RTP and EIR identify comprehensive strategy to reduce greenhouse gas emissions
Orange County Business Council	Support OCCOG Board's recommendation to use OCP06 Projection

Table 1: Comparison of Baseline and Policy Growth Forecasts 2003-2035

2003	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	154,569	154,569	0.0%	41,614	41,614	0.0%	55,739	55,739	0.0%
Los Angeles	10,034,511	10,034,511	0.0%	3,177,407	3,177,407	0.0%	4,355,197	4,355,197	0.0%
Orange	2,999,316	2,999,316	0.0%	964,089	964,089	0.0%	1,568,411	1,568,411	0.0%
Riverside	1,747,879	1,747,879	0.0%	560,728	560,728	0.0%	589,462	589,462	0.0%
San Bernardino	1,864,250	1,864,250	0.0%	552,187	552,187	0.0%	638,946	638,946	0.0%
Ventura	797,007	797,007	0.0%	254,436	254,436	0.0%	334,511	334,511	0.0%
SCAG Region	17,597,532	17,597,532	0.0%	5,550,461	5,550,461	0.0%	7,542,266	7,542,266	0.0%

2005	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	164,102	164,102	0.0%	45,178	45,178	0.0%	58,005	58,005	0.0%
Los Angeles	10,205,979	10,205,979	0.0%	3,212,440	3,212,440	0.0%	4,397,032	4,397,032	0.0%
Orange	3,059,950	3,059,950	0.0%	980,965	980,965	0.0%	1,615,937	1,615,937	0.0%
Riverside	1,931,324	1,931,324	0.0%	612,345	612,345	0.0%	650,317	650,317	0.0%
San Bernardino	1,971,328	1,971,328	0.0%	576,259	576,259	0.0%	704,222	704,222	0.0%
Ventura	814,056	814,056	0.0%	259,994	259,994	0.0%	345,358	345,358	0.0%
SCAG Region	18,146,739	18,146,739	0.0%	5,687,181	5,687,181	0.0%	7,770,871	7,770,871	0.0%

2010	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	202,266	202,266	0.0%	57,089	57,089	0.0%	73,214	73,214	0.0%
Los Angeles	10,615,568	10,615,568	0.0%	3,357,678	3,357,678	0.0%	4,552,400	4,552,400	0.0%
Orange	3,314,952	3,314,952	0.0%	1,039,202	1,039,202	0.0%	1,755,166	1,755,166	0.0%
Riverside	2,242,758	2,242,758	0.0%	720,525	720,525	0.0%	784,996	784,996	0.0%
San Bernardino	2,182,051	2,182,051	0.0%	637,246	637,246	0.0%	810,216	810,216	0.0%
Ventura	860,606	860,606	0.0%	275,117	275,117	0.0%	373,443	373,443	0.0%
SCAG Region	19,418,201	19,418,201	0.0%	6,086,857	6,086,857	0.0%	8,349,435	8,349,435	0.0%

2014	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	240,766	240,766	0.0%	69,983	69,983	0.0%	90,385	90,385	0.0%
Los Angeles	10,896,323	10,896,323	0.0%	3,479,386	3,479,386	0.0%	4,645,711	4,645,711	0.0%
Orange	3,424,405	3,424,405	0.0%	1,065,346	1,065,346	0.0%	1,821,267	1,821,267	0.0%
Riverside	2,456,016	2,456,016	0.0%	793,302	793,302	0.0%	886,108	886,108	0.0%
San Bernardino	2,323,390	2,323,390	0.0%	686,028	686,028	0.0%	880,032	880,032	0.0%
Ventura	898,332	898,332	0.0%	287,207	287,207	0.0%	391,439	391,439	0.0%
SCAG Region	20,239,232	20,239,232	0.0%	6,381,252	6,381,252	0.0%	8,714,942	8,714,942	0.0%

2015	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	247,024	245,098	-0.8%	71,600	72,130	0.7%	92,954	92,913	0.0%
Los Angeles	10,970,637	10,996,346	0.2%	3,509,178	3,521,600	0.4%	4,675,877	4,673,025	-0.1%
Orange	3,451,750	3,440,649	-0.3%	1,071,809	1,070,087	-0.2%	1,837,771	1,831,727	-0.3%
Riverside	2,509,332	2,516,073	0.3%	811,486	817,493	0.7%	911,388	916,807	0.6%
San Bernardino	2,385,750	2,360,864	-1.1%	718,593	701,844	-2.4%	897,489	900,921	0.4%
Ventura	900,358	905,834	0.6%	290,993	290,470	-0.2%	395,937	396,001	0.0%
SCAG Region	20,464,851	20,464,864	0.0%	6,473,659	6,473,624	0.0%	8,811,416	8,811,394	0.0%

Table 1: Comparison of Baseline and Policy Growth Forecasts 2003-2035 (cont.)

2020	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	276,031	264,368	-4.4%	82,022	80,605	-1.8%	106,083	102,647	-3.3%
Los Angeles	11,328,871	11,440,968	1.0%	3,666,221	3,688,955	0.6%	4,754,746	4,778,367	0.5%
Orange	3,533,939	3,512,870	-0.6%	1,088,374	1,088,879	0.0%	1,897,357	1,872,022	-1.4%
Riverside	2,809,011	2,783,097	-0.9%	913,212	913,453	0.0%	1,042,148	1,035,065	-0.7%
San Bernardino	2,582,777	2,527,473	-2.2%	787,127	764,612	-2.9%	965,776	981,396	1.6%
Ventura	937,378	939,189	0.2%	302,947	303,376	0.1%	416,928	413,563	-0.8%
SCAG Region	21,468,007	21,467,965	0.0%	6,839,903	6,839,880	0.0%	9,183,038	9,183,060	0.0%

2025	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	297,646	282,167	-5.5%	90,712	87,937	-3.2%	117,105	112,170	-4.4%
Los Angeles	11,677,583	11,851,510	1.5%	3,788,324	3,833,488	1.2%	4,847,445	4,881,477	0.7%
Orange	3,586,288	3,579,544	-0.2%	1,102,373	1,105,140	0.3%	1,933,060	1,911,457	-1.1%
Riverside	3,090,009	3,029,593	-2.0%	1,008,910	996,359	-1.3%	1,168,773	1,150,833	-1.6%
San Bernardino	2,773,945	2,681,290	-3.5%	852,987	818,814	-4.2%	1,045,470	1,060,164	1.4%
Ventura	968,698	969,986	0.1%	312,924	314,506	0.5%	434,934	430,747	-1.0%
SCAG Region	22,394,169	22,394,090	0.0%	7,156,230	7,156,244	0.0%	9,546,787	9,546,848	0.0%

2030	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	312,319	298,696	-4.6%	97,669	94,715	-3.1%	125,936	121,771	-3.4%
Los Angeles	12,014,935	12,232,799	1.8%	3,906,454	3,967,278	1.5%	4,946,415	4,985,374	0.8%
Orange	3,629,528	3,641,470	0.3%	1,110,660	1,120,162	0.8%	1,960,630	1,951,202	-0.5%
Riverside	3,343,761	3,258,568	-2.6%	1,097,953	1,073,094	-2.3%	1,295,487	1,267,504	-2.2%
San Bernardino	2,957,744	2,824,174	-4.7%	914,571	868,991	-5.2%	1,134,962	1,139,547	0.4%
Ventura	996,106	998,589	0.2%	321,788	324,819	0.9%	449,939	448,066	-0.4%
SCAG Region	23,254,393	23,254,296	0.0%	7,449,095	7,449,059	0.0%	9,913,369	9,913,464	0.0%

2035	Population			Households			Employment		
COUNTY	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.	Baseline	Policy	% Diff.
Imperial	320,449	314,102	-2.0%	102,877	100,767	-2.1%	132,551	131,557	-0.8%
Los Angeles	12,337,715	12,588,249	2.0%	4,003,069	4,086,650	2.0%	5,041,151	5,091,306	1.0%
Orange	3,653,987	3,699,217	1.2%	1,118,493	1,133,563	1.3%	1,981,902	1,991,722	0.5%
Riverside	3,596,670	3,472,031	-3.6%	1,183,093	1,141,553	-3.6%	1,413,522	1,386,457	-2.0%
San Bernardino	3,133,791	2,957,366	-6.0%	972,567	913,749	-6.4%	1,254,749	1,220,477	-2.8%
Ventura	1,013,753	1,025,255	1.1%	330,186	334,019	1.1%	463,224	465,730	0.5%
SCAG Region	24,056,365	24,056,220	0.0%	7,710,285	7,710,301	0.0%	10,287,099	10,287,249	0.0%

Table 2

Impact on Per Capita VMT and Average VMT Per Household Draft Policy Growth Forecast Versus Draft Baseline Growth Forecast						
	Per Capita LM-VMT (Light&Medium Duty)			LM-VMT/Household (Light&Medium Duty)		
	Draft Baseline	Draft Plan	% Change	Draft Baseline	Draft Plan	% Change
Imperial	32.6	32.3	-0.9%	101.4	100.6	-0.8%
Los Angeles	19.7	18.9	-4.1%	60.7	58.2	-4.1%
Orange	22.4	22.0	-1.7%	73.1	71.8	-1.8%
Riverside	22.1	20.6	-7.1%	67.3	62.5	-7.1%
San Bernardino	27.4	27.2	-0.7%	88.4	88.1	-0.3%
Ventura	21.3	20.8	-2.3%	65.5	64.0	-2.3%
TOTAL	21.7	20.9	-3.8%	67.7	65.2	-3.8%

Source: SCAG Regional Transportation Modeling System

Table 3

Regional Transportation Model Run Results

CTC 4 + Draft Baseline Growth Forecast

County	LM_VMT	HDT_VMT	Total_VMT	LM_VHT	HDT_VHT	Total_VHT	LM_Delay	HDT_Delay	Total_Delay	Speed
Imperial	10,432,685	1,263,535	11,696,220	238,506	23,965	262,471	35,949	2,487	38,436	44.6
Los Angeles	242,764,296	18,873,417	261,637,713	9,351,756	589,518	9,941,274	3,477,410	224,120	3,701,530	26.3
Orange	81,725,405	5,318,537	87,043,942	2,940,437	160,674	3,101,111	1,058,682	59,026	1,117,708	28.1
Riverside	79,574,393	9,507,974	89,082,367	2,803,252	251,207	3,054,458	1,086,965	88,028	1,174,993	29.2
San Bernardino	85,952,142	14,406,089	100,358,231	2,541,874	356,008	2,897,882	745,571	111,059	856,630	34.6
Ventura	21,629,300	1,856,705	23,486,005	708,847	48,781	757,627	222,822	14,128	236,949	31.0
SCAG	522,078,221	51,226,257	573,304,478	18,584,671	1,430,153	20,014,823	6,627,399	498,846	7,126,245	

CTC 4 + Draft Policy Growth Forecast

County	LM_VMT	HDT_VMT	Total_VMT	LM_VHT	HDT_VHT	Total_VHT	LM_Delay	HDT_Delay	Total_Delay	Speed
Imperial	10,134,457	1,252,566	11,387,023	231,406	23,640	255,046	34,213	2,371	36,584	44.6
Los Angeles	237,674,653	18,716,188	256,390,841	9,158,754	581,331	9,740,085	3,380,402	218,781	3,599,183	26.3
Orange	81,339,094	5,239,290	86,578,384	2,922,132	158,807	3,080,939	1,046,678	58,416	1,105,094	28.1
Riverside	71,353,127	9,139,598	80,492,725	2,425,266	233,123	2,658,389	895,429	77,999	973,428	30.3
San Bernardino	80,512,609	13,918,753	94,431,362	2,318,417	334,502	2,652,919	645,791	98,824	744,615	35.6
Ventura	21,374,251	1,834,785	23,209,036	697,142	47,886	745,028	216,803	13,622	230,425	31.2
SCAG	502,388,190	50,101,182	552,489,371	17,753,117	1,379,289	19,132,407	6,219,317	470,013	6,689,329	

Mobility Benefits from Draft Policy Growth Forecast

County	LM_VMT	HDT_VMT	Total_VMT	LM_VHT	HDT_VHT	Total_VHT	LM_Delay	HDT_Delay	Total_Delay	Speed
Imperial	-298,228	-10,969	-309,197	-7,100	-325	-7,424	-1,736	-116	-1,852	0.1
Los Angeles	-5,089,643	-157,228	-5,246,872	-193,002	-8,187	-201,189	-97,008	-5,339	-102,346	0.0
Orange	-386,312	-79,246	-465,558	-18,305	-1,867	-20,172	-12,004	-610	-12,614	0.0
Riverside	-8,221,266	-368,376	-8,589,642	-377,985	-18,084	-396,069	-191,536	-10,029	-201,565	1.1
San Bernardino	-5,439,534	-487,336	-5,926,870	-223,456	-21,506	-244,963	-99,780	-12,235	-112,015	1.0
Ventura	-255,049	-21,920	-276,969	-11,705	-894	-12,599	-6,019	-506	-6,524	0.2
SCAG	-19,690,031	-1,125,076	-20,815,107	-831,553	-50,863	-882,417	-408,082	-28,834	-436,916	

Mobility Benefits from Draft Policy Growth Forecast--% Changes from Draft Baseline Growth Forecast

County	LM_VMT	HDT_VMT	Total_VMT	LM_VHT	HDT_VHT	Total_VHT	LM_Delay	HDT_Delay	Total_Delay	Speed
Imperial	-2.9%	-0.9%	-2.6%	-3.0%	-1.4%	-2.8%	-4.8%	-4.7%	-4.8%	
Los Angeles	-2.1%	-0.8%	-2.0%	-2.1%	-1.4%	-2.0%	-2.8%	-2.4%	-2.8%	
Orange	-0.5%	-1.5%	-0.5%	-0.6%	-1.2%	-0.7%	-1.1%	-1.0%	-1.1%	
Riverside	-10.3%	-3.9%	-9.6%	-13.5%	-7.2%	-13.0%	-17.6%	-11.4%	-17.2%	
San Bernardino	-6.3%	-3.4%	-5.9%	-8.8%	-6.0%	-8.5%	-13.4%	-11.0%	-13.1%	
Ventura	-1.2%	-1.2%	-1.2%	-1.7%	-1.8%	-1.7%	-2.7%	-3.6%	-2.8%	
SCAG	-3.8%	-2.2%	-3.6%	-4.5%	-3.6%	-4.4%	-6.2%	-5.8%	-6.1%	

Source: SCAG Regional Transportation Modeling System. Model run with CTC Alt. 4 Network
Note: VMT: Vehicle Mile Travel, VHT: Vehicle Hour Travel, HDT: Heavy Duty Truck, LM: Linght & Medium Duty

Table 4

Draft 2008 RTP Estimated Benefits: Policy Growth Forecast (Land Use) vs. Network Improvement

	A	B	C	D = B - A	E = B - C	E / D
	Baseline Network & Baseline Growth Forecast	CTC4 Network & Policy Growth Forecast	CTC4 Network & Baseline Growth Forecast	Total RTP Plan Benefits	Policy Growth Forecast Benefits	Policy Growth Forecast (Land use) as % of total Benefits
-Vehicle Miles Traveled (VMT)						
Light and Medium Duty Vehicle	511,974,233	502,388,190	522,078,221	-9,586,044	-19,690,031	205%
Heavy Duty Truck	51,353,123	50,101,182	51,226,257	-1,251,941	-1,125,076	90%
All Vehicles and trucks	563,327,356	552,489,371	573,304,478	-10,837,985	-20,815,107	192%
-Vehicle Hours Traveled (VHT)						
Light and Medium Duty Vehicle	19,423,752	17,753,117	18,584,671	-1,670,635	-831,553	50%
Heavy Duty Truck	1,531,249	1,379,289	1,430,153	-151,960	-50,863	33%
All Vehicles and trucks	20,955,002	19,132,407	20,014,823	-1,822,595	-882,417	48%
-Vehicle Hours Delayed						
Light and Medium Duty Vehicle	7,545,518	6,219,317	6,627,399	-1,326,202	-408,082	31%
Heavy Duty Truck	592,735	470,013	498,846	-122,722	-28,834	23%
All Vehicles and trucks	8,138,253	6,689,329	7,126,245	-1,448,924	-436,916	30%
Transit Boarding	3,255,078	3,280,990	3,156,783	25,912	124,207	479%

Source: SCAG Regional Transportation Modeling Syatem.
Note: All figures are estimated, subject to revision due to changes in final draft plan.

Appendix A

The regional emissions analysis performed for the draft 2008 RTP is based on the 2008 RTP Draft Policy Growth Forecast. The regional emissions analysis indicates a positive conformity finding.

Regional transportation model runs were also performed to assess conformity with the Draft Baseline Growth Forecast (using the same transportation network as the original runs). The results for both runs are shown in the following tables. As shown in the tables, a positive conformity finding may also be achieved using the Draft Baseline Growth Forecast.

SOUTH COAST AIR BASIN
8-Hour Ozone (Summer Planning Emissions [tons/day])

ROG	2008	2011	2014	2017	2020	2020 Baseline SED	2023	2023 Baseline SED	2030	2030 Baseline SED	2035	2035 Baseline SED
2008 RTP	200.68	167.6	141.6	124.21	110.6	110.8	100.2	100.4	83.9	84.2	75.9	76.2
New Defined State Measures	-3.9	-22.9	-24.6	-20.2	-15.6	-15.6	-12.4	-12.4	0.0	0.0	0.0	0.0
Total Emissions	196.8	144.7	117.0	104.0	95.0	95.2	87.8	88.0	83.9	84.2	75.9	76.2
Emission Budgets	210	153	124	109	99	99	91	91	91	91	91	91
Budget – Emissions	13.2	8.3	7.0	5.0	4.0	3.8	3.2	3.0	7.1	6.8	15.1	14.8

NOx	2008	2011	2014	2017	2020	2020 Baseline SED	2023	2023 Baseline SED	2030	2030 Baseline SED	2035	2035 Baseline SED
2008 RTP	420.4	341.4	272.8	220.9	173.8	174.6	152.2	153.0	121.0	122.1	112.5	113.8
New Defined State Measures	-0.3	-56.6	-91.4	-65.3	-45.7	-45.7	-33.5	-33.5	0.0	0.0	0.0	0.0
Total Emissions	420.1	284.8	181.4	155.6	128.1	128.9	118.7	119.5	121.0	122.1	112.5	113.8
Emission Budgets	441	298	196	167	138	138	128	128	128	128	128	128
Budget – Emissions	20.9	13.2	14.6	11.4	9.9	9.1	9.3	8.5	7.0	5.9	15.5	14.2

SOUTH COAST AIR BASIN

PM2.5 (Annual [tons/day])

ROG	2009	2012	2014	2023	2023 Baseline SED	2030	2030 Baseline SED	2035	2035 Baseline SED
2008 RTP	184.8	155.1	137.7	96.2	96.4	80.5	80.8	73.0	73.3
New Defined State Measures	3.5	23.1	24.0	12.1	12.1	9.2	9.2	0.0	0.0
Total Emissions	181.3	132.0	113.7	84.1	84.3	71.3	71.6	73.0	73.3
Emission Budgets	193	139	121	87	87	74	74	74	74
Budget – Emissions	11.7	7.0	7.3	2.9	2.7	2.7	2.4	1.0	0.7

NOx	2009	2012	2014	2023	2023 Baseline SED	2030	2030 Baseline SED	2035	2035 Baseline SED
2008 RTP	400.4	324.9	278.2	154.9	155.8	122.7	123.9	113.8	115.1
New Defined State Measures	0.3	71.2	91.9	33.7	33.7	9.4	9.4	0.0	0.0
Total Emissions	400.1	253.7	186.3	121.2	122.1	113.3	114.5	113.8	115.1
Emission Budgets	427	266	201	131	131	123	123	123	123
Budget – Emissions	26.9	12.3	14.7	9.8	9.0	9.7	8.5	9.2	7.9

PM2.5	2009	2012	2014	2023	2023 Baseline SED	2030	2030 Baseline SED	2035	2035 Baseline SED
2008 RTP	16.3	15.7	15.3	14.6	14.7	14.8	15.0	15.2	15.4
Re-entrained Road Dust	18.3	18.6	18.7	19.1	19.7	19.6	20.2	20.4	20.6
Re-entrained Road Dust	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Road Construction Dust	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
New Defined State Measures	0.0	-3.3	-4.6	-1.6	-1.6	-0.4	-0.4	0.0	0.0
Total Emissions	35.8	32.2	30.6	33.3	34.0	35.1	36.0	36.8	37.2
Emission Budgets	38	34	33	37	37	39	39	39	39
Budget – Emissions	2.2	1.8	2.4	3.7	3.0	3.9	3.0	2.2	1.8

SOUTH COAST AIR BASIN

PM10 (Annual [tons/day])

ROG	2010	2020	2020 Baseline SED	2030	2030 Baseline SED	2035	2035 Baseline SED
2008 RTP	172.5	106.6	106.8	80.5	80.8	73.0	73.3
New Defined State Measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions	172.5	106.6	106.8	80.5	80.8	73.0	73.3
Emission Budgets	251	251	251	251	251	251	251
Budget – Emissions	78.5	144.4	144.2	170.5	170.2	178.0	177.7
NOx	**2010**	**2020**	**2020 Baseline SED**	**2030**	**2030 Baseline SED**	**2035**	**2035 Baseline SED**
2008 RTP	371.6	177.1	177.9	122.7	123.9	113.8	115.1
New Defined State Measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions	371.6	177.1	177.9	122.7	123.9	113.8	115.1
Emission Budgets	549	549	549	549	549	549	549
Budget – Emissions	177.4	371.9	371.1	426.3	425.1	435.2	433.9
PM10	**2010**	**2020**	**2020 Baseline SED**	**2030**	**2030 Baseline SED**	**2035**	**2035 Baseline SED**
2008 RTP	22.8	21.8	22.0	22.4	22.7	23.0	23.4
Re-entrained Road Dust Paved	122.1	125.1	129.0	129.6	134.0	134.9	136.4
Re-entrained Road Dust Unpaved	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Road Construction Dust	2.2	2.2	2.2	2.2	2.2	2.2	2.2
AQMD Backstop	0.0	-9.0	-9.0	-16.0	-16.0	-16.0	-16.0
New Defined State Measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions	155.8	148.8	152.9	146.8	151.5	152.8	154.6
Emission Budgets	166	166	166	166	166	166	166
Budget – Emissions	10.2	17.2	13.1	19.2	14.5	13.2	11.4