SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

# TECHNICAL WORKING GROUP (TWG)

**Thursday, May 21, 2015: 10:00 a.m.**

SCAG Offices
818 West 7th Street, 12th Floor
**Board Room**
Los Angeles, CA 90017
(213) 236-1800

**Teleconferencing Information: Number: 1-800-832-0736 – Participant Code: 7334636**

Please use for web connection: **http://scag.adobeconnect.com/twg91814/**

## AGENDA

**Introductions**

**Receive and File**

1. Meeting Summary 4-16-15 (Attachment)
2. Agenda Outlook for the Development of the 2016 RTP/SCS (Attachment)
3. 2016-2040 Potential Policy Committee Meetings Outlook (Attachment)

**Information Items**

4. 2016-2040 RTP/SCS Preliminary Scenarios – Modeling Results (Christopher Tzeng) (Under Separate Cover)
5. 2016 RTP/SCS Performance Measures (Naresh Amatya/Ping Chang) (Attachment)
6. 2016 RTP/SCS Open House Overview and Schedule (Mark Butala) (Attachment)
7. 2016 RTP/SCS Overview of Aviation Program (Ryan Hall) (Attachment)
8. 2016 RTP/SCS Overview of Highways/Arterials (Naresh Amatya) (Attachment)
9. 2016 RTP/SCS Progress Update on PEIR Development (Lijin Sun) (No Attachment)

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 1 Attachment:
Meeting Summary

# TECHNICAL WORKING GROUP (TWG)

April 16, 2015

## Meeting Summary

The following is a summary of discussions at the Technical Working Group meeting of April 16, 2015.

**Receive and File**

1. **Meeting Summary 3-19-15**
2. **Agenda Outlook for the Development of the 2016 RTP/SCS**
3. **2016-2040 Potential Policy Committee Meetings Outlook**
4. **2016 RTP/SCS Public Health Analysis Framework**

**Information Items**

5. **Active Transportation Progress towards 2016 RTP/SCS**
   Alan Thompson, SCAG staff, provided an overview of the Active Transportation Progress, including highlights of the current conditions, goals and objectives, and an outline of the new focus for the 2016 RTP.

6. **2016-2040 RTP/SCS Scenario Planning Model**
   Christopher Tzeng, SCAG staff, introduced Mr. Joe DiStefano, Principal, AICP, Calthorpe Analytics, who provided an overview of Southern California growth perspectives, the 2016 RTP/SCS Alternatives Development Process Overview, and the Scenario Planning Model Scenarios Overview. Mr. DiStefano in describing growth perspectives, noted that SPM can answer questions such as the impact(s) on meeting market housing demand. Mr. DiStefano noted that the data is starting to show changes as more mixed-use dwellings are developed, and there is a shift in community plans and general plans.

   During the question and answer discussion, Huasha Liu and Christopher Tzeng, SCAG staff, outlined the schedule of next steps, including: 1) Scenario and Modeling Refinements (late April); 2) Scenarios Analysis Results (April 30 TWG meeting); 3) Presentation at General Assembly (May 7 & 8); 4) Public Workshops (May-June); and 5) Draft Preferred Scenario.

7. **2016 RTP/SCS Monitoring Measures Update**
   Ping Chang and Naresh Amatya, SCAG staff, provided highlights of the proposed 2016 monitoring measures, including the monitoring measures background and considerations for 2016 monitoring measures enhancement. Mr. Chang and Mr. Amatya also provided a summary of expectations for the 2016 monitoring measures: 1) Achieve a more

balanced set of monitoring measures; 2) Ensure data availability for measures; 3) Prepare to align with MAP-21 requirements; and 4) Utilize CALOTS to support local jurisdictions to track change and progress at jurisdictional and sub-jurisdictional levels.

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 2 Attachment:
2016 RTP/SCS Agenda Outlook

**Agenda Outlook for the Development of the 2016 RTP/SCS**

(Note: Revised to put the outlook in chronological order as suggested at the Sept. 2014 TWG) (Updated 2/11/15)

- Strikethrough signifies item was not covered

**June 2013**

- Potential approach/process, coordination between various technical working groups and policy committees, and updated overall schedule for the development of the 2016 RTP/SCS

**January 2014**

- System Preservation and system operation focus in the 2012 RTP/SCS and our current efforts on Pavement and Bridge condition database/management

**February 2014**

- System Performance Measures and MAP-21 requirements under Performance Based Planning and implications of MAP-21
- Local Input Process for Growth Forecast/Land Use (Scenario Planning) for 2016 RTP/SCS, including growth forecast and technology

**March 2014**

- Performance Based Planning and implications of MAP-21: Safety Performance Measures
- Overview of baseline and innovative funding sources adopted in the 2012 RTP/SCS including underlying technical assumptions/methodology/analysis under Transportation Finance
- Overview of cost assumptions/cost modal for the 2012 RTP/SCS under Transportation Finance
- Model and Tools and Datasets to be used in the 2016 RTP/SCS
- Overview of Aviation program in the 2012 RTP/SCS with a focus on ground transportation improvements

**May 2014**

- OCTA Draft Long Range Plan Update
- System Preservation Update
- Draft Paper on TOD benefits, challenges and best practices
- Active Transportation Program Update
- Local Input Survey Update
- MAP-21 Safety NPRM Update
- CalEnviro Screen Tool

**June 2014**

- SCAG Active Transportation Results from the 2011 Household Travel Survey
- 2016 RTP/SCS Modeling variables matrix
- Statewide and MPO Planning Rules NPRM Update
- California Active Transportation Program Update

**July 2014**

- 2016 RTP/SCS Modeling Variables Matrix

**September 2014**

- 2016 RTP/SCS Development Agenda Outlook
- Status of Local Input for the 2016 RTP/SCS; Growth Forecast Update
- Modeling Update
- CAL LOTS Update

**October 2014**

- Overview of SCS in the 2012 RTP/SCS
- Current status of SCS implementation (Local Implementation survey)
- Environmental Justice (First EJ Workshop will be held on 10/23)
- Map Collaborator Database (A web based tool to collect data and develop open space plan.)

**November 2014**

- Discussion on existing and proposed Performance Measures
- Role of Technology in the 2016 RTP/SCS
- Development of alternative scenarios (Scenario Planning) for 2016 RTP/SCS, including growth forecast, technology
- Emerging issues/themes that could influence 2016 SCS
- ~~Zero/Near Zero/Clean Technology Applications, including Slow Speed/ Electric Vehicle programs (Nov. 2014)~~
- ~~Emerging New Technology Applications~~

**December 2014**

- ~~Technical assumptions/methodology/data/analysis in the 2012 RTP/SCS~~
- ~~Potential changes in the 2016 RTP/SCS to technical assumptions/methodology/data/analysis~~
- ~~Updated forecast/land use distribution for 2016 RTP/SCS~~
- ~~Updated SCS for 2016 RTP/SCS~~
- ~~Overview of Active Transportation Strategy in the 2012 RTP/SCS~~
- ~~Progress update on Active Transportation Strategy and emerging issues and their implications to the 2016 RTP/SCS~~
- **Zero/Near Zero/Clean Technology Applications, including Slow Speed/ Electric Vehicle programs (Nov. 2014)**
- **Update on 2016 RTP/SCS Schedule**
- **Update on research and analysis for RTP/SCS strategies**

**January 2015**

- ~~Asset Management and Infrastructure Performance Measures~~
- ~~Overview of Goods Movement (GM) Strategy in the 2012 RTP/SCS with a focus on technical assumptions (including technology assumptions)/data/analysis~~
- ~~Progress update on the GM Strategy with focus on emerging issues and implications on the 2016 RTP/SCS~~
- ~~**Technical assumptions/methodology/data/analysis in the 2012 RTP/SCS**~~
- ~~**Potential changes in the 2016 RTP/SCS to technical assumptions/methodology/data/analysis**~~

- ~~**Updated forecast/land use distribution for 2016 RTP/SCS**~~
- ~~**Updated SCS for 2016 RTP/SCS**~~
- ~~**Overview of Active Transportation Strategy in the 2012 RTP/SCS**~~
- ~~**Progress update on Active Transportation Strategy and emerging issues and their implications to the 2016 RTP/SCS**~~
- **Draft 2016-2040 RTP/SCS Datasets for two Scenarios 1) Local Input 2) Updated 2012-35 RTP/SCS and analysis relative to HQTAs, TPAs and Local Specific Plans**
- **Preview of the Progress Report/General Framework presentation for the 2016 RTP/SCS to be given at the February 5 Joint Regional Council/Policy Committee Meeting**

**February 2015**

- Program EIR
- Overview of RTP/SCS Transit Element
- Overview of RTP/SCS Passenger Rail Element
- **2015 Active Transportation Program**
- **Public Health Framework for 2016-2040 RTP/SCS**
- **Environmental Justice Framework**
- **Draft Scenario Planning Matrix**
- **2015 Local Profiles Status Update**
- **Best Practices Research Project Status Update**

**March 2015**

- **Affordable Housing Sustainable Communities Grant Criteria**
- **Draft Scenario Matrix**
- **2016 RTP/SCS Performance Measures**
- **Asset Management and Condition Overview**
- **Active Transportation Program (ATP) Regional Guidelines**
- **2016 RTP/SCS Active Transportation Progress Update**
- **California Transportation Plan 2040**
- ~~Public Participation Plan~~

**April 2015**

- **Progress Update on Active Transportation and the 2016 RTP/SCS**
- **Public Health Analysis Framework**
- **Scenario Planning Model**
- ~~**Overview of Goods Movement (GM) Strategy in the 2012 RTP/SCS with a focus on technical assumptions (including technology assumptions)/data/analysis**~~
- ~~**Progress update on the GM Strategy with focus on emerging issues and implications on the 2016 RTP/SCS**~~

**May 2015**

- Overview of Aviation Program Update in the RTP/SCS
- **2016 RTP/SCS Performance Measures**

- **Scenario Planning Model- Performance Results**
- **Overview of Highways/Arterials in the RTP/SCS**
- **2016 RTP/SCS Workshop Overview and Schedule**
- **Progress update on the PEIR development for the 2016 RTP/SCS**

**June 2015**

- Progress update on 2012 RTP/SCS revenue/cost
- Potential changes/focus areas and emerging issues in the 2016 RTP/SCS
- **Overview of HOV/HOT/Toll Roads/Express Lanes in the RTP/SCS with a focus on technical assumptions/analysis**
- **Progress update and emerging issues related to HOV/HOT/Toll Roads/Express Lanes**

**July 2015**

- Transportation Conformity
- **Progress status of TDM/TSM and emerging issues**
- **Overview of TDM/TSM in the 2012 RTP/SCS, including underlying assumptions**

**August 2015**

- Finance Plan for 2016 RTP/SCS
- Updated GM Strategy for the 2016 RTP/SCS
- Updated Transit Strategy for the 2016 RTP/SCS
- Updated Active Transportation Strategy for the 2016 RTP/SCS
- Highways Improvement Element in the 2016 RTP/SCS
- Updated Aviation Element of the 2016 RTP/SCS
- Updated TDM/TSM Element for the 2016 RTP/SCS

Note: The Agenda Outlook is intended as a reference for TWG and is subject to change as needed and appropriate as things progress.

Legend:

Light Grey Font: Items already presented

Regular Grey Font: Future Agenda Items

Bold Face Fonts: New or revised Agenda Items

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 3 Attachment:
2016 RTP/SCS Policy Committee Meeting
Agenda Outlook

**2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)**
**Potential Policy Committee Meetings Outlook**

| 2015 Meeting Dates | Topic | Committee[1] | | | |
|---|---|---|---|---|---|
| | | Joint | TC | CEHDC | EEC |
| March 5 | Draft Scenario Planning Matrix | | X | X | X |
| | Environmental Justice Framework | | X | X | X |
| | Public Health Planning & Analysis Framework | | X | X | X |
| | Release of Notice of Preparation of Program Environmental Impact Report (PEIR) | | | | X |
| April 2 | Focus on System Operation and Preservation | X | | | |
| May 7 | Draft Scenario Planning and SCS Workshops Rollout | General Assembly | | | |
| June 4 | Performance Measures and Goals | X | | | |
| | Active Transportation | | X | | |
| | Rail and Transit | | X | | |
| | Regional Aviation | | X | | |
| | Regional Goods Movement | | X | | |
| | Transportation Finance | | X | | |
| | Growth Forecast/Land Use & Transit-Oriented Development Strategies | | | X | |
| | 2016 South Coast Air Quality Management Plan | | | | X |
| | Administrative Draft PEIR | | | | X |
| | Public Health | | | | X |
| June 18 | Special Meeting - topics TBD on as-needed basis | X | | | |
| July 2 | Base Year and No-Build (Baseline) System Performance | | X | | |
| | Emerging Technology Consideration in 2016 RTP/SCS | | X | | |
| | Active Transportation | | | X | X |
| | Public Health | | | X | X |
| | Environmental Justice, Policy Choices & Mitigations | | | | X |
| | PEIR Approaches to Mitigation Measures | | | | X |
| July 16 | Special Meeting - topics TBD on as-needed basis | X | | | |
| August 6 | Summary of Findings from Workshops & How Incorporated into Draft Plan | X | | | |
| | PEIR Approaches to Alternatives | X | | | |
| | Draft Transportation Finance Plan | X | | | |
| September 3 | Review and Consider Staff Recommendation on All Elements of Draft 2016 RTP/SCS | X | | | |
| | PEIR Findings, Draft Technical Studies, and Draft PEIR | X | | | |
| | Draft Transportation Conformity Determination | X | | | |
| | Transmittal of Draft 2016 South Coast Air Quality Management Plan Appendix IV-C | X | | | |
| October 8 | Consideration of the Release of Draft PEIR and Draft 2016 RTP/SCS | X | | | |

[1] Committee abbreviations include (in order of appearance): Joint (Joint Policy Committee); TC (Transportation Committee); CEHDC (Community, Economic & Human Development Committee); and EEC (Energy & Environment Committee).

[2] Meeting may not be necessary depending on progress. If it were to occur, it could allow the September 3 meeting to be more targeted in its focus.

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 4 Attachment: (Under Separate Cover)
2016-2040 RTP/SCS Preliminary Scenarios -
Modeling Results

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 5 Attachment:
2016 RTP/SCS Performance Measures

# 2016 RTP/SCS Performance Measures Update (Part 2: Monitoring)

## Technical Working Group

May 21, 2015

Ping Chang & Naresh Amatya
SCAG Staff

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS
50 YEARS

# Presentation Outline

- Performance (Monitoring) Measures Background
- Considerations for 2016 Monitoring Measures Updates
- Highlights of Proposed 2016 Monitoring Measures Updates

# Performance Measures for Monitoring Background

- Performance measures used to track progress after plan adoption
- Included in the 2012 RTP/SCS for the first time
- A key component of performance-based planning
- Should be generally consistent with the overall framework of performance measures used to develop the plan, but may not have the same measures in some cases
- Provide a focus but not constraint for monitoring

# Considerations for 2016 RTP/SCS Monitoring Measures Update

- SB 375 requirement of an integrated land use/transportation plan generated needs to go beyond transportation-focused measures
  - Need to address land use/urban form
  - Need to address co-benefits in resources efficiency
- Need to address MAP-21 requirements as feasible since rulemaking still in progress

# Considerations for 2016 RTP/SCS Monitoring Measures Update (cont'd)

- Protect the health of residents through cleaner environment and active transportation is an RTP/SCS goal
- Delete measures without consistent or reliable data
- Delete measures that are similar to other measures to focus monitoring efforts

# 2016 RTP/SCS Monitoring Measures
# Proposed Categories

1) Location Efficiency*
2) Mobility and Accessibility*
3) Reliability*
4) Productivity*
5) Safety and Health*
6) Environmental Quality*
7) System Sustainability**
8) Resource Efficiency**

* 2012 RTP/SCS monitoring measure categories

** Proposed new categories for 2016 RTP/SCS Monitoring Measures

# 2016 RTP/SCS Monitoring Measures Proposed Additions

1) Location Efficiency
   - VMT/per capita
   - Mode share of transit
   - Transit trips per capita
2) Mobility & Accessibility (No change from 2012)
3) Reliability (No change)
4) Productivity (No change)
5) Safety and Health
   - Mode share of walking and biking

# 2016 RTP/SCS Monitoring Measures Proposed Additions (cont'd)

6) Environmental Quality (No change)
7) System Sustainability
   - State highway system pavement condition
   - Local roads pavement condition
8) Resource Efficiency
   - Urban water consumption per capita
   - Energy (electricity, natural gas, vehicle fuel) consumption per capita

* See Table 3 attached for further details on monitoring measures

# 2016 RTP/SCS Monitoring Measures Proposed Deletions

1) Location Efficiency

- Percent of households with walk access to neighborhood services (lack of reliable data)
- Percent of existing and new below market rental housing units in TOD area (lack of reliable data)
- Percent of jobs within 15 minutes walk of transit (overlap with other measures)
- Percent of population within 1/2mile (or 10 minute walk) of high frequency transit stop (every 10 minutes during peak periods) (overlap with other measures)

# 2016 RTP/SCS Monitoring Measures Proposed Deletions (cont'd)

5) Safety and Health

- Percent of households living > 65 decibels noise (lack of reliable data)

# 2016 RTP/SCS Monitoring Measures Update Summary

- Achieve a more balanced set of monitoring measures
- Ensure data availability for measures
- Prepare to align with MAP-21 requirements (e.g., system sustainability measures) while its rule-making is still in progress
- Utilize CALOTS (currently undergoing upgrade) to support local jurisdictions to track change and progress at jurisdictional and sub-jurisdictional levels for selected measures

# 2016 RTP/SCS Performance Measures Update Timeline

March 19, 2016 – TWG Meeting on Proposed Performance Measures Update (Part 1)

April 16, 2015 – TWG Meeting on Proposed Performance Measures Update (Part 2: Monitoring) (postponed to May 21)

May 21, 2015 – TWG Meeting on Proposed Performance Measures Update (Part 2: Monitoring)

June 18, 2015 – Joint Policy Committee Meeting on Goals & Performance Measures

# For Further Information

Please contact:

Ping Chang, Chang@scag.ca.gov, 213-236-1839

Naresh Amatya, Amatya@scag.ca.gov, 213-236-1885

Thank you!

**Table 3: Proposed 2016-2040 RTP/SCS Performance Measures for Monitoring (Proposed Update from 2012 RTP/SCS)**
**(DRAFT for DISCUSSION ONLY, May 19, 2015)**

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| Location Efficiency | Share of growth in High Quality Transit Areas | Share of the region's growth in households and employment in High Quality Transit Areas | Improvement over Base Year | American Community Survey<br>SCAG GIS database |
| | Land consumption | Number of acres of agricultural land changed to urban uses | Improvement over Base Year | California Farmland Mapping and Monitoring Program |
| | Vehicle Miles Traveled (VMT) per capita | | Improvement over Base Year | Highway Performance Monitoring System |
| | Mode share of transit | The share of transit of work and non-work trips | Improvement over Base Year | American Community Survey<br>California Household Travel Survey |
| | Transit trips per capita | | Improvement over Base Year | National Transit Database |
| | Annual household transportation cost | Annual household spending on transportation Including costs of vehicle owner-ship, operation and maintenance, and public transportation | Improvement over Base Year | Center for Neighborhood Technology |
| | ~~Percent of households with walk access to neighborhood services~~ | ~~New measure, but further research needed~~ | ~~Improvement over Base Year~~ | ~~N/A~~ |
| | ~~Percent of existing and new below-market rental housing units in Transit Oriented Development (TOD) area~~ | ~~New measure, but further research needed~~ | ~~Improvement over Base Year~~ | ~~N/A~~ |
| | Percent of income spent on housing and transportation | The share of household income spent on both housing and transportation | Improvement over Base Year | U.S. Bureau of Labor Statistics and American Community Survey |

**Table 3: Proposed 2016-2040 RTP/SCS Performance Measures for Monitoring (Proposed Update from 2012 RTP/SCS) (Cont'd)**
**(DRAFT for DISCUSSION ONLY, May 19, 2015)**

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| | ~~Percent of jobs within 15 minutes' walk of transit~~ | ~~Pending availability of data~~ | ~~Improvement over Base Year~~ | ~~N/A~~ |
| | ~~Percent of population within 1/2 mile (or 10 minute walk) of high frequency transit stop (every 10 minutes during peak periods)~~ | ~~Pending availability of data~~ | ~~Improvement over Base Year~~ | ~~SCAG GIS database~~ |
| Mobility and Accessibility | Highway non-recurrent delay for mixed flow and high occupancy lanes | Delay that is caused by accidents, incidents, weather, planned lane closures, special events, or other atypical traffic patterns | Improvement over Base Year | Caltrans Performance Measurement System (PeMS) |
| | Mode share of work trips | | Improvement over Base year | American Community Survey |
| | Travel time to work | Average travel time to work | Improvement over Base year | American Community Survey |
| Reliability | Variability of travel time for auto | Day-to-day change in travel times experienced by auto travelers | Improvement over Base Year | Caltrans Performance Measurement System (PeMS) |
| | Variability of travel time for trucks | Day-to-day change in travel times experienced by trucks | Improvement over Base Year | Caltrans Performance Measurement System (PeMS) |
| Productivity | Lost lane miles for highways, per- cent seat miles utilized for transit | Percent utilization during peak demand conditions | Improvement over Base Year | N/A |
| Safety and Health | Collision/accident rates by severity by mode | ~~Injury and fatality rates per million vehicle miles~~ Accident and fatality rates per 100 million vehicle miles by mode (all, bicycle/pedestrian) Number of fatalities and serious injuries by mode (all, bicycle/pedestrian) | Improvement over Base Year ~~"0" for all accident types and modes~~ | Caltrans Performance Measurement System (PeMS), Traffic Accident Surveillance and Analysis System (TASAS) |
| | Mode share of walking and biking | Mode share of walking and biking for work and | Improvement over Base Year | American Community Survey California Household Travel survey |

**Table 3: Proposed 2016-2040 RTP/SCS Performance Measures for Monitoring (Proposed Update from 2012 RTP/SCS) (Cont'd)**
**(DRAFT for DISCUSSION ONLY, May 19, 2015)**

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| | | non-work trips | | |
| | Daily amount of walking and biking related to work and non-work trips (Moved from "Location Efficiency") | ~~New measure, but further research needed~~ Percent of population who had walk or bike trips during the day by age group Number of minutes of walking and biking for those who had walk or bike trips by age group | Improvement over Base Year | California Household Travel Survey ~~N/A~~ |
| | Asthma incidence and exacerbations | The share of population in the region who are ever diagnosed with asthma | Improvement over Base Year | California Health Interview Survey |
| | | The share of population with asthma who had emergency room visits | Improvement over Base Year | California Health Interview Survey |
| | ~~Percent of households living >65 decibels noise~~ | ~~New measure, but further research needed~~ | ~~Improvement over Base Year~~ | ~~N/A~~ |
| | Percent of households living <500 feet from high-volume roadways | The share of total households that live within 500 feet from a high volume which is defined as traffic volume of over 100,000 vehicles per day in urban 50,000 vehicles per day in rural areas. | Improvement over Base Year | SCAG GIS database |
| | Pre-mature deaths due to PM2.5 | The number of pre-mature deaths due to long-term population exposure to which is estimated from monitored or modeled concentration of PM2.5 | Improvement over Base Year | California Air Resources Board |

**Table 3: Proposed 2016-2040 RTP/SCS Performance Measures for Monitoring (Proposed Update from 2012 RTP/SCS) (Cont'd)**
**(DRAFT for DISCUSSION ONLY, May 19, 2015)**

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| | Percent of residents within 1/2 mile walk to parks and open space (Moved from "Location Efficiency") | New measure, but further research needed | Improvement over Base Year | N/A |
| | Number of acres of parks for every 1,000 residents (Moved from "Location Efficiency") | Number of acres of parks (including local, regional and beach parks) for every 1,000 residents | Improvement over Base Year | SCAG GIS database |
| Environmental Quality | Ambient air quality conditions | The existing condition of air quality in the various air basins | Improvement over Base Year | ~~Pending availability of data~~ California Air Resources Board |
| System Sustainability | State Highway System Pavement Condition | Share of distressed lane miles of State Highway System | Improvement over Base Year | Pavement Management System (Caltrans) |
| | Local Roads Pavement Condition | Pavement Condition Index (PCI) on Local Roads | Improvement over Base Year | Local Arterial Survey Database |
| Resource Efficiency | Energy consumption ~~Annual household energy use (transportation + space heating)~~ (Moved from "Location Efficiency") | Energy (electricity, natural gas, vehicle fuel) consumption per capita | Improvement over Base Year | ~~Pending availability of data~~ California Energy Commission California Department of Transportation |
| | ~~Annual household w~~Water consumption (Moved from "Location Efficiency") | Urban water consumption per capita ~~Annual household water consumption in number of gallons~~ | Improvement over Base Year | Pending availability of complete data Metropolitan Water District |

**Rationales for the Proposed Enhancement of Performance Measures Framework for the 2016-2040 RTP/SCS**

**May 19, 2015 (Draft)**

## Introduction

At the March 19, 2015 Technical Working Group (TWG) meeting, SCAG staff provided a PowerPoint presentation on the proposed enhancement of Performance Measures (PMs) Framework for the 2016 RTP/SCS building upon the PMs for the 2012 RTP/SCS. (The PowerPoint could be viewed at http://www.scag.ca.gov/committees/CommitteeDocLibrary/twg031915fullagn.pdf)
This brief paper provides additional information on the rationales for the proposed enhancement.

It is important to note at the beginning that in addition to transportation performance measures, measures of co-benefits and Environmental Justice (EJ) were already referred to as "performance measures" in the 2012 RTP/SCS and used to measure the plan performance. Nevertheless, measures of co-benefits and EJ were *not* included in the table of adopted performance measures in 2012 RTP/SCS. Staff proposes to include both measures of co-benefits and EJ as adopted performance measures for the 2016 RTP/SCS as further described below.

## Background

While neither MAP-21 nor SB 375 contains a definition of "performance measures", "performance measures" are generally defined as those quantitative indicators that measure the extent to achieve the plan goals or objectives.

Based on the purpose of application, there are two types of performance measures. One includes those performance measures that are used to estimate performance of the scenarios and final plan in the future, or future performance-based PMs. Another includes those performance measures for on-going monitoring, or past monitoring-based PMs. The future performance-based PMs are generally estimated through forecast models while past-monitoring-based PMs are generally estimated from empirical observations such as Census surveys or travel surveys. Accordingly, they may not be the same.

## Summary of the Performance Measures Framework for the 2012 RTP/SCS

- Included both future performance- based as well as past monitoring-based PMs.
- Only future performance- based PMs which focus on measures of transportation performance were included in the table of adopted PMs.
- Measures of RTP/SCS co-benefits (land consumption, energy consumption, water consumption, local fiscal impacts & public health) were all referenced as "performance measures" though not included in the table of adopted PMs (except land consumption).
- Measures of Environmental Justice were also referenced as "performance measures" though not included in the table of adopted PMs.

**Proposed Framework Enhancement for 2016 RTP/SCS Performance Measures**

- Continue to include the two types of performance measures: future performance-based as well as past monitoring-based.

- Future performance-based PMs will include, in addition to transportation performance measures, performance measures of co-benefits and social equity. They will then be categorized into two groups: core performance measures and additional performance measures. Both groups will be considered as adopted PMs.

- All federal and state requirements will be addressed through core performance measures

**Rationales of the Proposed PM Framework Enhancement for 2016 RTP/SCS:**

- **Measures of co-benefits and EJ were already referred to as performance measures in the adopted 2012 RTP/SCS**

- **Performance measures should address federal and state requirements**
  - Proposed PM framework enhancement will address federal requirements in EJ/Title VI, in addition to MAP-21 and transportation conformity, and state requirements in GHG reduction targets. Accordingly, staff proposes to include EJ performance measures as part of the adopted performance measures.

- **The need to consider performance measures beyond transportation measures**
  - With the passage of SB 375 in 2008, the RTP/SCS is a regional plan integrating transportation and land use, and not focusing solely on transportation. Accordingly, performance measures should not be limited to measure the impacts from transportation (e.g., mobility & air quality), but also other impacts from integrating land use and transportation (e.g., energy & water consumption, public health and local fiscal impacts).

  - The 2012 RTP/SCS already recognized the broader nature of performance from RTP/SCS than the earlier RTPs. For example, page 180 of the 2012 RTP/SCS states the following: "In addition to the transportation performance results discussed above, the RTP/SCS's more focused land pattern, increased investments in transit, and support of communities that foster walk and bike modes as serious transportation options leads to additional benefits in fiscal, economic, environmental, and other quality-of-life performance measures." The "transportation performance results" referred to the fact that the adopted PMs focus only on transportation performance measures.

- **Performance measures should reflect the vision and goals of the RTP/SCS**
  - The 2016 RTP/SCS is expected to making further progress in pursuing the vision and goals adopted in the 2012 RTP/SCS, including the vision for mobility, *economy* & *sustainability*.

  - In addition, the 2012 RTP/SCS also has specific goals to protect the *environment* and *health* of our residents, and also to encourage *energy* efficiency (2012 RTP/SCS, page 13).

Accordingly, the proposed PM framework enhancement includes public health, and resource efficiency measures (energy, water, local fiscal impacts) which respond directly to the vision and goals of the RTP/SCS. Those resource efficiency measures address the vision of both economy and sustainability.

- Resource efficiency in energy and water is also critical to the future of the SCAG region as the region has historically relied on other regions for both energy and water. In addition, conserving energy and water through more compact development patterns further contributes to GHG reductions (currently unaccounted for under SB 375) as both energy production and transporting water hundreds miles away generate GHG emissions.

- **Performance measures should be used to estimate performance of scenarios/alternatives during the plan development process**
  - Specifically, performance measures are those indicators used to estimate the performance of various scenarios and not just measure the performance of the preferred scenario after it is selected.

  - In the 2016 RTP/SCS process, measures of transportation performance, co-benefits (e.g., energy and water consumption, public health), and environmental justice will all be used to analyze the performance of various plan scenarios in addition to the final plan.

- **State of the Practice**
  - Regions across the state with similar mandates and facing comparable issues include performance measures that reflect their vision and goals of their regional plans, such as "healthy communities, vibrant economy, and innovative mobility and planning."

**Table 1: Proposed 2016 RTP/SCS Core Performance Measures* (March 16, 2015 Draft)**

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| Location Efficiency | Share of growth in High Quality Transit Areas (HQTAs) | Share of the region's growth in households and employment in HQTAs | Improvement over No Project Baseline | ~~Census (including annual American Community Survey), InfoUSA~~RTP/SCS Socio-economic small area data |
| | Land consumption | ~~Additional land needed for development that has not previously been developed or otherwise impacted, including agricultural land, forest land, desert land and other virgin sites~~ *Greenfield land consumed* *Refill land consumed* | Improvement over No Project Baseline | ~~Rapid Fire~~ *Scenario Planning* Model |
| | *Vehicle Miles Traveled (VMT) per capita* | | *Improvement over No Project Baseline* | *Travel Demand Model* |
| | *Mode share of transit* | *The share of transit of work and non-work trips respectively* | *Improvement over No Project Baseline* | *Travel Demand Model* |
| | Average distance for work or non-work trips | The average distance traveled for work or non-work trips separately | Improvement over No Project Baseline | Travel Demand Model |
| | Percent of ~~work~~ trips less than 3 miles | The share of ~~total~~ work and non-work trips which are fewer than 3 miles respectively | Improvement over No Project Baseline | Travel Demand Model |
| | Work trip length distribution | The statistical distribution of work trip length in the region | Improvement over No Project Baseline | Travel Demand Model |
| Mobility and Accessibility | Person delay per capita | Delay per capita can be used as a supplemental measure to account for population growth impacts on delay. | Improvement over No Project Baseline | Travel Demand Model |
| | Person delay by facility type (mixed flow, HOV, arterials) | Delay – excess travel time resulting from the difference between a reference speed and actual speed. | Improvement over No Project Baseline | Travel Demand Model |
| | Truck delay by facility type (Highway, Arterials) | Delay – excess travel time resulting from the difference between a reference speed and actual speed. | Improvement over No Project Baseline | Travel Demand Model |

## Table 1: 2016 RTP/SCS Core Performance Measures (Cont'd)

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| | Travel time distribution for transit, SOV, HOV for work and non-work trips | Travel time distribution for transit, SOV, HOV for work and non-work trips | Improvement over No Project Baseline | Travel Demand Model |
| Safety and Health | Collision/accident rates by severity by mode | Accident rates per 100 million vehicle miles by mode (all, bicycle/pedestrian ~~and fatality/killed~~) Number of fatalities and serious injuries by mode (all, bicycle/pedestrian) | Improvement over Base Year | CHP Accident Data Base, Travel Demand Model Mode Split Outputs |
| | Criteria pollutants emissions | CO, NOX, PM2.5, PM10, and VOC | Meet Transportation Conformity requirements | Travel Demand Model /ARB EMFAC Model |
| | Air pollution-related health measures[1] | Respiratory/pollution-related disease incidence and costs | Improvement over No Project Baseline | Scenario Planning Model |
| | Physical activity-related health measures[2] | Physical activity/weight related incidence and costs | Improvement over No Project Baseline | Scenario Planning Model |
| | Mode share of walking and biking | Mode share of walking and biking for work and non-work trips respectively | Improvement over No Project Baseline | Travel Demand Model |
| Environmental Quality | Criteria pollutant and greenhouse gas emissions | CO, NOX, PM2.5, PM10, and VOC Per capita greenhouse gas emissions (CO2) | Meet Transportation Conformity requirements and SB 375 per capita GHG reduction targets | Travel Demand Model /ARB EMFAC Model |
| Economic Well Being | Additional jobs supported by improving competitiveness | Number of jobs added to the economy as a result of improved transportation conditions which make the region more competitive | Improvement over No Project Baseline | Regional Economic Model REMI |
| | Additional jobs supported by transportation investment | Total number of jobs supported in the economy as a result of transportation expenditures. | Improvement over No Project Baseline | Regional Economic Model (REMI) |
| | Net contribution to Gross Regional Product | Gross Regional Product due to transportation investments and increased competitiveness | Improvement over No Project Baseline | Regional Economic Model (REMI) |
| Investment Effectiveness | Benefit/Cost Ratio | Ratio of monetized user and societal benefits to the agency transportation costs | Greater than 1.0 | California Benefit Cost Model |

## Table 1: 2016 RTP/SCS Core Performance Measures (Cont'd)

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| System Sustainability | Cost per capita to preserve multi-modal system to current and state of good repair conditions | Annual costs per capita required to preserve the multi-modal system to current conditions | Improvement over Base Year | Estimated using SHOPP Plan and recent California Transportation Commission 10-Year Needs Assessment |
| | State Highway System Pavement Condition | Distressed share of State Highway Lane miles | Improvement over No-Project Baseline | Pavement Management System (Caltrans) |
| | Local Roads Pavement Condition | Pavement Condition Index (PCI) on Local Roads | Improvement over No-Project Baseline | Local Arterial Survey Database |
| Environmental Justice | *See Table 2 for details* | *See Table 2 for details* | *No unaddressed disproportionately high or adverse effects for low income or minority communities* | *See Table 2 for details* |

***Please also see Table 2 on 2016 RTP/SCS Additional Performance Measures.**

1. **Performance measures used in the Scenario Planning stage of the 2012 RTP/SCS using the Rapid Fire Model**
2. **Performance measures expected from the new health module (in process of completion) in the Scenario Planning Model**

**Acronyms:**

**CHP: California Highway Patrol**
**EMFAC: Emissions Factors**
**SHOPP: State Highway Operation and Protection Program**

## Table 2: Proposed 2016 RTP/SCS Additional Performance Measures* (March 14, 2015 Draft)

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| **Resource Efficiency** | *Energy consumption (buildings)* [1] | *Residential energy use*<br>*Commercial energy use*<br>*Building related total energy costs*<br>*Building related GHG emission* | *Improvement over No Project Baseline* | *Scenario Planning Model* |
| | *Water consumption (buildings)*[1] | *Indoor and outdoor water use*<br>*Water costs*<br>*Water related energy use*<br>*Water related GHG emissions* | *Improvement over No Project Baseline* | *Scenario Planning Model* |
| | *Local Fiscal Impacts*[1] | *Capital costs for local infrastructure (local streets, water, wastewater, sewage, local parks)*<br>*Operation and maintenance costs*<br>*Local tax and fee revenues* | *Improvement over No Project Baseline* | *Scenario Planning Model* |
| **Environmental Justice**** | *RTP revenue source in terms of tax burdens*[2] | Proportion of RTP/SCS revenue sources (taxable sales, income, and gasoline taxes) for low income and minority populations | No unaddressed disproportionately high or adverse effects for low income or minority communities | Census Data, BLS Consumer Expenditure Survey Data, BOE Taxable Sales Data, SCAG's Integrated Growth Forecast |
| | *Share of transportation system usages*[2] | Comparison of transportation system usage by mode for low income and minority households vs. share of each groups' in the greater region | No unaddressed disproportionately high or adverse effects for low income or minority communities | NHTS, SCAG's Integrated Growth Forecast |
| | *RTP/SCS investments*[2] | Allocation of RTP/SCS investments by mode (bus, HOV lanes, commuter/high speed rail, highways/arterials, and light/heavy rail transit) | No unaddressed disproportionately high or adverse effects for low income or minority communities | RTP/SCS Finance Strategy Data, Integrated Growth Forecast, RTP/SCS TDM Output |
| | *Distribution of travel time savings and travel distance reductions*[2] | Details what groups are overall benefiting as a result of the Plan in terms of travel time and distance savings | No unaddressed disproportionately high or adverse effects for low income or minority communities | NHTS, SCAG's Integrated Growth Forecast, RTP/SCS TDM Output |
| | *Job-housing imbalance or* | Comparison of median earnings for | Establishing existing conditions – not | Census PUMS |

## Table 2: 2016 RTP/SCS Additional Performance Measures (Cont'd)

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| | *job-housing mismatch*[2] | intra-county vs. inter-county commuters for each of the six counties in the SCAG region | a performance measure for the Plan | |
| | *Accessibility to employment and services*[2] | The percentage of the population who can travel between work and home or between retail stores and home within 45 minutes during the morning peak period for both rail transit, bus, and auto modes | No unaddressed disproportionately high or adverse effects for low income or minority communities | InfoUSA Employment Data, RTP/SCS TDM Output, Census Data, SCAG's Integrated Growth Forecast, NHTS |
| | *Accessibility to parks*[2] | The percent of population who can reach local, state, or national parks within 45 minutes of travel via rail transit, bus, and auto modes | No unaddressed disproportionately high or adverse effects for low income or minority communities | SCAG's Parcel Level Land Use Data, California Protected Areas Database (CPAD), RTP/SCS TDM Output, Integrated Growth Forecast, NHTS |
| | *Gentrification and displacement*[2] | Examination of historical and projected demographic and housing trends for areas surrounding rail transit stations. | No unaddressed disproportionately high or adverse effects for low income or minority communities | High Quality Transit Areas (HQTAs), Census Data, NHTS |
| | *Air quality health impacts along freeway and highly traveled corridors*[2] | Historical emissions and health data summarized for areas that have a high concentration of minority and low income population. Tabulation of health improvements resulting from the Plan. | Historical data used to establish existing conditions – not a performance measure of the Plan. Otherwise, no unaddressed disproportionately high or adverse effects for low income or minority communities | ARB Historical Emissions Data, SCAG's Integrated Growth Forecast |
| | *Environmental impacts of plan and baseline scenarios*[2] | Comparison of Plan and Baseline Scenarios; identification of areas that are lower performing as a result of the Plan, along with a breakdown of demographics for these areas | No unaddressed disproportionately high or adverse effects for low income or minority communities | RTP/SCS Small Area Emissions Data (Base Year, Baseline & Plan) |
| | *Aviation noise impacts*[2] | Comparison of Plan and Baseline Scenarios; breakdown of population by race and ethnicity for low performing airport noise impacted | No unaddressed disproportionately high or adverse effects for low income or minority communities | Projected Noise Impacts from Aircraft Operations for 2035 (from PEIR), SCAG's Integrated Growth Forecast |

## Table 2: 2016 RTP/SCS Additional Performance Measures (Cont'd)

| Outcome | Performance Measure/ Indicator | Definition | Performance Target | Data Sources Used |
|---|---|---|---|---|
| | | areas | | |
| | *Roadway noise impacts*[2] | Comparison of Plan and Baseline Scenarios , identification of areas that are low performing as a result of the Plan; breakdown of population for these impacted areas by race/ethnicity and income | No unaddressed disproportionately high or adverse effects for low income or minority communities | RTP/SCS TDM Output, SCAG's Integrated Growth Forecast |
| | *Active Transportation Hazard* | Comparison of Plan and Baseline Scenarios , identification of areas that are low performing as a result of the Plan; breakdown of population for these impacted areas by race/ethnicity and income | No unaddressed disproportionately high or adverse effects for low income or minority communities | RTP/SCS TDM Output, SCAG's Integrated Growth Forecast, SWITRS Data |
| | *Rail-related impacts*[2] | Breakdown of population by race and ethnicity for areas in close proximity to rail corridors and planned grade separations | No unaddressed disproportionately high or adverse effects for low income or minority communities | Rail Network Geodata, Rail Traffic Data, Grade Separations Geodata, Census Data, SCAG's Integrated Growth Forecast |

*** Please also see Table 1: 2016 RTP/SCS Core Performance Measures**
****Under Environmental Justice, additional information is included in the 2012 RTP/SCS Environmental Justice Technical Appendix.**

**1. Performance measures used in the Scenario Planning stage of the 2012 RTP/SCS using the Rapid Fire Model**
**2. Performance measures used in the Environmental Justice Analysis of the 2012 RTP/SCS**

**Acronyms:**

**BLS: Bureau of labor Statistics**
**BOE: Board of Equalization**
**HOV: High-occupant Vehicles**
**NHTS: National Household Travel**
**SWITRS: (California) Statewide Traffic Records System**

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 6 Attachment:
2016 RTP/SCS Open House Overview and Schedule

WHAT IS THE
**BIGGEST CHALLENGE**
FACING YOUR COMMUNITY?

HOW DO WE
**IMPROVE TRANSPORTATION**
IN SOUTHERN CALIFORNIA?

2016 2040 RTPSCS

**HELP PLAN THE FUTURE OF SOUTHERN CALIFORNIA**

- JOBS
- AIR QUALITY
- HOUSING
- GREEN SPACE
- ACTIVE TRANSPORTATION
- PUBLIC HEALTH
- GOODS MOVEMENT
- POVERTY
- TRAFFIC & MOBILITY

OPEN HOUSE INFORMATION ON THE REVERSE SIDE →
BE SURE TO VISIT **SCAGRTPSCS.NET**

# WE NEED YOUR INPUT

# PLAN TO ATTEND AN OPEN HOUSE IN YOUR COMMUNITY

Provide feedback on important issues in the region such as Traffic & Congestion, Housing, Air Quality & Green Spaces, Public Health and the Economy. There will be no formal presentation and topics can be explored at your own pace. Your input will help SCAG develop guiding policies to be included in the Draft RTP/SCS, scheduled for release in October.

## IMPERIAL COUNTY

**May 26, 3:00 p.m. – 5:00 p.m.**
Imperial County Workforce Development Board Room
2799 S. 4th St., El Centro, CA 92243

## LOS ANGELES COUNTY

**June 15, 9:00 a.m. – 11:00 a.m.**
City of Culver City, Patacchia Conference Room – First Fl.
9770 Culver Blvd., Culver City, CA 90232

**June 16, 10:30 a.m. – 12:30 p.m.**
Calabasas City Hall, Multi-Purpose Room (Library)
100 Civic Center Way, Calabasas, CA 91302

**June 22, 10:00 a.m. – 12:00 p.m.**
Canyon Rooms at the Activities Center
20880 Centre Pointe Parkway, Santa Clarita, CA 91350

**June 24, 9:00 a.m. – 11:00 a.m.**
Carson Community Center
801 East Carson St., Carson CA 90745

**June 25, 6:00 p.m. – 8:00 p.m.**
Gateway Cities COG Office
16401 Paramount Blvd., Paramount, CA 90723

**June 29, 9:00 a.m. – 11:00 a.m.**
Monrovia Community Center – Senior Game Room
119 W. Palm Ave., Monrovia, CA 91016

## ORANGE COUNTY

**June 18, 6:00 p.m. – 8:00 p.m.**
Aliso Viejo City Council Chambers
12 Journey, Suite 100, Aliso Viejo, CA 92656

**June 23, 5:00 p.m. – 7:00 p.m.**
CSU, Fullerton - Mihaylo Hall, O'Brien Conference Room
2601 Nutwood Avenue, Fullerton, CA 92831

**June 25, 12:00 p.m. – 2:00 p.m.**
OCTA Building, Room 103/104
600 S. Main St., Orange, CA 92863

## RIVERSIDE COUNTY

**May 27, 10:30 a.m. – 12:30 p.m.**
Palm Desert Public Library, Community Room
73-300 Fred Waring Dr., Palm Desert, CA 92260

**May 27, 5:00 p.m. – 7:00 p.m.**
City of Coachella, Coachella Corporate Yard
53-462 Enterprise Way, Coachella, CA 92236

**May 28, 10:00 a.m. – 12:00 p.m.**
City of Perris, Council Chambers
101 N D St., Perris, CA 92570

**June 2, 4:30 p.m. – 6:30 p.m.**
Downtown Library
3581 Mission Inn Ave., Riverside, CA 92501

## SAN BERNARDINO COUNTY

**May 28, 5:30 p.m. – 7:30 p.m.**
Ontario Senior Center, Multi-Purpose Room
225 E. "B" St., Ontario, CA 91764

**June 2, 9:30 a.m. – 11:30 a.m.**
Victorville City Hall, Training Room 1 & 2
14343 Civic Dr., Victorville, CA 92393

**June 3, 8:30 a.m. – 10:30 a.m.**
SANBAG Santa Fe Depot, Tile Room
1170 W. 3rd St., San Bernardino, CA 92410

## VENTURA COUNTY

**June 16, 5:00 p.m. – 7:00 p.m.**
City of Moorpark, Community Center - Citrus Room
799 Moorpark Ave., Moorpark, CA 93021

**June 17, 1:00 p.m. – 3:00 p.m.**
Camarillo Airport, Assembly Room
555 Airport Way, Suite B, Camarillo, CA 93010

**June 17, 5:00 p.m. – 7:00 p.m.**
Camarillo Airport, Assembly Room
555 Airport Way, Suite B, Camarillo, CA 93010

¿Necesita ayuda de intérprete durante una de nuestras reuniones? Para solicitar un intérprete, sírvase comunicarse por correo electrónico al: **rtpscs@scag.ca.gov** por lo menos 72 horas antes de la reunión.

會議參加者若在會議中需要翻譯服務,請在參加會議開始前的72小時內電子郵件寄至 rtpscs@scag.ca.gov 提出翻譯服務要求。

통역이 필요한 경우 회의 시작하기 72 시간 전에 **rtpscs@scag.ca.gov** 에 이메일을 보내셔서 통역을 요청하시기 바랍니다.

Cần phiên dịch ở một trong những buổi họp của chúng tôi? Quý vị có thể yêu cầu một thông dịch viên qua email **rtpscs@scag.ca.gov** trước 72 tiếng.

50 YEARS SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

**For more information, visit scagrtpscs.net or email rtpscs@scag.ca.gov**

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 7 Attachment:
2016 RTP/SCS Overview of Aviation Program

# Aviation Element Update:
## 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)


**Mr. Ryan N. Hall**
SCAG Aviation Specialist
hall@scag.ca.gov

**SCAG Technical Working Group (TWG)**
May 21, 2015

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS
50 YEARS

# Our Region's Aviation Assets

# Our airports work well…

- No lengthy tarmac delays
- Consistently above 80% on time arrivals and departures
- New passenger enhancement projects underway
- Improved community relations
- Retention of EAS to IPL


# The *Vision* of the 2016 Aviation Element

… is to recognize that the aviation industry is a business, not a public utility. Airlines and passengers choose both the airports they serve and use. Sometimes they decide to serve a different aviation market outside the region, or passengers decide not to travel at all. Every flight and every passenger that departs from a SCAG region airport is good for the region. A healthy and growing aviation system is a sign of regional prosperity.

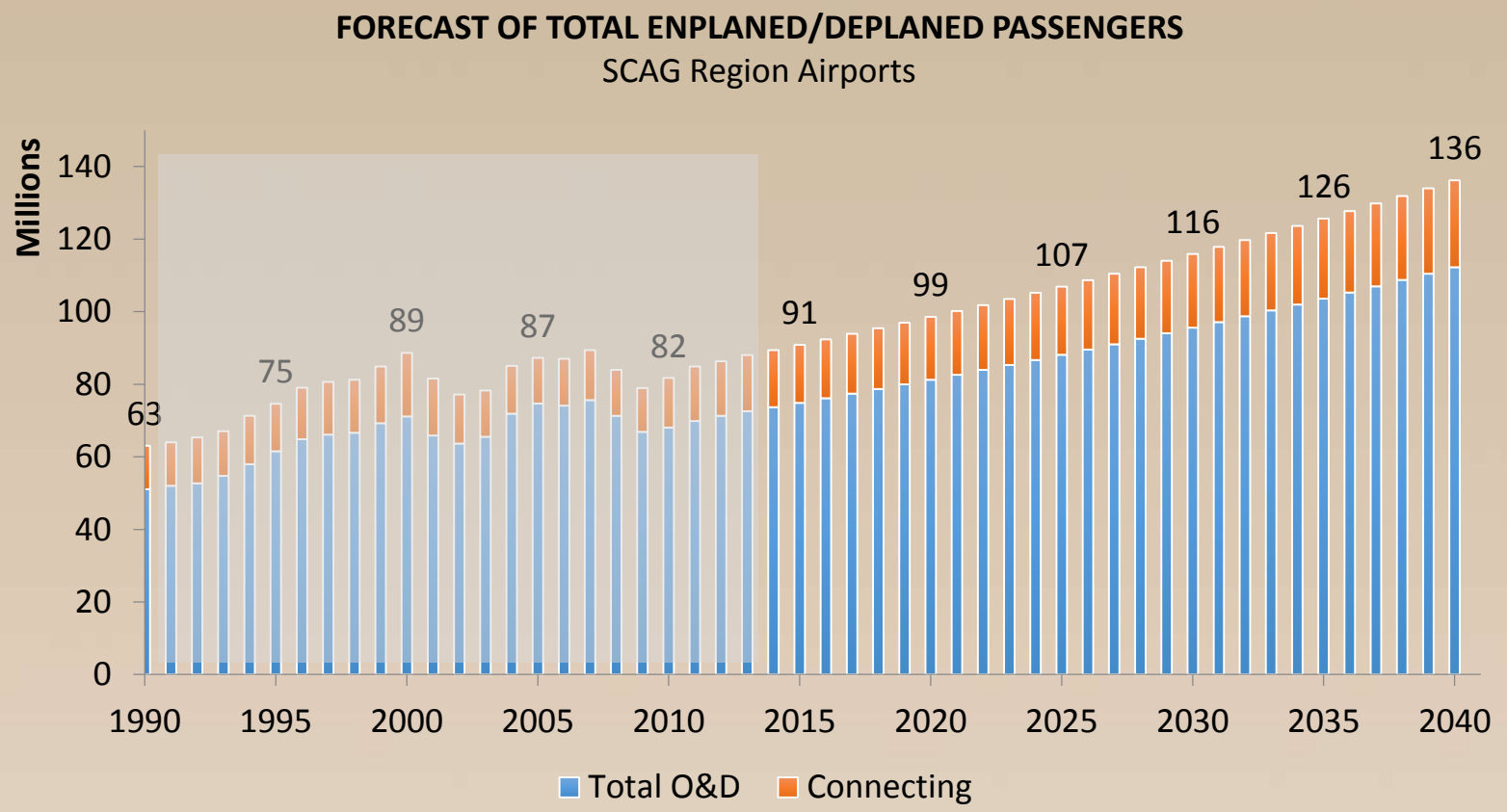
# SCAG has 5 Aviation *Goals*

1. Develop an Aviation Element for the 2016 RTP/SCS that enjoys consensus and addresses all of the requirements and meet's the region's needs
2. Utilizing a forecast methodology that is technically sound, transparent and inclusive
3. Highlighting the overall regional demand as the most important element of the aviation forecast, while still developing airport specific forecast numbers
4. Educating policy makers on the basic fundamentals of airline economics and passenger behavior
5. Quantifying and highlighting the economic benefit of the SCAG region airports

# Aviation Forecast Methodology

- Population (age, household size, etc)
- Economy (SCAG Region, California, United States and global)
- Historical trends
- Passengers
  - Business passengers
  - Leisure
  - Visiting Friends/Relatives


# Total enplaned/deplaned passengers increase from 88.0 MAP in 2013 to 136.2 MAP in 2040




- The share of connecting passengers remains stable around 17%

# Overall Regional Aviation Forecast for 2040

Total passengers increase from

88.0 MAP in 2013 to

**136.2 MAP in 2040**

*(Equivalent to annual growth of 1.6%)*

# Comparison to previous RTP forecasts

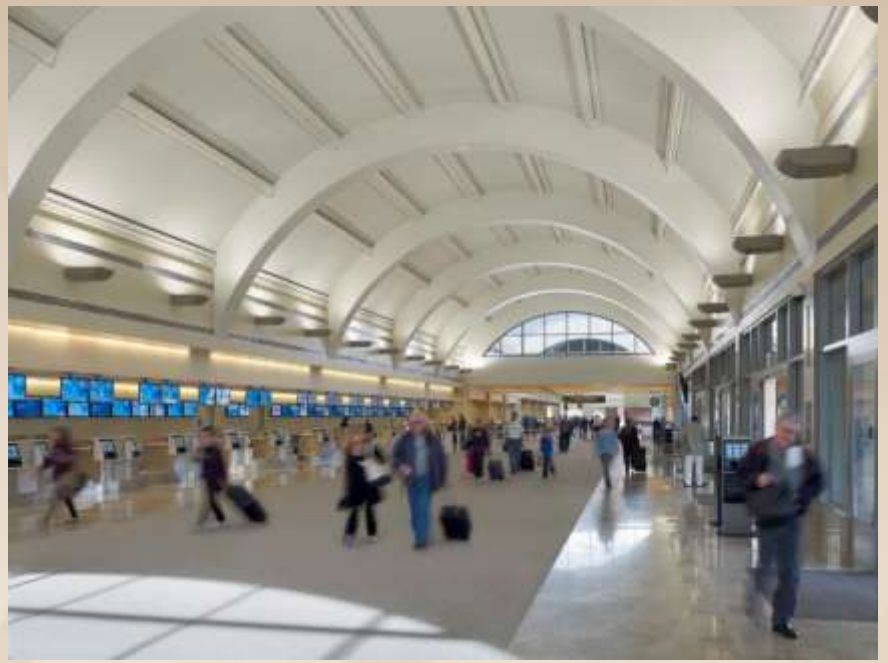
- 1998 RTP—157.4 MAP in 2020
- 2001 RTP—167 MAP in 2025
- 2004 RTP—170 MAP in 2030
- 2008 RTP—165.3 MAP in 2035
- 2012-2035 RTP—145.9 MAP in 2035 (Baseline Scenario)

- Current forecast is 136 MAP in 2040

# Next Steps

- Seek policy direction from TC on June 4, 2015
- Develop the airport specific forecasts
- Continue coordination with the Aviation Technical Advisory Committee

# Thank you!
# Questions?
# Comments?



**Ryan N. Hall**
SCAG Aviation Specialist
hall@scag.ca.gov

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS
50 YEARS

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 8 Attachment:
2016 RTP/SCS Overview of Highways/Arterials

# 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) Highways Element Update

Technical Working Group
May 21, 2015

## Outline for Today's Presentation

- Highway System Overview, Challenges, and Guiding Principles
- Highway Element Management Philosophy
- Overview of Investments
- Incremental Expansion of HOV system – closing gaps in the system
- What to expect in the 2016 RTP/SCS

## 2012 RTP/SCS Review - Highways

- 75,700 lane-miles, serving 62M trips each weekday (including arterials)
- 9 out of 10 trips rely entirely or in part on the highway/arterial system
- Local streets and roads account for over 80% of total road network
- 2012 RTP/SCS included:
  - $64.2 billion for highway infrastructure improvements
  - $56.7 billion for O&M
- 2012 RTP/SCS aims to:
  - Reduce delay to below 2008 levels
  - Reduce truck delay by 40 percent

## Regional Challenges - Highways

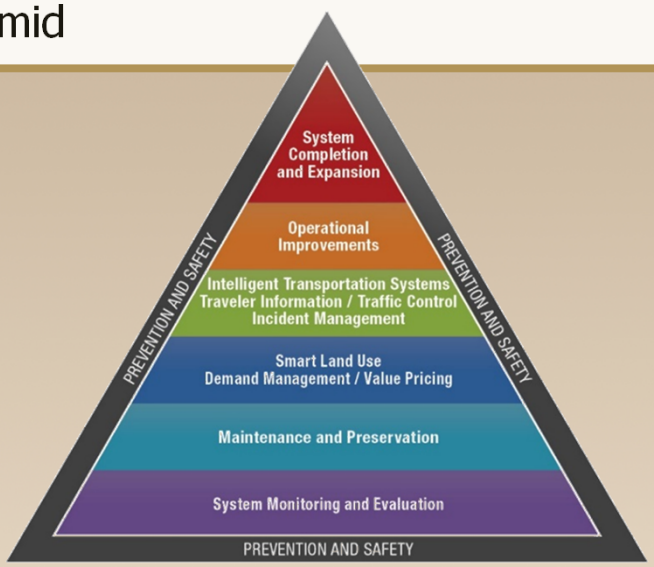
- Critical gaps and congestion chokepoints within the highway network remain
- Roadway expansion as the primary means of solving our mobility challenges is no longer viable due to costs, environment and politics
- Scarcity of transportation dollars have led to underinvestment's towards preserving our system in a state of good repair
- Our aging highway infrastructure will be faced with accelerated preservation costs if deferred maintenance persists

# Guiding Principles

- Protect and Preserve what we have – Fix it First
- Focus on achieving maximum productivity through system management and demand management
- Focus on adding capacity only to:
  - close gaps in the system
  - improve access where needed
- Propose new road capacity projects only after exhausting all other options (required under federal CMP)
- Complement road capacity projects with demand management strategies and other complementary improvements such as transit service and bikeways where feasible (federal CMP)

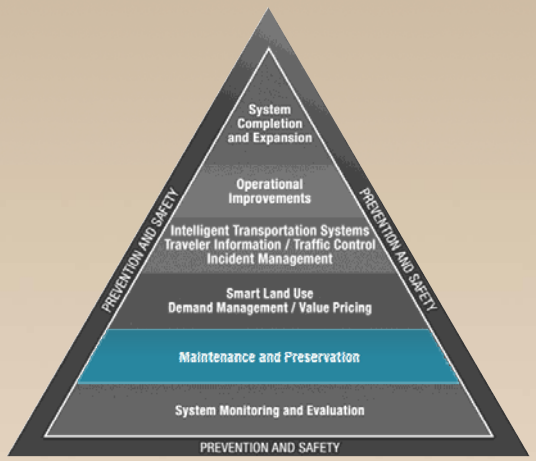
# Highway Element Philosophy

Mobility Pyramid




Transportation Investments Have More Impact If Built On This Foundation

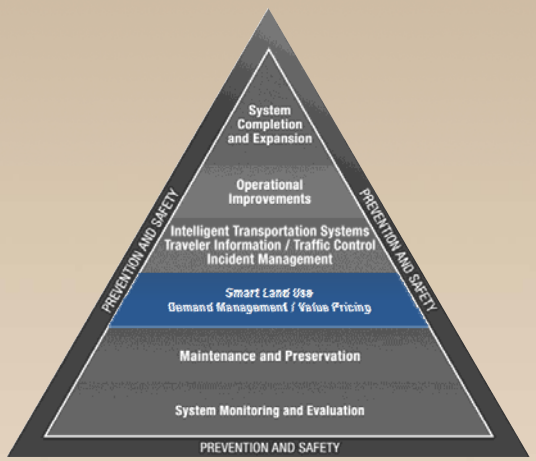
## 2012 RTP/SCS includes a significant investment towards system preservation




$56.7 billion allocated for operation and maintenance towards preserving our state highways

**Major damage restoration, bridge preservation, roadway preservation, facility improvements**

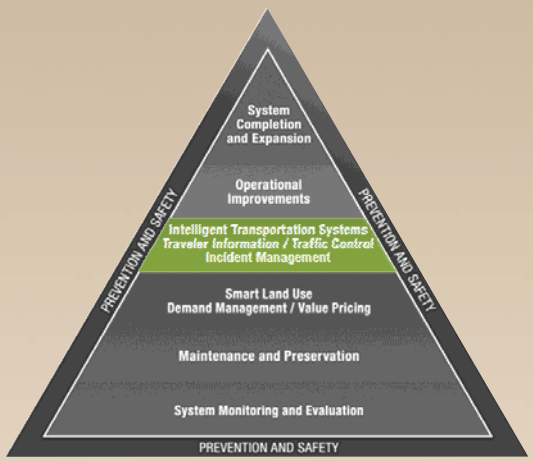
## 2012 RTP/SCS includes a significant investment in TDM strategies




$4.5billion allocated for Transportation Demand Management (TDM) to reduce vehicular demand and congestion

**Incentivize carpooling, transit, biking, walking, flexible work schedules, telecommuting, First Mile/Last Mile strategies, congestion pricing**

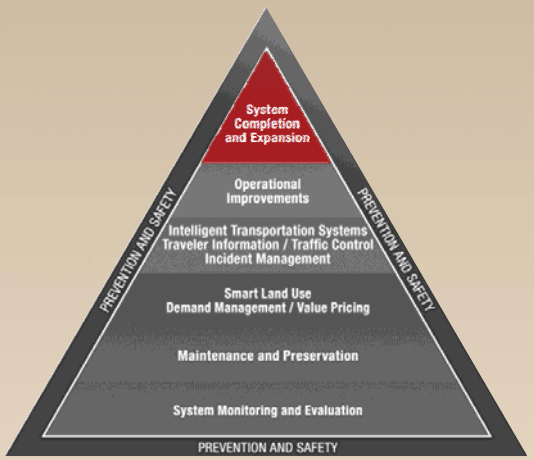
## 2012 RTP/SCS also includes a significant investment in TSM strategies




$7.6 billion allocated for Transportation Systems Management (TSM) to increase productivity of the existing transportation system

**Enhanced incident management, Advanced ramp metering, Traffic signal synchronization, Advanced traveler information**

## Finally, the RTP/SCS invests in the strategic multimodal expansion of the system




| Project Type | Amount |
|---|---|
| Arterials | $22.1 |
| Goods Movement | $48.4 |
| HOV/HOT | $20.9 |
| Mixed-Flow | $16.0 |
| Toll | $27.3 |
| TSM | $7.6 |
| Passenger Rail & Transit | $106.9 |
| Active Transportation | $6.7 |
| TDM | $4.5 |
| Other | $2.5 |
| **Total** | **$262.8** |

# 2012 RTP/SCS Review - Highways

- Highway Improvement Priorities Towards Completing Our System
  - Mixed Flow: interchange improvements, closures of critical gaps, improved access
  - High-Occupancy Vehicle (HOV)/High-Occupancy Toll (HOT): closure of gaps in the HOV lane network, freeway-to-freeway direct HOV connectors, connected network of Express/HOT lanes
  - Toll Facilities: closure of critical gaps in the highway network to provide access to all parts of the region

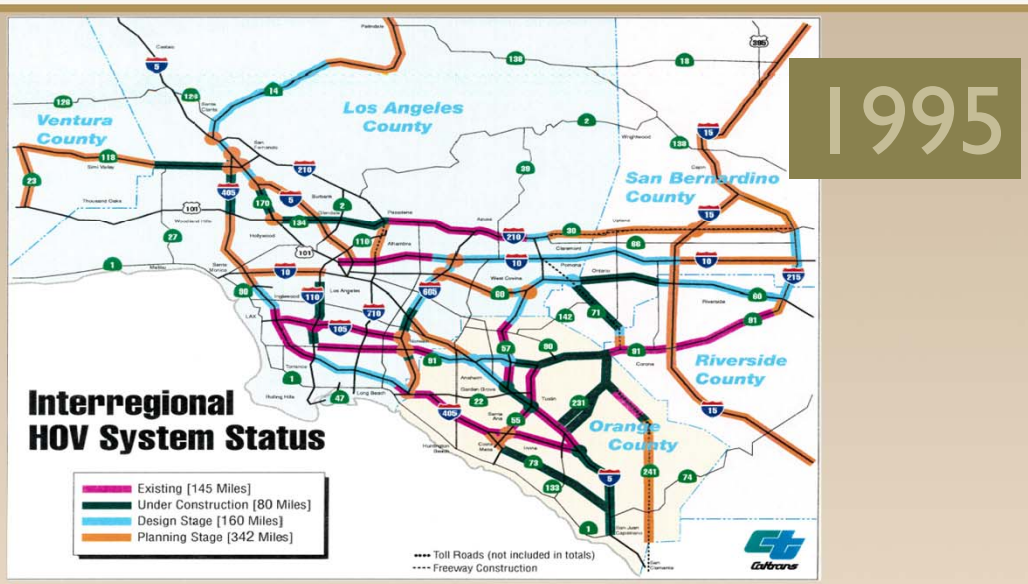
# 2012 RTP/SCS Review – Major Highway Improvements


- SR-115 Expressway
- SR-710 North
- High Desert Corridor
- SR-241 Improvements
- SR-79 Realignment and I-215 Improvements
- US-101 and SR-118 Improvements
- Regional HOV/HOT Lanes Network

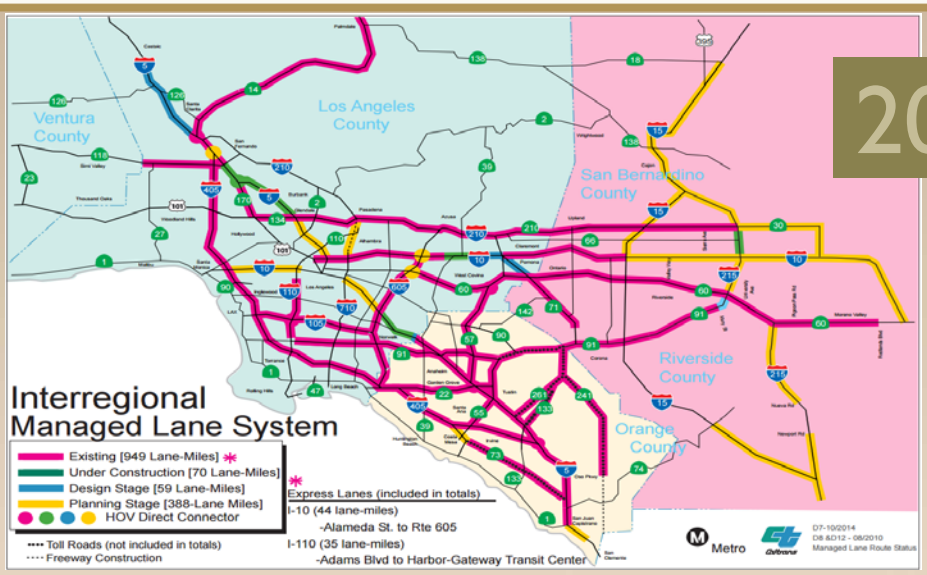
# HOV System – Historical Context

- **1973**: First ever HOV facility in Los Angeles County (bus-only facility) operating along I-10 freeway
- **1976**: The facility was later opened to carpools of 3+ persons, subsequent legislation would later reduce occupancy requirements to 2+ persons
- **1976 – 1990s**: Despite success, further expansion of the HOV system was limited
- **1991**: The Intermodal Surface Transportation Efficiency Act (ISTEA) identified HOV as a viable solution towards addressing system deficiencies and improving air quality
- **1992**: LACTC and Caltrans adopted the "Carpool Lane Plan"
- **1992 – Present**: Currently 949 managed lane miles within the interregional system

# Interregional HOV System



# Interregional Managed Lane Network




# 2012 RTP/SCS Review – Major HOV Projects

| County | Route | From | To | Completion Year* |
|---|---|---|---|---|
| **HOV Lane Additions** | | | | |
| Los Angeles | I-10 | I-605 | Puente Ave | 2014 |
| Los Angeles | I-10 | Puente Ave | SR-57/I-210 | 2018 |
| Los Angeles | I-5 | LA/OC County Line | I-605 | 2018 |
| Los Angeles | I-5 | Pico Canyon | Parker Rd | 2030 |
| Los Angeles | I-405 | I-10 | US-101 | 2018 |
| Los Angeles | SR-14 | Ave P-8 | Ave L | 2030 |
| Orange | I-5 | Avenida Pico | San Juan Creek Rd | 2018 |
| Orange | I-5 | SR-55 | SR-57 | 2018 |
| Orange | SR-73 | I-405 | MacArthur | 2035 |
| Riverside | I-215 | Riv/SB County Line | Spruce St | 2014 |
| Riverside | I-215 | Nuevo Rd | Box Springs Rd | 2030 |
| Riverside | SR-91 | Adams St | SR-60/I-215 | 2018 |
| Riverside | I-15 | Riv/SB County Line | I-15/I-215 | 2020 |
| San Bernardino | I-10 | Haven Ave | Ford St | 2020 |
| San Bernardino | I-10 | Ford St | Riv/SB County Line | 2030 |
| San Bernardino | I-215 | Orange Show Rd | Riv/SB County Line | 2014 |
| San Bernardino | I-215 | SR-210 | I-15 | 2030 |
| San Bernardino | I-15 | Riv/SB County Line | SR-18/Mojave River | 2020 |
| **Freeway-to-Freeway HOV Connectors** | | | | |
| Los Angeles | I-5/SR-14 | Connector | | 2014 |
| Los Angeles | I-5/I-405 | Connector (partial) | | 2030 |
| Orange | I-405/SR-73 | Connector | | 2035 |

- The 2012 RTP/SCS proposes strategic HOV gap closures and freeway-to-freeway direct HOV connectors to complete the system by 2035
- HOV system to serve as the backbone for the regional "HOT Lanes Network"
- Conversion of certain HOV lanes to allow for continuous access (i.e. Garden Grove Freeway)

## 2012 RTP/SCS Review –
### Highway HOV/HOT Lanes Projects Started or Completed

- I-405 Sepulveda Pass Improvements
- I-110 and I-10 HOT Lanes adopted as permanent facilities
- I-605 to I-405 HOV Connector


## What to Expect in the 2016 RTP/SCS

- Continue to emphasize the importance of system preservation
- Continue to support investments that will improve system productivity
- Continue to support projects that are already underway and those that are identified in the current RTP/SCS
- Continue to support new projects that will close gaps in the system and/or improve access where it is currently inadequate
- Focus on addressing non-recurring congestion with new technology
- Support Complete Street opportunities where feasible and practical
- Continue to support the regional HOT Lane network

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 9: No Attachment
2016 RTP/SCS Progress Update on PEIR Development