



SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

TECHNICAL WORKING GROUP (TWG)

Thursday, July 17, 2014: 10:00 a.m.

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

NEW Teleconferencing Information:

Number: 1-888-273-3658 – Participant Code: 182121

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AGENDA

Introductions

Receive and File

1. Meeting Summary 6-19-14 (Attachment)
2. Agenda Outlook for the Development of the 2016 RTP/SCS (Attachment)

Discussion Items

3. 2016 RTP/SCS Modeling Variables Matrix (Guoxiong Huang) (Attachment) 1 hr.



TECHNICAL WORKING GROUP (TWG)

June 19, 2014

Meeting Summary

Following is a summary of discussions of the Technical Working Group meeting of June 19, 2014.

Discussion Items

1. SCAG Active Transportation Results from the 2011 Household Travel Survey

Alan Thompson, SCAG staff, provided an overview of the Active Transportation results from the 2011 Household Travel Survey. Mr. Thompson provided clarification on what defines a trip and trip purpose, as well as trip transfers. The discussion focused on the importance of the survey in terms of investment and meeting the needs of active transportation in our region.

Wally Siembab, South Bay Cities COG, stated that the single most importance effort must be GHG emissions reduction. Mr. Siembab stated that it will require a major focus on mode share, Smart cars, and electric vehicles.

The following was requested from staff:

- 1) Clarify definitions and acronyms;
- 2) Clarify definitions of linked and non-linked trips;
- 3) Clarify meaning of 'other' categories;
- 4) Define recreational trips, distance, and age ratio;
- 5) One-page Executive Summary of the survey results and how it pertains to active transportation and the development of the 2016 RTP;
- 6) Breakdown of auto trips and transfer trips;
- 7) Clarify primary mode to school, whether K-12 or above.

Also for clarification purposes, members will be provided the original survey questions.

2. 2016 RTP/SCS Modeling Variables Matrix

Item postponed until next meeting.

3. Statewide and Non-Metropolitan Transportation Planning; Metropolitan Transportation Planning Notice of Proposed Rule Making (NPRM)

Ryan Kuo, SCAG staff, stated that the Federal Highway Administration (FHWA) continues to release a series of Notices of Proposed Rule Making that will provide guidance to agencies that are required to implement requirements of MAP-21. On June 2, 2014, FHWA released the NPRM for Statewide, Non-Metropolitan and Metropolitan

Transportation Planning. Mr. Kuo reviewed the fact sheet provided in the agenda packet, highlighting revisions to the current rules. Mr. Kuo stated that staff must submit their comments on the NPRM by September 2, 2014.

Nancy Pfeffer, Gateway Cities COG, inquired if the proposed changes will affect the current 2016 RTP/SCS. Mr. Kuo stated that portions of the NPRM that are not impacted by performance measures will go into effect on a more “regular” schedule, while we would have two years to comply with the portions impacted by performance measures, as they are subject to the new requirements assigned to states (as previously reported to the TWG).

Naresh Amatya, SCAG staff, stated that Caltrans is taking the lead in convening all the MPOs and RTPAs to start the discussion as to the mutual assessments of the NPRM. The meeting is in July and SCAG will participate.

Technical Update Items

4. California Active Transportation Program Grant Update

Alan Thompson, SCAG staff, stated that SCAG will be competing for a portion of \$360M in grants. May 20, 2014 was the deadline to submit applications. Mr. Thompson noted there is another opportunity for SCAG to receive funds from a \$75M grant.

Gail Shiomoto-Lohr, City of Mission Viejo, inquired about the percentage of funding available to disadvantaged communities. Mr. Thompson stated a minimum of 25% of the funding will benefit disadvantaged communities.

A request was made for staff to provide a combined list of all the applicants from the region with the quantities they have requested.

Announcements

Mark Butala introduced the new staff members who will assist the Technical Working Group going forward. Arnold San Miguel will coordinate the agenda with the program staff, and Jane Embry will assume the administrative duties. The working group will transition from Rich Macias’ division, with Mark Butala assuming Naresh Amatya’s function.

Dan Kopulsky with Caltrans announced that in July 2014 the California Freight Mobility Plan will be holding workshops as follows: July 22nd in Los Angeles, July 23rd in San Bernardino, and July 24th in San Diego. He also noted that later in the year, there will be a workshop on the California Transportation Plan. More information will be provided as it becomes available

The next meeting of the TWG will be Thursday, July 17, 2014.

Agenda Outlook for the Development of the 2016 RTP/SCS

(Updated 7/2/14)

Framework/Overarching Issues

- Potential approach/process, coordination between various technical working groups and policy committees, and updated overall schedule for the development of the 2016 RTP/SCS
- Performance Based Planning and implications of MAP-21
 - Safety Performance Measures (March 2014)
 - Asset Management and Infrastructure Performance Measures
 - System Performance Measures (February 2014)
 - System Preservation Update (May 2014)
- Role of Technology in the 2016 RTP/SCS

General topic areas

- Growth Forecast/Land Use
 - Local Input Process (February 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
 - Map Collaborator Database
- Sustainable Communities Strategy
 - Overview of SCS in the 2012 RTP/SCS
 - Current status of SCS implementation (January 2013)
 - Emerging issues/themes that could influence 2016 SCS
 - Updated SCS for 2016 RTP/SCS
 - SB 375 GHG Target and AB 32 Scoping Plan Update (February 2014)
- Transportation Finance
 - Overview of baseline and innovative funding sources adopted in the 2012 RTP/SCS including underlying technical assumptions/methodology/analysis (March 2014)
 - Overview of cost assumptions/cost modal for the 2012 RTP/SCS
 - Progress update on 2012 RTP/SCS revenue/cost
 - Potential changes/focus areas and emerging issues in the 2016 RTP/SCS
 - Finance Plan for 2016 RTP/SCS
- Modeling
 - Model and Tools and Datasets to be used in the 2016 RTP/SCS (March 2014)
 - 2016 RTP/SCS Modeling Variables Matrix (July 2014)
- Transportation Conformity
- Program EIR
- Environmental Justice
- Public Participation Plan (February 2014)

Major Modal/Strategy Areas

- Goods Movement (GM) Strategy
 - Overview of 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
 - Updated GM Strategy for the 2016 RTP/SCS
- Transit (HSR, Rail and Bus)
 - Overview of Transit Strategy in the 2012 RTP/SCS
 - Progress update on the Transit Strategy and emerging issues/challenges that could influence the 2016 RTP/SCS
 - Updated Transit Strategy for the 2016 RTP/SCS
- Active Transportation
 - 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 (January 2013)
 - SCAG Active Transportation Results from the 2011 Household Travel Survey (June 2014)
 - Progress status of 1st Mile/Last Mile Study and its integration into the 2016 RTP/SCS
 - Updated Active Transportation Strategy for the 2016 RTP/SCS
- Highways/HOV/HOT/Toll Roads/Express Lanes
 - Overview of Highway/HOV/HOT/Toll Roads/Express Lanes proposed in the 2012 RTP/SCS with a focus on technical assumptions/analysis
 - System Preservation and system operation focus in the 2012 RTP/SCS and our current efforts on Pavement and Bridge condition database/management (January 2013)
 - Progress update and emerging issues related to highways/HOV/HOT/Toll Roads/Express Lanes
 - Highways Improvement Element in the 2016 RTP/SCS
- Aviation
 - Overview of Aviation program in the 2012 RTP/SCS with a focus on ground transportation improvements (March 2014)
 - Progress update on the current status of the Aviation component of the 2012 RTP/SCS and emerging issues that may influence the 2016 RTP/SCS
 - Updated Aviation Element of the 2016 RTP/SCS
- Transportation Demand Management and Transportation System Management (TDM/TSM)
 - Overview of TDM/TSM in the 2012 RTP/SCS, including underlying assumptions
 - Progress status of TDM/TSM and emerging issues
 - Updated TDM/TSM Element for the 2016 RTP/SCS
- Others
 - Zero/Near Zero/Clean Technology Applications, including Slow Speed Electric Vehicle programs
 - Emerging New Technology Applications

Modeling and Forecasting

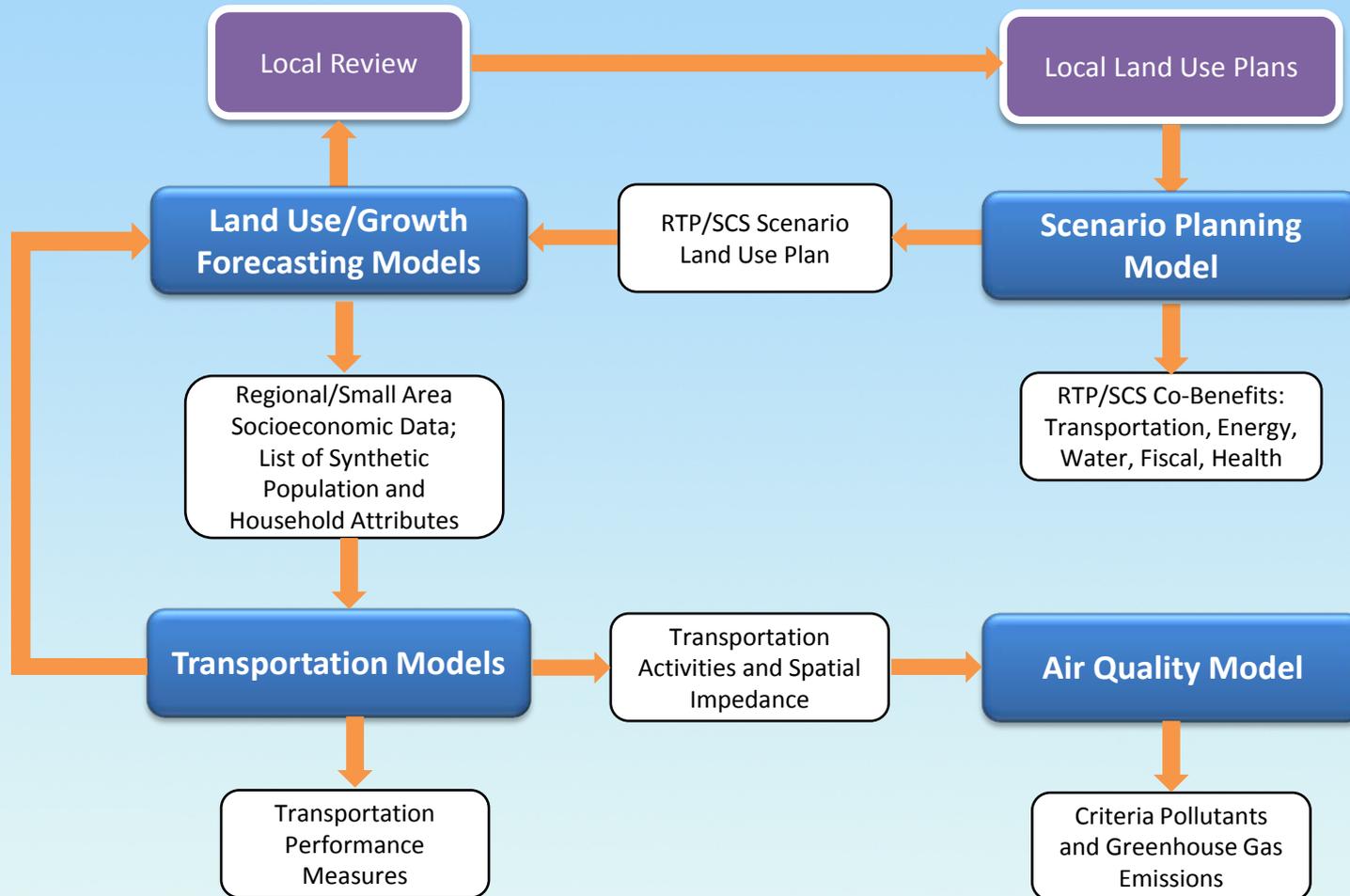
Guoxiong Huang

July, 2014



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SCAG Integrated Modeling & Forecasting Framework



SCAG SPM: A Web Based Land Use Planning Collaboration Tool

City of Irvine SCAG UrbanFootprint Scenario Planning Model

Select features from Existing Land Use Parcels 25 Query or Selection Results

Where: Join: None Results Limited to Selected Area Show Selection Shape on Map

id	apn	scaguid12	city	county	lu12	comments	land_use_definition
23717	451-071-51	590462580	Irvine	Orange	1110	null	1110: Single Family Resid
23716	451-071-50	590462579	Irvine	Orange	1110	null	1110: Single Family Resid
23712	451-071-44	590462575	Irvine	Orange	1110	null	1110: Single Family Resid
23711	451-071-43	590462574	Irvine	Orange	1110	null	1110: Single Family Resid
23710	451-071-42	590462573	Irvine	Orange	1110	null	1110: Single Family Resid

Zoom map to selection

Layers for Base Condition: Background Imagery, Google labels, Cloudmade - Open Street Maps, Google map, Google aerial, City of Irvine, Tier2 Taz, **Existing Land Use Parcels**, Scenario Planning Zones, General Plan Parcels, Sphere Of Influence, Jurisdiction Boundary, Orange County, High Quality Transit Corridors, Flood Zones, Transit Priority Areas, Habitat Conservation Areas, Major Transit Stops, Endangered Species, Cpad Holdings, High Quality Transit Areas, County Boundary, Farmland

Search Map

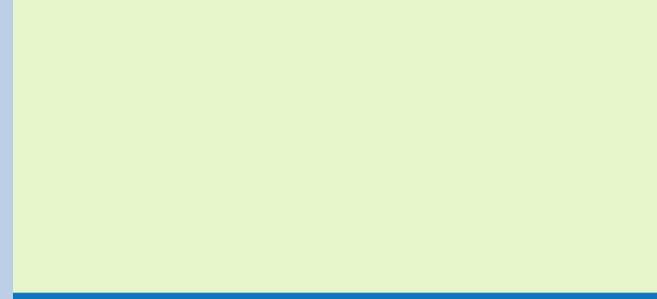
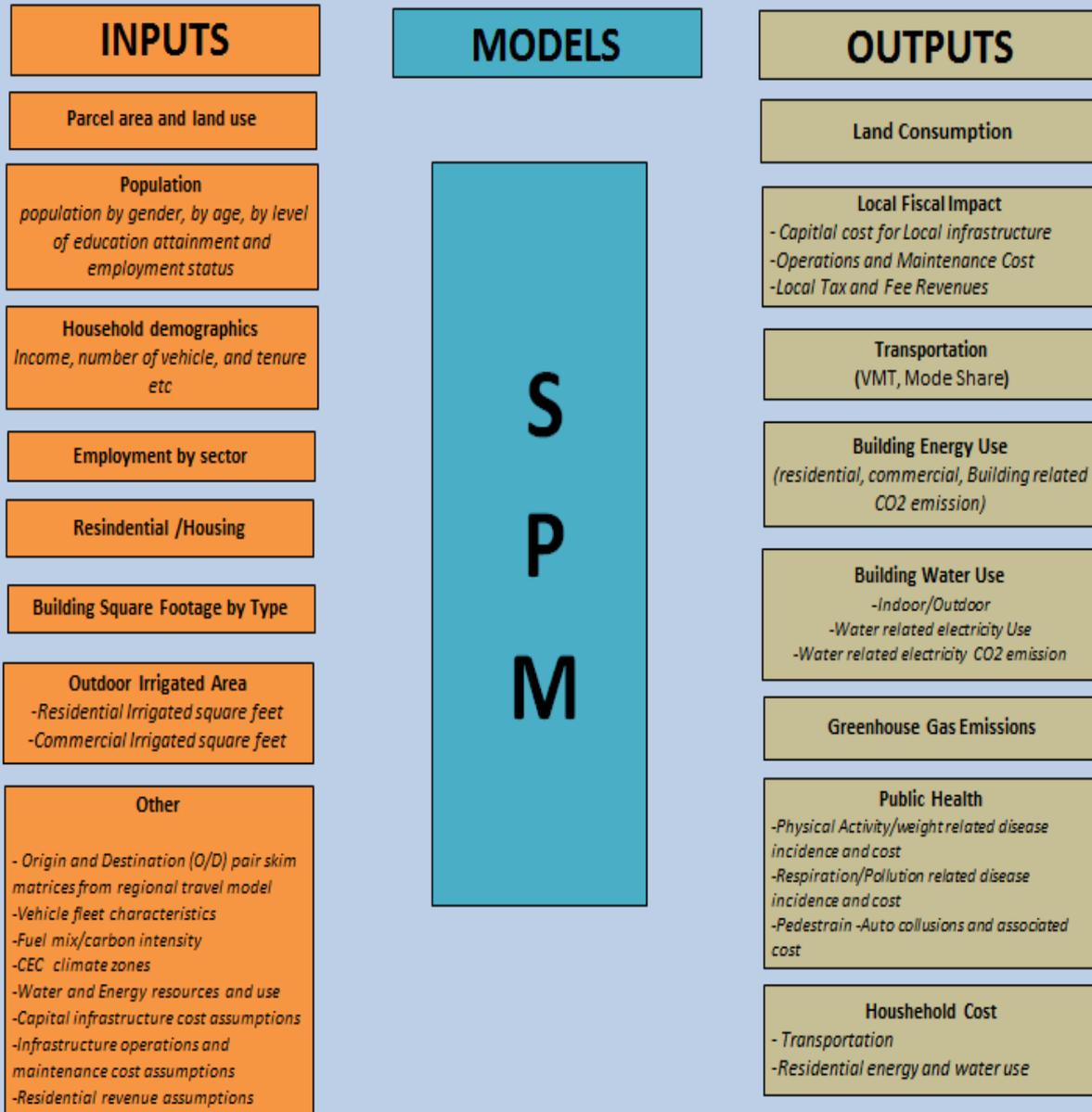
Layer: Existing Land Use Parcels User: JungA Selected Records: 25

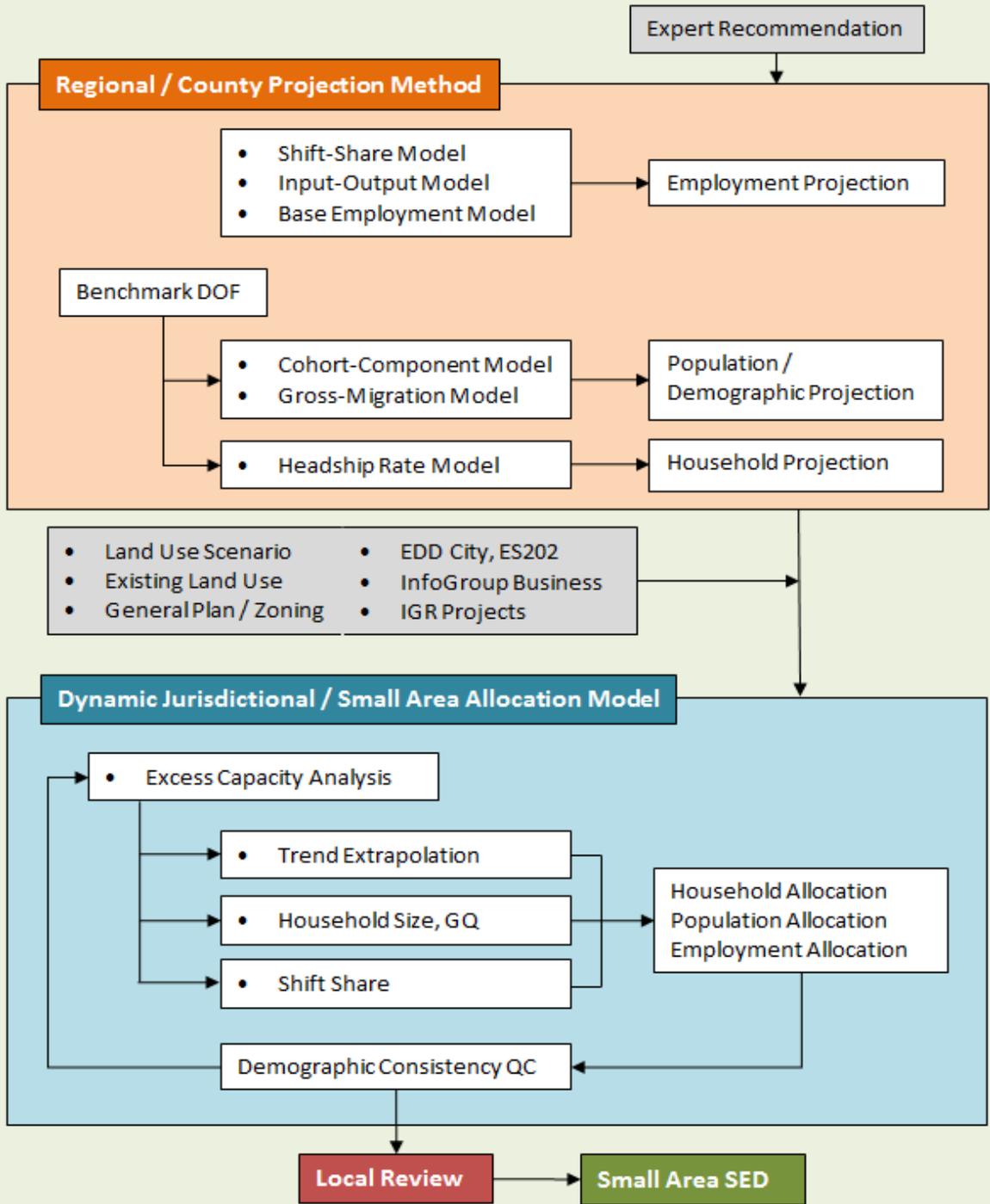
Existing Land Use 2012
1110: Single Family Residential

Comments
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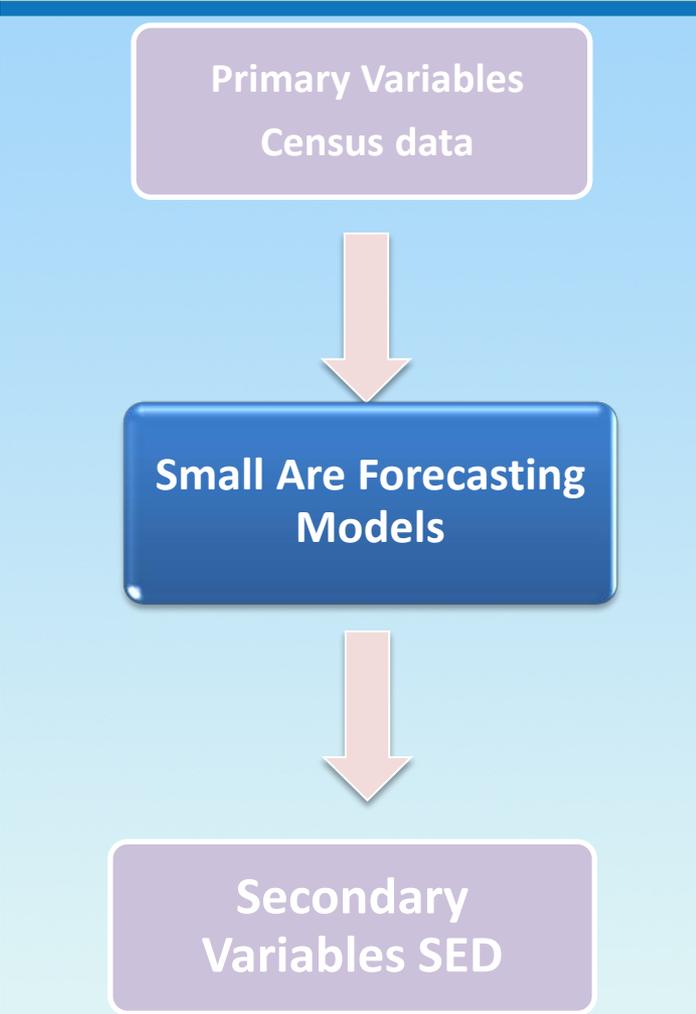
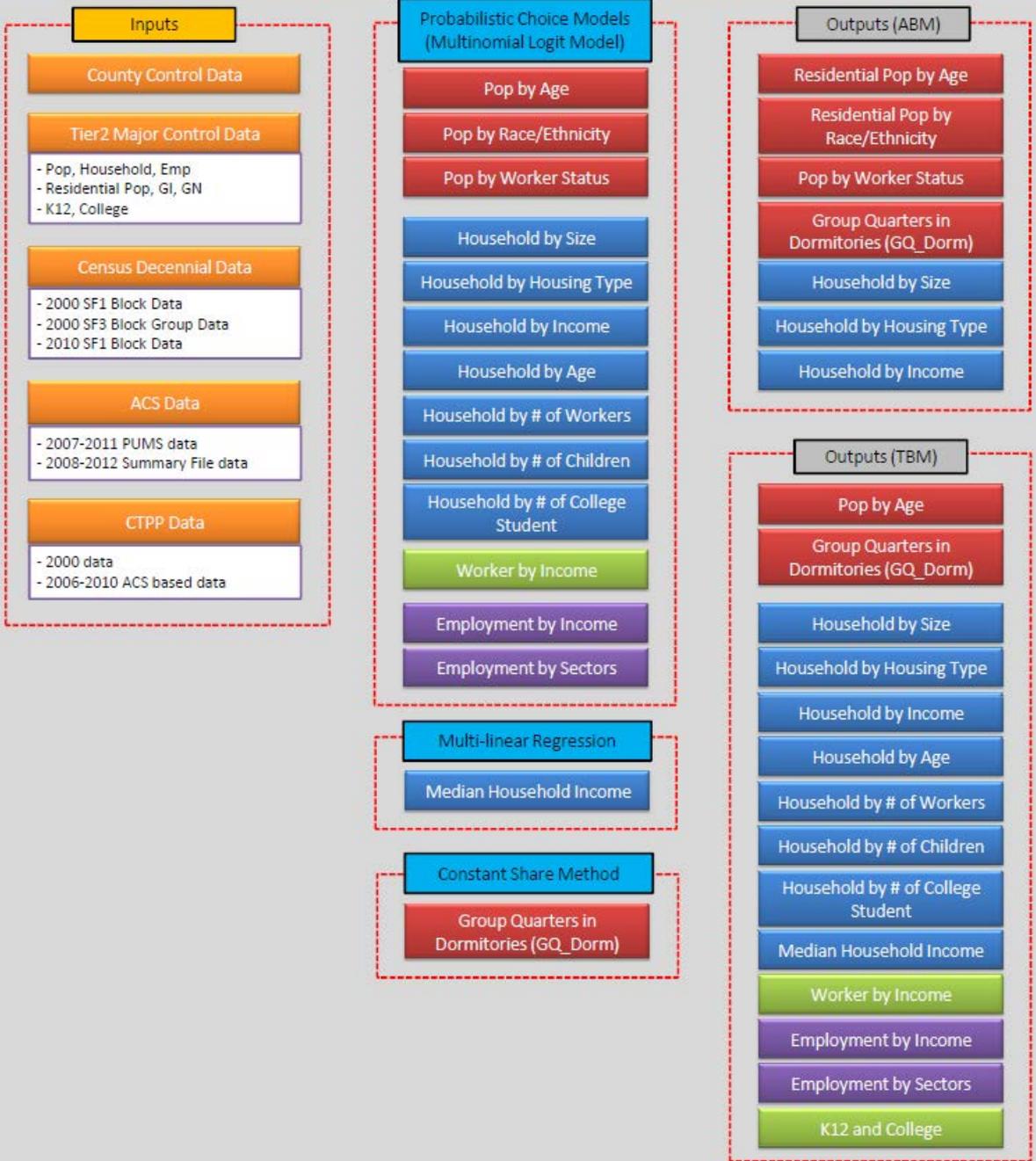
UF UrbanFootprint rev. 2014.6.25 © 2014 Calthorpe Associates

SCAG Scenario Planning Model



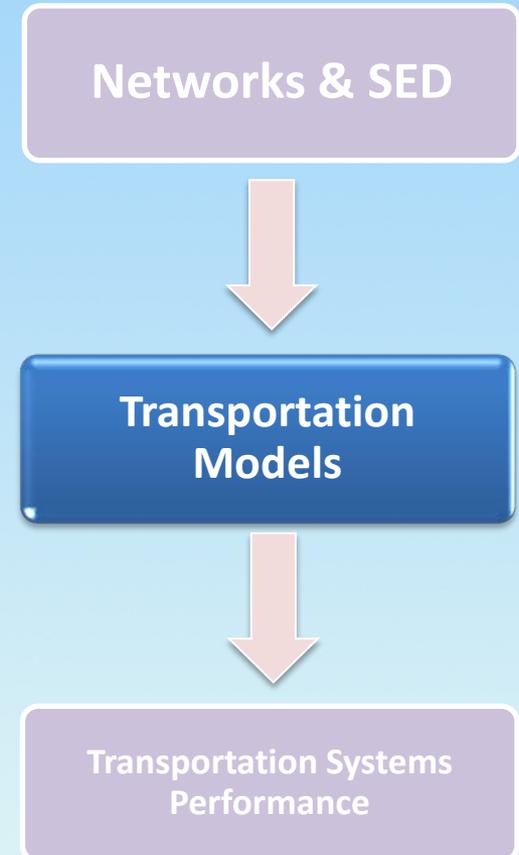


Small Area SED Allocation Model System



SCAG Transportation Models

Activity Based Model	• 2016 RTP/SCS
Trip Based Model	• 2012 RTP/SCS
Sub-regional Models	• Modeling Tools for Locals
Heavy-Duty Truck Model	• Truck and Goods Movements
Dynamic Traffic Assignment	• Network Simulation



Transportation Model System

INPUTS

SED

1. Regional/Small area Socio-Economic control data
2. Public Use Micro-Data household attributes
3. Public Use Micro-Data person

Land Use, built environment and

Business hour profile

Accessibility

- By mode (auto, transit and non-motorized)
- By activity type (mandatory and non-mandatory)
- By household car sufficiency level (0 car, suff and insuff car)
- By hour (time=1-24)

Zone Equivalence file

Parking cost data

Highway skim

- Network
- Capacity table
- Speed table
- Volume delay function

Transit skim

- Network
- Fare Matrix
- Link fares
- Mode table

Truck data

- Truck grade factors
- Truck Congestion factor
- Truck composite factor

External trips

- Port trips
- Gordon trips

Models

Population Synthesis

Long term and Mobility Choices

Activity Generation and Tour/Trip Scheduling

Sub-regional Model

Heavy-Duty Truck Model

Highway and transit assignments

Outputs

Synthetic household and person attributes

Work and School location

Driver license

Number of household vehicles

Number of activities by purpose

Number of tours by mode and by purpose

Number of trips by mode and by purpose

Number of stops by purpose

Number of truck and external vehicle trips

Highway Volumes and Speed

Other data

- Screenline count
- HPMS data
- Transit level of service data
- Parameters

Networks & SED



Transportation Models



Transportation Systems Performance

EMFAC Model

Air Quality Model

INPUTS

1. Base Input

1. Area
2. Calendar Year
3. Season

2. Vehicle Miles of Travel (VMT) Profile (for each Base Input category)

1. Vehicle Category and Technical
2. Daily VMT by vehicle category

3. Speed profile (for each Base Input and vehicle category)

1. Speed bin
2. Speed distribution

4. Emission rates

5. Vehicle Fleet Compositions

MODELS

EMFAC2011 LDA

EMFAC2011 HD

EMFAC2011 SG

OUTPUTS

Criteria Pollutants Emissions

(tons/average weekday)

1. Total organic gases (TOG) emissions
2. Reactive organic gases (ROG) emissions
3. Carbon monoxide (CO) Emissions
4. Nitrogen oxides (NOx) emissions
5. Particulate matter 10 microns or less in diameter (PM10) emissions
6. Particulate matter 2.5 microns or less in diameter (PM2.5) emissions
7. Sulfur oxides (Sox) emissions

Greenhouse Gas Emissions

(tons/average weekday)

1. Carbon dioxide (CO2) emissions
2. Carbon dioxide (CO2) emissions (including Pavley I and LCFS adjustments)

Fuel Consumptions

(1,000 gallons/average weekday)

1. Gasoline Consumptions
2. Diesel consumptions

Transportation Activity
Data



Air Quality Models



Emissions

Questions?

For more information, please contact

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