GCCOG SCS
Strategies to Reduce GHGs

Presented by:
Ken Farfsing (Signal Hill)
Nancy Pfeffer (GCCOG)
Christopher Wornum (CS)

February 28, 2011
Presentation Agenda

1. Introduction and Self-Introductions
   Nancy Pfeffer (Gateway Cities COG) 2:00-2:05 5 minutes

2. Unique Characteristics of the Gateway Cities
   Ken Farfsing (Signal Hill) 2:05-2:10 5 minutes

3. Reasons for Developing a Subregional SCS
   Ken Farfsing (Signal Hill) 2:10-2:15 5 minutes

4. SCS Development Timeline and Process
   Nancy Pfeffer (Gateway Cities COG) 2:15-2:30 15 minutes

5. Understanding of GHG Reduction Strategies
   Chris Wornum (Cambridge Systematics) 2:30-2:45 15 minutes

   Break

6. Approach & Methodology for Gateway SCS
   Chris Wornum (Cambridge Systematics) 3:00-3:15 15 minutes

7. Results Developed to Date
   Chris Wornum (Cambridge Systematics) 3:15-3:30 15 minutes
SB 375 Background

- Passed in 2008
- Intended to reduce greenhouse gas (GHG) emissions from transportation by changing land use by reducing sprawl
- Land use is only 2% of total statewide GHG reduction strategy under AB 32 (2006 – Global Warming Solutions Act)
- GHG reduction targets set by CARB for 2020 and 2035 to roll back to 1990 levels
SB 375 Approach

- Major regions of the state (MPOs) to produce Sustainable Communities Strategy (SCS) as a part of the Regional Transportation Plan
  - SCS is a regional GHG plan that links transportation, housing and land use to reduce GHG emissions from cars and light trucks

- SCAG’s next RTP is due in 2012 – timeline set by federal law

- SCS to achieve GHG reduction targets set by the California Air Resources Board

- No penalty at this time for failing to achieve target, but SCAG does not want to be the only region to fail
Gateway Cities Subregional SCS

Subregional COG’s have the option to prepare their own SCS

GCCOG White Paper (Dec. 2009) concluded that in order to meet 4% reduction by 2020, 80% of COG cities would need to adopt wide range of land use and transportation policies

Gateway chose SCS delegation in January 2010:

- Dense land use and transit patterns in Gateway Cities
- Relatively low vehicle miles traveled (VMT) per capita
- Ability to determine our own strategies in line with cities’ plans
- Many pieces of SCS already exist in COG studies, reports, and programs over the last decade
2. Unique Characteristics of the Gateway Cities

Population Growth from 2010 to 2020 and 2010 to 2035

- SCAG: 10.6%  
- LA County: 6.7%  
- Gateway Cities: 4.3%

2010 - 2020 SCAG: 16.2%
2010 - 2035 SCAG: 23.9%
2010 - 2020 LA County: 10.3%
2010 - 2035 LA County: 16.2%
2010 - 2020 Gateway Cities: 10.3%
2010 - 2035 Gateway Cities: 10.3%

2008 RTP Forecasts (Population)
2. Unique Characteristics of the Gateway Cities

Employment Growth from 2010 to 2020 and 2010 to 2035

2008 RTP Forecasts (Population)

- SCAG: 10.0% (2010-2020), 23.2% (2010-2035)
- LA County: 4.4% (2010-2020), 10.7% (2010-2035)
- Gateway Cities: 3.0% (2010-2020), 7.2% (2010-2035)
2. Unique Characteristics of the Gateway Cities

Median Household Income (2000)

- SCAG: $45,844
- LA County: $42,189
- Gateway Cities: $38,354

Source: 2000 U.S. Census
4. SCS Development Timeline and Process

Nov
- 1st Technical Workshop

Dec
- 2nd Policy Workshop

Jan
- 3rd Technical Workshop
- Stakeholder Workshop

Feb
- 1st Technical Workshop

Mar
- 2nd Policy Workshop

Apr
- 4th & 5th Technical & Policy Workshop

May
- 3rd Public Outreach Workshops

Jun
- 4th Public Outreach Workshops

Dec
- 5th Policy Workshop

Jan
- 6th Policy Workshop

F. 1st Draft Subregional SCS

G. 2nd Draft Subregional SCS

H. Final Subregional SCS
Housing Related Components of the SCS

1. SCS must consider the state housing goals set forth in Sections 65580 and 65881 of the Government Code (qualitative, not quantitative goals)

2. SCS must identify areas within the region to house all of the population of the region, including all economic segments, over the course of the planning period of the Regional Transportation Plan (i.e., 2035)

3. SCS must identify areas within the region sufficient to house an 8-year projection of the regional housing need for the region pursuant to Section 65584 of the Government Code (2013-2021 Regional Housing Needs Assessment [RHNA])
SCS and RHNA Relationship

- RHNA is not a component but a related planning effort that will follow the development of the SCS
- RHNA and SCS must be consistent
- Gateway Cities COG submits Final Subregional SCS to SCAG – June 2011
- SCAG approves Final SCS – April 2012
- SCAG releases Draft RHNA – April 2012
- SCAG adopts Final RHNA – October 2012
- COG will have to rely upon SCAG integrated growth forecasts in determining SCS and RHNA consistency
5. Current Understanding of GHG Reduction Strategies

**Nonmotorized Transportation**

<table>
<thead>
<tr>
<th>Level</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>Safe Routes to School, CMAQ, TIGER I/II</td>
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<tr>
<td></td>
<td>Guidelines (ADA), performance requirements</td>
</tr>
<tr>
<td></td>
<td>Investment / incentive programs</td>
</tr>
<tr>
<td></td>
<td>Guidelines, performance requirements</td>
</tr>
<tr>
<td>State</td>
<td></td>
</tr>
<tr>
<td>SCAG Region</td>
<td></td>
</tr>
<tr>
<td>LA County</td>
<td>Corridor bikeways</td>
</tr>
<tr>
<td></td>
<td>Bike lanes</td>
</tr>
<tr>
<td>Gateway Subregion</td>
<td>Bike/walk to transit amenities/bike station</td>
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<tr>
<td></td>
<td>Bike share programs</td>
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<td></td>
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<tr>
<td></td>
<td>Bike to work incentives</td>
</tr>
<tr>
<td>Local</td>
<td>Bike parking subsidy</td>
</tr>
<tr>
<td></td>
<td>Complete Streets/traffic calming policies</td>
</tr>
<tr>
<td></td>
<td>Pedestrian amenities</td>
</tr>
</tbody>
</table>

Corridors, roads, traffic calming, guidelines, performance requirements.
5. Current Understanding of GHG Reduction Strategies

Commute Trip Reduction and Other TDM Programs

- Employee-employer tax codes
- HOV/Managed Lanes
- Park-and-ride
- Transportation Management Associations
- Rideshare, guaranteed-ride-home programs
- Parking cash out / transportation benefit
- Telework and compressed work week
- TDM programs, outreach and support
- Car sharing
5. Current Understanding of GHG Reduction Strategies

Transportation’s Contribution to U.S. GHGs

U.S. GHG Emissions by End Use Economic Sector 2006

- Residential: 5%
- Commercial: 6%
- Agriculture: 8%
- Industry: 20%
- Electricity Generation: 33%
- Transportation: 28%

U.S. GHG Emissions Breakdown by Mode

- Light-Duty Vehicles: 59.3%
- Heavy-Duty Vehicles: 19.6%
- Other: 2.0%
- Rail: 2.7%
- Marine: 4.9%
- Aircraft: 11.5%

5. Current Understanding of GHG Reduction Strategies
Transportation’s Contribution to SCAG GHGs

http://cedp.scag.ca.gov/ewebeditpro/items/O84F23629.pdf
5. Current Understanding of GHG Reduction Strategies Cost Effectiveness of TDM on Emissions

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost (Dollars per Pound of CO2 Reduced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional ridesharing programs</td>
<td>$3.70</td>
</tr>
<tr>
<td>Pricing (parking pricing &amp; congestion pricing)</td>
<td>$5.15</td>
</tr>
<tr>
<td>Vanpool programs</td>
<td>$5.25</td>
</tr>
<tr>
<td>Miscellaneous TDM programs</td>
<td>$6.25</td>
</tr>
<tr>
<td>Employer trip reduction programs</td>
<td>$11.35</td>
</tr>
<tr>
<td>Conventional transit service improvements</td>
<td>$12.30</td>
</tr>
<tr>
<td>Park-and-ride facilities</td>
<td>$21.50</td>
</tr>
<tr>
<td>Transit shuttles or feeder lines</td>
<td>$43.75</td>
</tr>
<tr>
<td>Bicycle and pedestrian facilities</td>
<td>$42.05</td>
</tr>
<tr>
<td>Telework programs</td>
<td>$125.90</td>
</tr>
</tbody>
</table>

Estimates Shown in Dollars per Pound of CO2 Reduced
Break

- 2:45-3:00
- 15 minutes

Next: 6. Overall approach and methodology for the SCS
6. Approach & Methodology for Gateway SCS
Bottoms-up Approach to Portfolio Development

Prior and Ongoing GHG Reduction Efforts

Critical Local Conditions

Initial Portfolio of Municipal GHG Reduction Strategies
- Nonmotorized Infrastructure
- Public Transportation Improvement
- Traffic Operations/Management/ITS
- System Capacity/Bottleneck Relief
- Land Use and Smart Growth
- Transportation Demand Management
- Facility Pricing Strategies

Linkage and bundling between cities

Estimate of GHG Reduction

SCAG
LA County
Gateway
Municipal Strategies
Federal
6. Approach & Methodology for Gateway SCS
Three Categories of GHG Reductions

- TDM (Questionnaire)
- Land Use (Sustainability Tool)
- Transportation (over 300 strategies)
6. Approach & Methodology for Gateway SCS
CARB GHG Emissions Target for Entire SCAG Region

Emissions Reduction based on 2005 per Capita CO$_2$e
6. Approach & Methodology for Gateway SCS
Analysis of GHG Strategies with LACMTA Impact Tool
6. Approach & Methodology for Gateway SCS
GHG Reductions Measured for Ten Categories
6. Approach & Methodology for Gateway SCS
SCAG Sustainability Tool Used for Land Use Analysis

STEP 1 DEVELOPMENT TYPES

A Variety of Buildings, Streets and Amenities Create a “Place”

- City Employment High Mix
- Town Residential Low Mix
- Suburban Residential No Mix
6. Approach & Methodology for Gateway SCS
SCAG Sustainability Tool Used for Land Use Analysis

STEP 2 PAINT A SCENARIO

Design Scenarios by Painting Development Types on to the Landscape

Base Year | Compact Design | Transit Oriented