Modeling Task Force
July 27, 2016

A Presentation by the Southern California Association of Governments
Overview

• Background on Environmental Justice
• Outreach
• Methodology/Analysis
• Environmental Justice Toolbox
Background on Environmental Justice

Fundamental Principles

- To **ensure the full and fair participation** by all potentially affected communities in the transportation decision-making process

- To **avoid, minimize, or mitigate** disproportionately high and adverse human health and environmental effects, including social and economic effects, on **minority populations** and low-income populations

- To **prevent the denial of, reduction in, or significant delay in the receipt of benefits** by minority and low-income populations

- U.S. Department of Transportation, An Overview of Transportation and Environmental Justice
Background on Environmental Justice

Guiding Documents:

- Title VI of the Civil Rights Act of 1964
- Executive Order 12898 (1994)
- US Department of Transportation Order (1997)
  - Federal Highway Administration Order (1998)
  - Memorandum: Implementing Title VI Requirements in Metropolitan and Statewide Planning (1999)
  - FTA Circular 4703.1 on Environmental Justice (2012)
- SCAG’s Environmental Justice Compliance Procedures (2000)
- SCAG’s Public Participation Plan (2014)
SCAG’s Environmental Justice Policy

- When disproportionately high and adverse impacts on minority or low-income populations are identified, SCAG takes steps to consider alternative approaches or propose mitigation measures for the SCAG region.

- Continues to evaluate and respond to environmental justice issues that arise during and after the implementation of SCAG’s regional plans.

- If disproportionate impacts are found, SCAG will analyze the impacts and identify potential solutions to incorporate into the long-range transportation plan.
Background on Environmental Justice

**Federal Guidance for Metropolitan Planning Organizations (MPOs)**

- Analysis is Plan Specific - MPOs must conduct an evaluation of system-level environmental justice impacts from a collection of projects in long-range plans.
- Environmental justice should also be considered when long-range plans are moved into the short-range Transportation Improvement Program (TIP) or State Transportation Improvement Program (STIP).

**Assessment Process**

- Define Action and Study Area
- Develop Community Profile
- Analyze Impacts
- Identify Solutions
- Document Findings

Avoid
Minimize
Mitigate
Enhance

Sources: National Transit Institute, Federal Transit Administration
Outreach

NOVEMBER 2014
• EJ Workshop #1

APRIL 2015
• EJ Workshop #2
• EJ Workshop #3

JULY 2015
• 8 Focus Groups
• 2 Interviews

AUGUST 2015
• EJ Workshop #4
• EJ Workshop #5
Methodology/Analysis
Identifying EJ Population Groups

**Minority:**
- A person who is African American, Hispanic or Latino, Asian American, American Indian, Alaskan Native, Native Hawaiian and Other Pacific Islander

**Low-Income:**
- A person whose median income is at or below the Department of Health and Human Services (HHS) poverty guidelines

**Other Groups:**
- Non-English speakers, Households without vehicles, Population without a high school degree or equivalent, Disabled individuals, Seniors, ages 65 and over, Young children, ages 4 and under
Methodology/Analysis
Regional, Local, and Community Analysis

**Regional Analysis:**
- Appropriate when determining system-wide impacts (e.g. Financial Benefits and Burdens)

**Localized Analysis:**
- Appropriate for determining adverse impacts at the community level (emissions, noise, etc.)

**Community Analysis:**
- Appropriate for tabulating impacts of the RTP/SCS in selected places according to a “Communities of Concern” approach
Community Analysis

- **Environmental Justice Areas** - *Transportation Analysis Zones (TAZs)*, which are similar to block groups, that have a higher concentration of minority OR low income households than is seen in the region as a whole. The inclusion of this geography helps to fulfill SCAG’s Title VI requirements, along with other state and federal environmental justice guidelines.

- **SB 535 Disadvantaged Areas** – *Census tracts* that have been identified by *Cal/EPA as Disadvantaged Communities* based on the requirements set forth in SB 535, which seek to identify areas disproportionately burdened by and vulnerable to multiple sources of pollution.

- **Communities of Concern** – *Census Designated Places (CDPs) and City of Los Angeles Community Planning Areas (CPAs)* that fall in the upper 1/3rd of all communities in the SCAG Region for having the highest concentration of minority population AND low income households.
12.4 Million People
68% of Region

Environmental Justice Areas (2009-13 American Community Survey 5-Year Estimates)

Draft Proposed Environmental Justice Areas
Qualifying Transportation Analysis Zones (TAZs)

Environmental Justice Areas are Tier 2 TAZs that have a higher percentage of minority population OR households in poverty than is seen in the greater SCAG region.

Sources: SCAG, 2014, 2009-2013 American Community Survey (ACS), U.S. Census Bureau
ENVIRONMENTAL JUSTICE
SB 535 DISADVANTAGED COMMUNITIES
(2009-13 American Community Survey 5-Year Estimates)

SB 535 Disadvantaged Communities in the SCAG Region

Census tracts that have been identified by CalEPA as Disadvantaged Communities based on the requirements set forth in SB 535, which seek to identify areas disproportionately burdened by and vulnerable to multiple sources of pollution.


6.4 Million People
35% of Region
Environmental Justice Communities of Concern in the SCAG Region

Draft Proposed Communities of Concern
Other CDPs or CPAs (Not Qualifying)

Note: Environmental Justice Communities of Concern are Census Designated Places (CDPs) or City of Los Angeles Community Planning Areas (CPAs) that have the highest concentration (top 1/3rd) of minority population AND households in poverty compared to all other CDPs or CPAs in the region as a whole.

Sources: SCAG, 2014; 2009-2013 American Community Survey (ACS); U.S. Census Bureau

4.2 Million People
23% of Region

Minority Population
Households in Poverty

91%
40%
17.9 Million People

98% of Region

Minority Population

Households in Poverty

68%

13%
Rural Areas

Minority Population

Households in Poverty

434,000 People
2% of Region

Environmental Justice
Urban and Rural Areas in the SCAG Region

(Source: SCAG, 2015; Caltrans, U.S. Census Bureau)
Performance Indicators

• Benefits and Burdens Analysis
  – RTP revenue sources in terms of tax burdens
  – Share of transportation system usage
  – RTP/SCS investments
• Distribution of travel time savings and travel distance reductions
• Geographic distribution of transportation investments (NEW in 2016)
• Jobs-housing imbalance or jobs-housing mismatch
• Impacts from funding through mileage-based user fees

• Accessibility to employment and services
• Accessibility to parks and schools
• Gentrification and displacement
• Air quality impacts along freeways
• Emissions impacts
• Aviation noise impacts
• Roadway noise impacts
• Active transportation hazards (NEW in 2016)
• Public Health Impacts (NEW in 2016)
• Rail-related impacts
• Climate Vulnerability (NEW in 2016)
Performance Indicators - Benefits and Burdens

Share of Retail & Gasoline Taxes Paid & RTP Investments by Ethnicity

- Examines who will pay for the RTP/SCS and who will benefit from the Plan.
Performance Indicators – Travel Time Savings

- Examines the potential savings in travel time that results from the 2016 RTP/SCS based on each group’s usage of the transportation system.
Performance Indicators – Geographic Distribution of Transportation Investments

- Examines where transportation investments will occur throughout the region and in communities of concern
Performance Indicators – Job Housing Balance

- Looks at the travel behavior of commuters and their relative incomes
- Also the distribution of low wage jobs and affordable housing throughout the region

**Table 34: Median Commute Distance (in Miles) by Wage in the SCAG Region, 2012-2012**

<table>
<thead>
<tr>
<th>Origin</th>
<th>Destination</th>
<th>All Jobs</th>
<th>Low Wage</th>
<th>Med. Wage</th>
<th>High Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAG</td>
<td>SCAG</td>
<td>10.1</td>
<td>5.0</td>
<td>9.7</td>
<td>11.3</td>
</tr>
<tr>
<td>Import</td>
<td>SCAG</td>
<td>8.5</td>
<td>6.3</td>
<td>9.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Los Ang</td>
<td>SCAG</td>
<td>9.1</td>
<td>6.1</td>
<td>8.9</td>
<td>10.1</td>
</tr>
<tr>
<td>Orange</td>
<td>SCAG</td>
<td>0.8</td>
<td>8.0</td>
<td>8.9</td>
<td>10.8</td>
</tr>
<tr>
<td>Riverside</td>
<td>SCAG</td>
<td>15.6</td>
<td>14.8</td>
<td>14.9</td>
<td>19.3</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>SCAG</td>
<td>18.2</td>
<td>14.7</td>
<td>15.1</td>
<td>18.2</td>
</tr>
<tr>
<td>Ventura</td>
<td>SCAG</td>
<td>11.2</td>
<td>11.7</td>
<td>10.0</td>
<td>12.0</td>
</tr>
</tbody>
</table>

**Table 35: Job-to-Worker Ratio by Wage in the SCAG Region, 2012**

<table>
<thead>
<tr>
<th>County</th>
<th>All Jobs</th>
<th>Low Wage</th>
<th>Med. Wage</th>
<th>High Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial</td>
<td>0.94</td>
<td>0.93</td>
<td>0.93</td>
<td>1.01</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>1.17</td>
<td>1.09</td>
<td>1.18</td>
<td>1.23</td>
</tr>
<tr>
<td>Orange</td>
<td>1.13</td>
<td>1.16</td>
<td>1.13</td>
<td>1.11</td>
</tr>
<tr>
<td>Riverside</td>
<td>0.86</td>
<td>0.88</td>
<td>0.85</td>
<td>0.88</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>0.91</td>
<td>0.93</td>
<td>0.91</td>
<td>0.92</td>
</tr>
<tr>
<td>Ventura</td>
<td>0.91</td>
<td>0.97</td>
<td>0.91</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Source: SCAG, U.S. Census Bureau, 2015, LODES Data, Longitudinal Employee Household Dynamics Program

Photos: Metro, OCBC, Metrolink
Performance Indicators – Mileage-Based User Fee

- Examines the regressive impact of the gasoline tax on low income households and compares the mileage-based user fee.
Performance Indicators – Accessibility to Employment and Services

- Looks at the accessibility to employment, shopping destinations, and hospitals within a 30 minute travel area by car and 45 minute travel area by transit (rail and bus), also looks at the share of destinations within a 1 and 2 mile travel distance by EJ group

Photos: Metro, OCBC
Performance Indicators – Accessibility to Parks and Schools

- Looks at the accessibility to local and regional parks within a 45 minute travel area by car and transit (rail and bus), also looks at the share of population within 1 and 2 miles travel distance of the region’s parks and schools.

Photos: ClimateResolve.org, National Park Service
Performance Indicators – Gentrification and Displacement

- Examines historical trends in high quality transit areas and neighborhoods in close proximity to rail transit stations
Performance Indicators – Gentrification and Displacement (continued)

- Examines historical three performance indicators:
  - Growth
  - Economy
  - Equity, Ethnicity, and Sustainability
Performance Indicators – Emissions Impacts

Examine air quality impacts for particulate matter and carbon monoxide of the RTP/SCS at the regional level and for SCAG’s environmental justice areas.

Figures: ARB, sparetheair.org, Medscape.com
Performance Indicators – Air Quality Impacts Along Highways

- Examines air quality impacts of the RTP/SCS for areas in close proximity to highways

**TABLE 63: Emissions along Freeways and Highly Traveled Corridors**

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Emissions within 500-Foot of Freeways (Tons per Day)</th>
<th>Emissions in the SCAG Region (Tons per Day)</th>
<th>Decrease in Emissions within 500-Foot Freeways</th>
<th>Decrease in Emissions in the SCAG Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base Year 2012</td>
<td>2040 Baseline</td>
<td>2040 Plan</td>
<td>Base Year 2012</td>
</tr>
<tr>
<td>CO</td>
<td>445</td>
<td>89</td>
<td>80</td>
<td>1,545</td>
</tr>
<tr>
<td>PM1.0</td>
<td>5.0</td>
<td>3.5</td>
<td>3.4</td>
<td>17.6</td>
</tr>
</tbody>
</table>

Source: SCAG

Photos: SCAG, latimes.com
Performance Indicators – Aviation Noise Impacts

- Examines population in areas incurring aviation noise at or above 65 dB Community Noise Equivalent Level (CNEL), a measure of noise that takes into account both the number and the timing of flights, as well as the mix of aircraft types.

**METHODOLOGY**

To identify potentially impacted populations, the anticipated population within the 65 dB CNEL contour was calculated using the following steps:

- Use the Integrated Noise Model (INM) to generate aviation noise contours for 65 dB community noise equivalent (CNEL), based on the estimated noise analysis from the aviation technical information in SCAG’s 2001 RTP. Note that the noise contours estimated from the 2001 planning cycle represent potentially the largest noise contour areas in recent years, due to trends in the industry that have been signaling the adoption of quieter airplane engines and less aviation operations.
- Identify areas of concern within the aviation noise zone.
- Estimate and compare to the greater region the share of environmental justice groups for each area of concern within the noise zone.

**TABLE 84: EJ Variables within the Aviation 65-dB Noise Impacted Areas for 2016 RTP/SCS**

<table>
<thead>
<tr>
<th></th>
<th>2012 Base Year</th>
<th>2040 Baseline</th>
<th>2040 Plan</th>
<th>Plan - Baseline</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>91,028</td>
<td>156,253</td>
<td>134,277</td>
<td>(20,976)</td>
<td>-14%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>50,773</td>
<td>86,253</td>
<td>74,965</td>
<td>(11,288)</td>
<td>-13%</td>
</tr>
<tr>
<td>White</td>
<td>12,873</td>
<td>20,004</td>
<td>17,622</td>
<td>(2,383)</td>
<td>-12%</td>
</tr>
<tr>
<td>African American</td>
<td>23,095</td>
<td>30,563</td>
<td>24,711</td>
<td>(5,852)</td>
<td>-19%</td>
</tr>
<tr>
<td>Native American</td>
<td>158</td>
<td>430</td>
<td>378</td>
<td>(52)</td>
<td>-12%</td>
</tr>
<tr>
<td>Asian &amp; PI</td>
<td>3,173</td>
<td>14,343</td>
<td>12,647</td>
<td>(1,697)</td>
<td>-12%</td>
</tr>
<tr>
<td>Other Races</td>
<td>1,855</td>
<td>4,659</td>
<td>3,854</td>
<td>(735)</td>
<td>-15%</td>
</tr>
</tbody>
</table>
Performance Indicators – Roadway Noise Impacts

- Examines population in areas incurring noise along roadways at or above 65 dB Community Noise Equivalent Level (CNEL), which accounts for traffic volume, speed, and vehicle types including heavy duty trucks.
Performance Indicators – Active Transportation Hazards

- Examines population in areas that experience the highest levels of bicycle and pedestrian collisions in recent periods.
Performance Indicators – Public Health Impacts

- Examines existing public health conditions throughout the region based on Cal/EPA’s CalEnviroScreen data
Performance Indicators – Rail Related Impacts

- Examines population living in close proximity to freight/commuter rail lines, along with future grade separations.

**TABLE 90 Distribution of Environmental Justice Demographic Groups in the Railroad Adjacent Areas**

<table>
<thead>
<tr>
<th></th>
<th>Within 500-Foot of Railroads</th>
<th>SCAG Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base Year 2012</td>
<td>2040 Baseline</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>63.1%</td>
<td>64.2%</td>
</tr>
<tr>
<td>White</td>
<td>18.6%</td>
<td>14.3%</td>
</tr>
<tr>
<td>African American</td>
<td>8.6%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Native American</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>10.2%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Other Races</td>
<td>1.6%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

**TABLE 91 Distribution of Environmental Justice Demographic Groups in the Areas Adjacent to Grade Separation Projects**

<table>
<thead>
<tr>
<th></th>
<th>Within 500-Foot of Grade Separation Projects</th>
<th>SCAG Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base Year 2012</td>
<td>2040 Baseline</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>62.0%</td>
<td>64.2%</td>
</tr>
<tr>
<td>White</td>
<td>18.2%</td>
<td>13.5%</td>
</tr>
<tr>
<td>African American</td>
<td>2.8%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Native American</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Asian &amp; PI</td>
<td>15.1%</td>
<td>16.6%</td>
</tr>
<tr>
<td>Other Races</td>
<td>1.6%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>
Performance Indicators – Climate Vulnerability

Examines conditions in environmental justice communities related to potential climate vulnerability (e.g. sea level rise, wildfire risk)
Local Strategies to Address Environmental Justice

Pages 196 and 197 of the Appendix list strategies for local jurisdictions to improve environmental justice at the local level.
Thank you!

Learn more by visiting www.scag.ca.gov
Contact us at: EnvironmentalJustice@scag.ca.gov.