

Environmental Justice Analysis of Job and Housing Imbalance In Southern California Region

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Southern California Association of Governments

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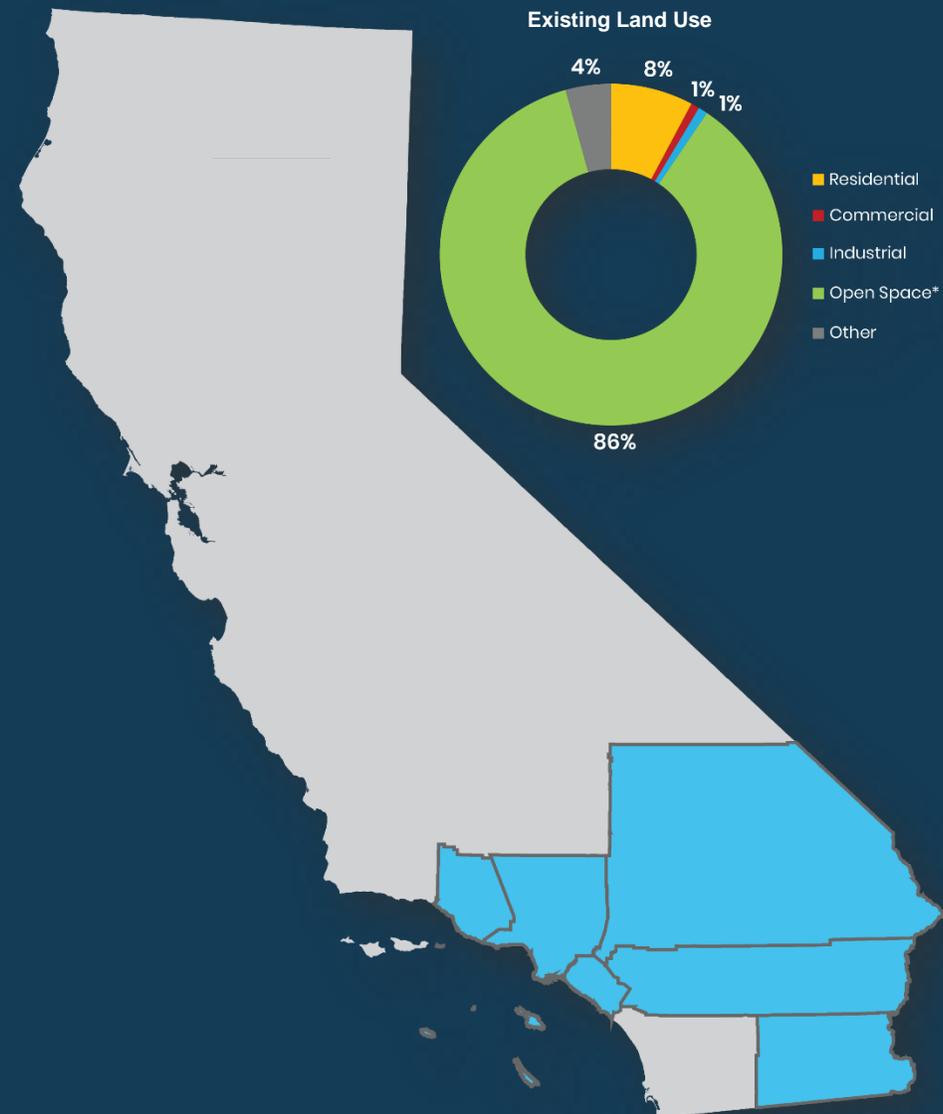
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Southern California Association of Governments (SCAG)



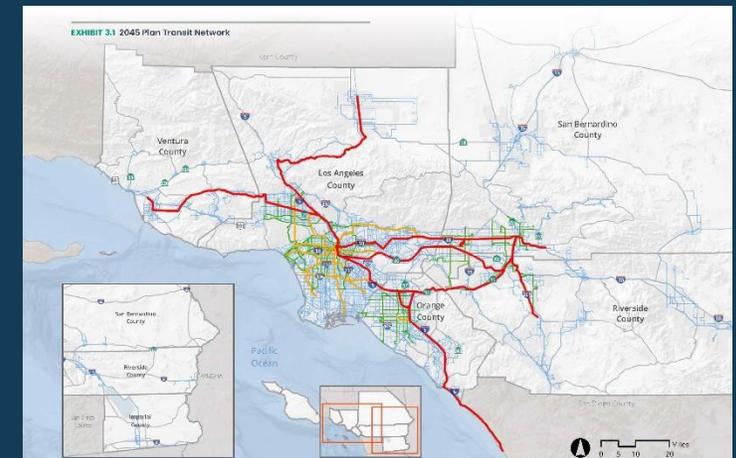
- Nation's largest Metropolitan Planning Organization (MPO)
- Regional planning & policy initiatives to encourage a more sustainable Southern California now and in the future
 - Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS)
 - Federal Transportation Improvement Program (FTIP)
 - Regional Housing Needs Assessment (RHNA)



*Open Space category consists of open space, water, and vacant land use.
Source: SCAG 2016 Regional Land Use Dataset

Regional Transportation Plan

- **Regional Transportation Plan (RTP)**
 - A long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals
 - Regional transportation strategies and investments to reduce traffic congestion, improve the efficiency of the network and expand mobility choices
- **Sustainable Communities Strategy (SCS)**
 - Linkage among transportation, land use, housing and climate policy at the regional level to reduce GHG emissions
- **Connect SoCal (2020-2045 RTP/SCS)**
 - Adopted on September 3, 2020



- **RTP/SCS & Environmental Justice**
 - Integrate the principles of Title VI of the Civil Rights Act of 1964 into RTP/SCS
 - Federal and state requirement designed to ensure the fair treatment and meaningful involvement of all people and communities in the regional planning process regardless of race, color, national origin, or income.
- **SCAG's Connect SoCal & Environmental Justice**
 - Conducted EJ analysis for 18 EJ performance measures to assess the impacts of RTP programs and projects on minority and low-income populations
 - Conducted a comprehensive EJ community outreach process to ensure that low-income and minority communities have ample opportunity to participate in the decision-making process



TABLE 1 Comparison of EJ Performance Measures Between 2045 Plan and 2045 Baseline

(I) HOW WILL THIS IMPACT QUALITY OF LIFE?

EJ Topics	EJ Performance Measures	Current Conditions Analysis	SCAG Region	EJA	DAC	COCC
Job-Housing Imbalance H LU	Job-Housing Imbalance	Historical and current trends show that higher wage workers tend to commute longer distances from lower wage areas. The median commute distance grew 11.1% from 2000 to 2015. And 2015, 60% of the population in the region commutes to work in a lower job-income area than their residential area. Four counties have a substantial concentration of low wage jobs, but lack an adequate number of affordable rental units, which in turn contributes to a disproportionate concentration of affordable rental units and workers relative to the number of housing units that match their skills. The Plan will contribute to improvement in job-housing balance throughout the region, and especially in inland counties.				
	Neighborhood Change and Displacement H LU	Establishing new transportation and displacement measures to improve transportation is challenging for a region-wide basis. Several studies of LA County have shown that the spending and the number of projects of 2.5 million or more on the water, neighborhood outdoor spaces to 20% above baseline levels. However, most of the proposed projects are for middle- and upper income groups while limited evidence is found that will also improve transportation. Increase in new jobs for low-income households, however, may be limited by the limited number of affordable units. The Plan will contribute to improvement in job-housing balance throughout the region, and especially in inland counties.				
Accessibility to Employment and Services C LU	Accessibility to Employment (time-based) by 30 Minute Auto	Improve	Improve	Improve	Improve	Improve
	Accessibility to Employment (time-based) by 45 Minute All Transit	Improve	Improve	Improve	Improve	Improve
	Accessibility to Employment (time-based) by 45 Minute Local Bus	Improve	Improve	Improve	Improve	Improve
	Accessibility to Shopping (time-based) by 10 Minute Auto	Improve	Improve	Improve	Improve	Improve
	Accessibility to Shopping (time-based) by 15 Minute All Transit	Improve	Improve	Improve	Improve	Improve
Accessibility to Shopping (time-based) by 15 Minute Local Bus	Improve	Improve	Improve	Improve	Improve	

Jobs-Housing Imbalance/Mismatch Objectives



- **Imbalance of jobs and housing as an impediment to EJ and social equity as well as a key contributor to traffic congestion and air pollution**
 - EJ populations tend to be more sensitive to job accessibility due to the cost of housing and long-distance commuting
 - Workers without a car or people with less income who cannot afford a vehicle have to either live close to their jobs where they can have access to transit or within walk/bike distance.
- **To better understand the spatial and temporal dynamics of job-housing imbalance/mismatch in a geographically detailed way**
- **To understand whether there are significant differences in commute distance**
 - Between different income levels
 - Between different geographic areas—coastal counties vs. inland counties
 - Between temporal periods

Jobs-Housing Imbalance/Mismatch Methodology & Data Sources



- **Jobs-Housing Imbalance/Mismatch Analysis for Connect SoCal**
 - Median wages for workers by place of residence and place of work (inter-county and intra-county)
 - Median commute distance by wage
 - Job-to-worker ratio by wage
 - Jobs-housing ratio and low-wage jobs-housing fit (JHFIT)
- **Data Sources**
 - Census Bureau's American Community Survey 5-Year Estimates
 - Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES 7.4)
 - 2013-2017 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS)

Jobs-Housing Imbalance/Mismatch

Median Wages for Intra-County & Inter-County Commuters



- **Objective:** To identify median wages for workers by place of residence and place of work (inter-county and intra-county commuters)
- **Source:** 2013-2017 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS)
- **Finding:** Most inter-county commuters command much higher wages than those commuters who work and live in the same county

TABLE 12 Median Wage for Workers by Place of Residence and Place of Work, 2017 Dollars

Place of Residence	Place of Work						
	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	San Diego
Imperial	25,834	-	-	26,936	-	-	25,731
Los Angeles	36,403	30,336	36,582	33,446	30,878	39,368	42,479
Orange	-	56,284	32,936	45,504	47,789	51,799	60,621
Riverside	41,808	52,260	43,898	25,487	37,169	35,224	53,099
San Bernardino	-	42,479	42,479	34,987	26,130	15,168	45,504
Ventura	-	60,671	92,633	58,531	53,099	29,008	82,879
San Diego	55,580	51,571	63,757	41,808	56,979	62,159	34,583

Note: CPI adjusted to \$ in 2017; '-' indicates sample size is too small for the analysis. Sources: 2013-2017 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS)

Jobs-Housing Imbalance/Mismatch

Median Commute Distance by Wage



- **Objective:** To examine the historical trend in median commute distance between origin and destination tracts by wage in each county
- **Source:** LODES 7.4 Origin-Destination (OD) data file for the years 2002-2016
- **Finding:**
 - Higher wage workers tend to commute longer distances than lower wage workers.
 - The commute distance of workers in inland counties grew more rapidly than in coastal counties.

TABLE 13 Median Commute Distance (in Miles) by Wage in the SCAG Region, 2002-2016

2016					
Origin	Destination	All Jobs	Low Wage	Med. Wage	High Wage
SCAG	SCAG	10.0	9.0	9.5	11.1
Imperial	SCAG	8.4	6.7	8.4	10.0
Los Angeles	SCAG	9.1	8.2	8.7	10.0
Orange	SCAG	9.6	8.8	8.8	10.5
Riverside	SCAG	15.8	14.0	14.0	18.3
San Bernardino	SCAG	15.4	14.0	14.2	17.4
Ventura	SCAG	11.1	11.6	10.0	11.8
2012					
Origin	Destination	All Jobs	Low Wage	Med. Wage	High Wage
SCAG	SCAG	10.1	9.0	9.7	11.3
Imperial	SCAG	8.5	6.3	9.1	9.6
Los Angeles	SCAG	9.1	8.1	8.9	10.1
Orange	SCAG	9.8	8.9	8.9	10.8
Riverside	SCAG	16.6	14.8	14.9	19.3
San Bernardino	SCAG	16.2	14.7	15.1	18.2
Ventura	SCAG	11.2	11.7	10.0	12.0
2002					
Origin	Destination	All Jobs	Low Wage	Med. Wage	High Wage
SCAG	SCAG	9.4	8.6	8.8	11.0
Imperial	SCAG	7.5	8.1	7.2	5.7
Los Angeles	SCAG	8.8	8.2	8.4	10.2
Orange	SCAG	9.0	8.0	8.1	10.6
Riverside	SCAG	13.4	11.8	12.2	17.6
San Bernardino	SCAG	13.3	12.1	12.4	16.0
Ventura	SCAG	9.4	8.6	8.4	11.5

(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: U.S. Census Bureau, 2019. LEHD Origin-Destination Employment Statistics (LODES) 7.4

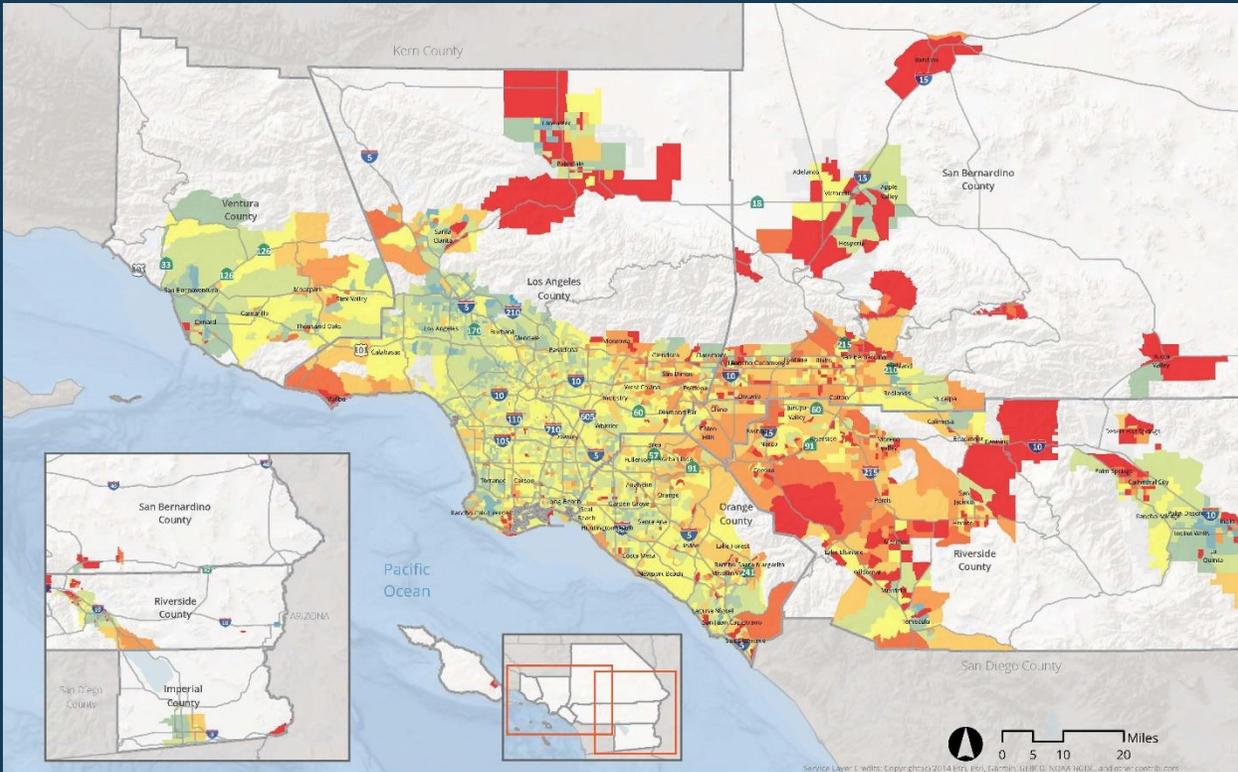
Jobs-Housing Imbalance/Mismatch

Median Commute Distance for All Jobs vs. Low-Wage Jobs

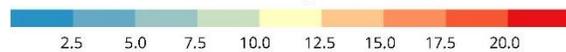


All Jobs

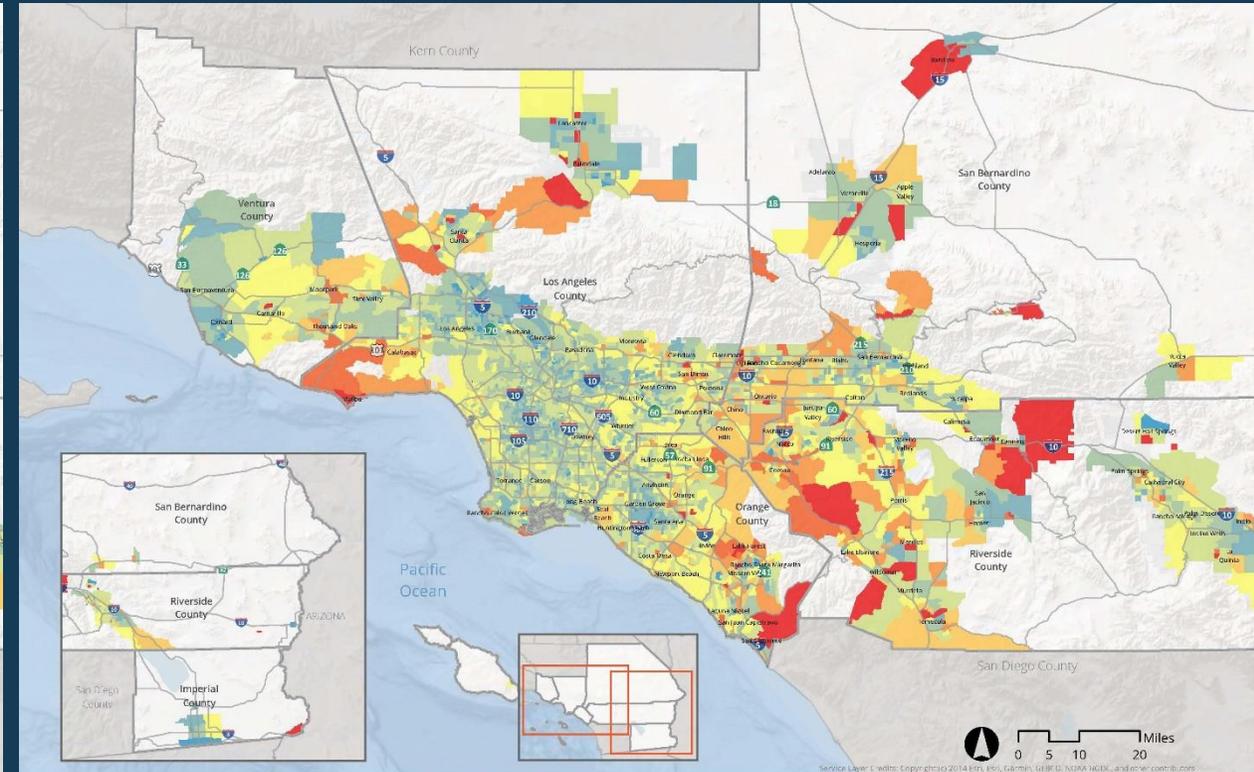
Low-Wage Jobs



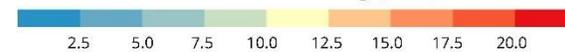
Median Commute Distance of All Jobs (in Miles) for Census Tracts, 2016



(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: U.S. Census Bureau, 2019. LEHD Origin-Destination Employment Statistics (LODES 7.4) Origin-Destination (OD) data file for year 2016



Median Commute Distance of Low Wage Jobs (in Miles) for Census Tracts, 2016



(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: U.S. Census Bureau, 2019. LEHD Origin-Destination Employment Statistics (LODES 7.4) Origin-Destination (OD) data file for year 2016

Jobs-Housing Imbalance/Mismatch

Jobs-to-Worker Ratio by Wage



- **Objective:** To examine whether jobs and workers are relatively balanced at the neighborhood level and county level by wage
- **Source:** Job estimates from LODES 7.4 Workplace Area Characteristics (WAC) data files and workers estimates from LODES 7.4 Residence Area Characteristics (RAC) data files for the year 2016
- **A higher job-to-worker ratio means more jobs while a lower job-to-worker ratio means more workers.**
- **Finding:**
 - Inland counties show a lower job-to-worker ratio than coastal counties.

TABLE 14 Job-to-Worker Ratio by Wage in the SCAG Region, 2016

County	All Jobs	Low Wage	Med. Wage	High Wage
Imperial	0.85	0.87	0.79	0.91
Los Angeles	1.05	1.04	1.02	1.09
Orange	1.12	1.13	1.19	1.07
Riverside	0.77	0.83	0.82	0.70
San Bernardino	0.87	0.89	0.90	0.84
Ventura	0.81	0.84	0.89	0.74

(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)

Source: U.S. Census Bureau, 2019. LEHD Origin-Destination Employment Statistics (LODES) 7.4

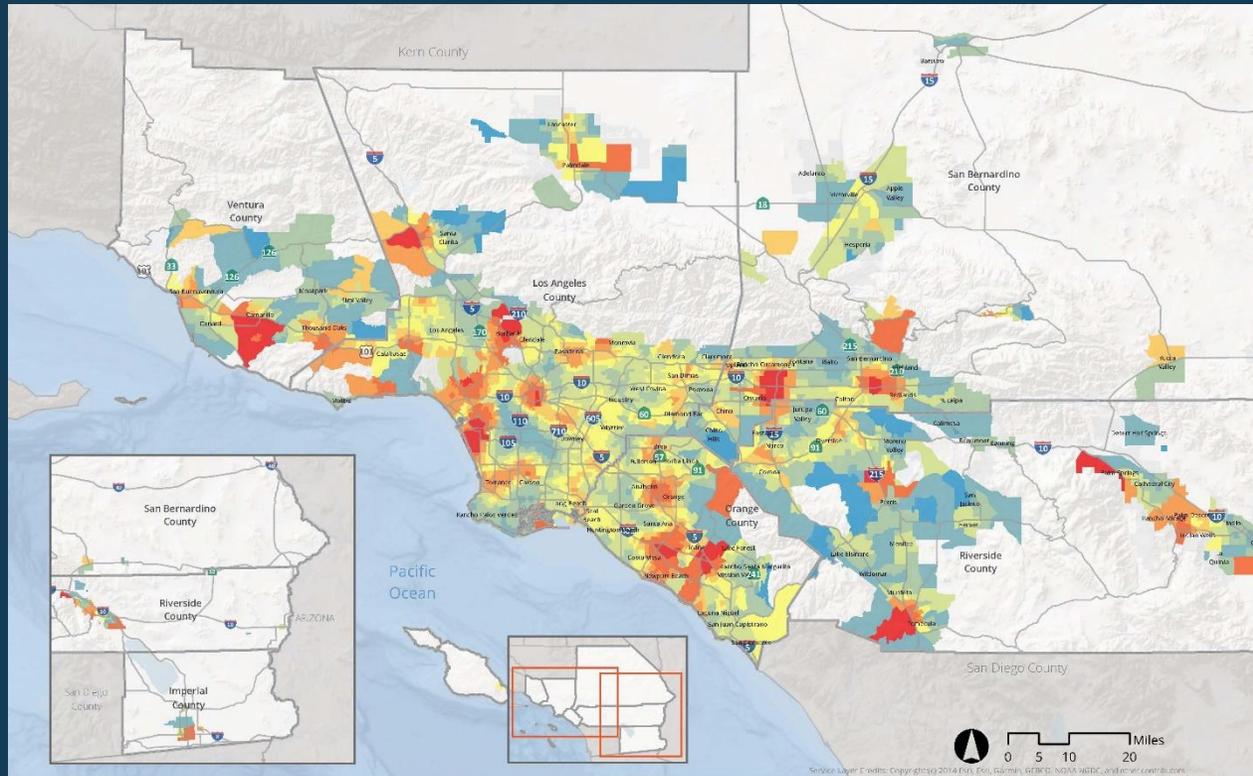
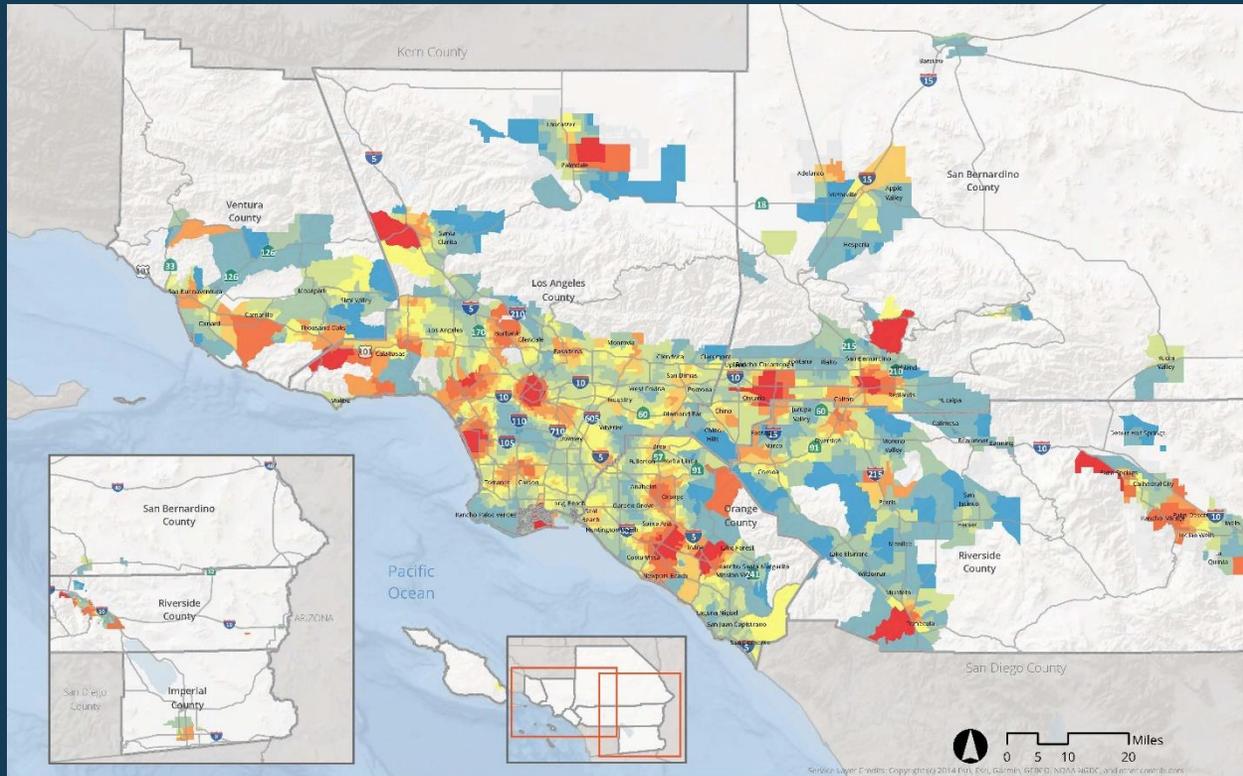
Jobs-Housing Imbalance/Mismatch

Jobs-to-Workers for All Jobs vs. Low-Wage Jobs

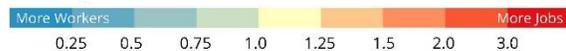


All Jobs

Low-Wage Jobs

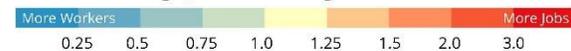


Ratio of Jobs to Workers for Census Tracts, 2016



(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: Job and worker data were obtained from U.S. Census Bureau, LEHD Origin-Destination Employment Statistics (LODES 7.4) Workplace Area Characteristics (WAC) Primary Jobs data file and Residence Area Characteristics (RAC) Primary Jobs data file for year 2016.

Ratio of Low-Wage Jobs to Low-Wage Workers for Census Tracts, 2016



(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: Job and worker data were obtained from U.S. Census Bureau, LEHD Origin-Destination Employment Statistics (LODES 7.4) Workplace Area Characteristics (WAC) Primary Jobs data file and Residence Area Characteristics (RAC) Primary Jobs data file for year 2016.

Jobs-Housing Imbalance/Mismatch

Jobs-Housing Ratio & Low-Wage Jobs Housing Fit (JHFIT)



- **Objective:** To examine the Jobs-Housing Fit (JHFIT) between available housing types and the income level of residents at a neighborhood scale
- **Source:** Job estimates from LODES 7.4 WAC data files for the years 2010 and 2016 and housing unit estimates from 2012 and 2017 ACS 5-Year Estimates
- **Finding:**
 - Jobs-housing ratio increased between 2010 and 2016, while low wage JHFIT decreased during the same period.
 - Coastal counties have a substantial concentration of low-wage jobs, but lack an adequate number of affordable rental units, while Inland counties have a substantial concentration of affordable rental units and workers, relative to the number of low-wage jobs.

TABLE 15 Jobs-Housing Ratio and Low-Wage Jobs-Housing Fit in the SCAG Region

County	2012 ACS 5 YEAR & 2010 LODES			2017 ACS 5 YEAR & 2015 LODES		
	Jobs-Housing Ratio	Low-Wage Jobs-Housing Fit	Difference	Jobs-Housing Ratio	Low-Wage Jobs-Housing Fit	Difference
Imperial	1.13	0.84	0.29	1.16	0.81	0.35
Los Angeles	1.15	0.79	0.35	1.22	0.77	0.46
Orange	1.33	2.10	-0.78	1.44	2.16	-0.72
Riverside	0.77	0.90	-0.14	0.88	0.81	0.07
San Bernardino	0.95	0.84	0.11	1.04	0.72	0.32
Ventura	0.98	1.59	-0.60	1.03	1.62	-0.59
SCAG	1.10	0.94	0.17	1.19	0.89	0.30

Sources:

1. Jobs and housing projections for years 2020 and 2030 are based on SCAG growth forecast projections for the Connect SoCal, the 2020 RTP/SCS
2. Job estimates are based on U.S. Census Bureau's LEHD Origin-Destination Employment Statistics Data (LODES version 7.4) Workplace Area Characteristics (WAC) Primary Jobs data files for years 2010 and 2016.
3. Housing unit estimates are based on U.S. Census Bureau's 2008-2012 American Community Survey 5-Year Estimates and 2013-2017 American Community Survey 5-Year Estimates.

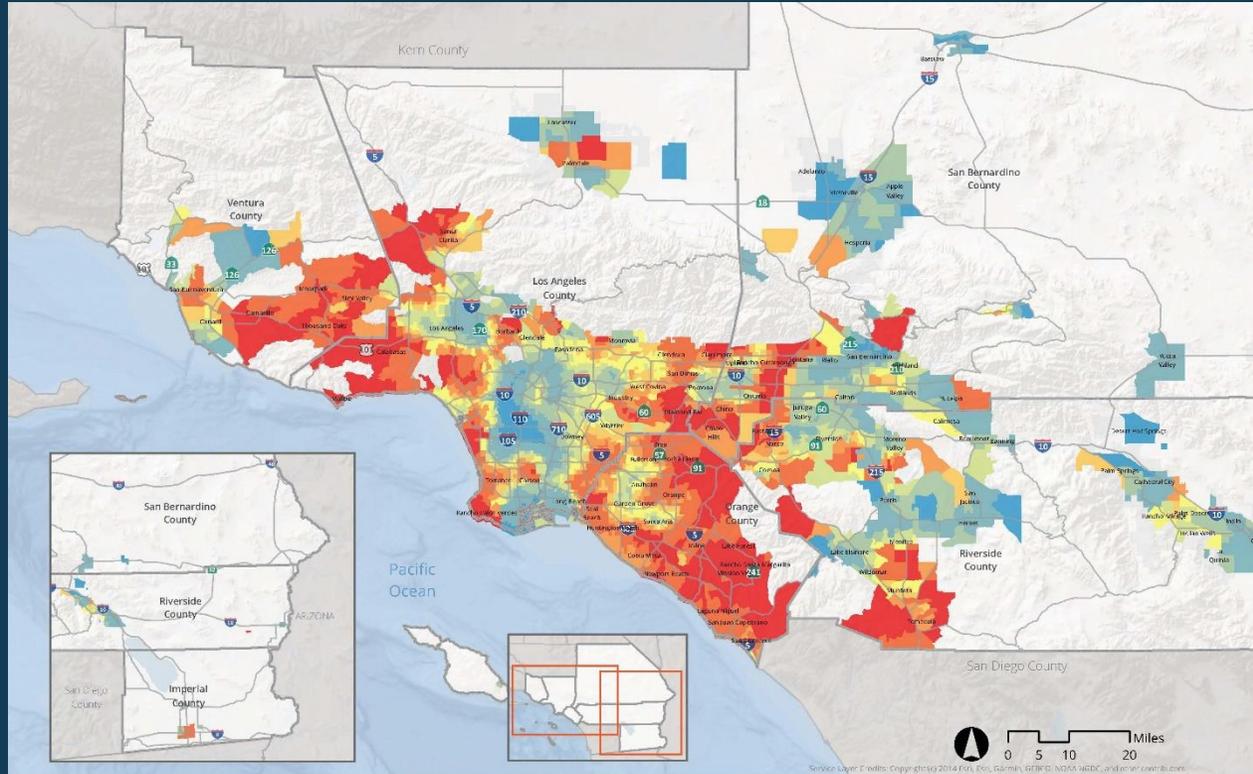
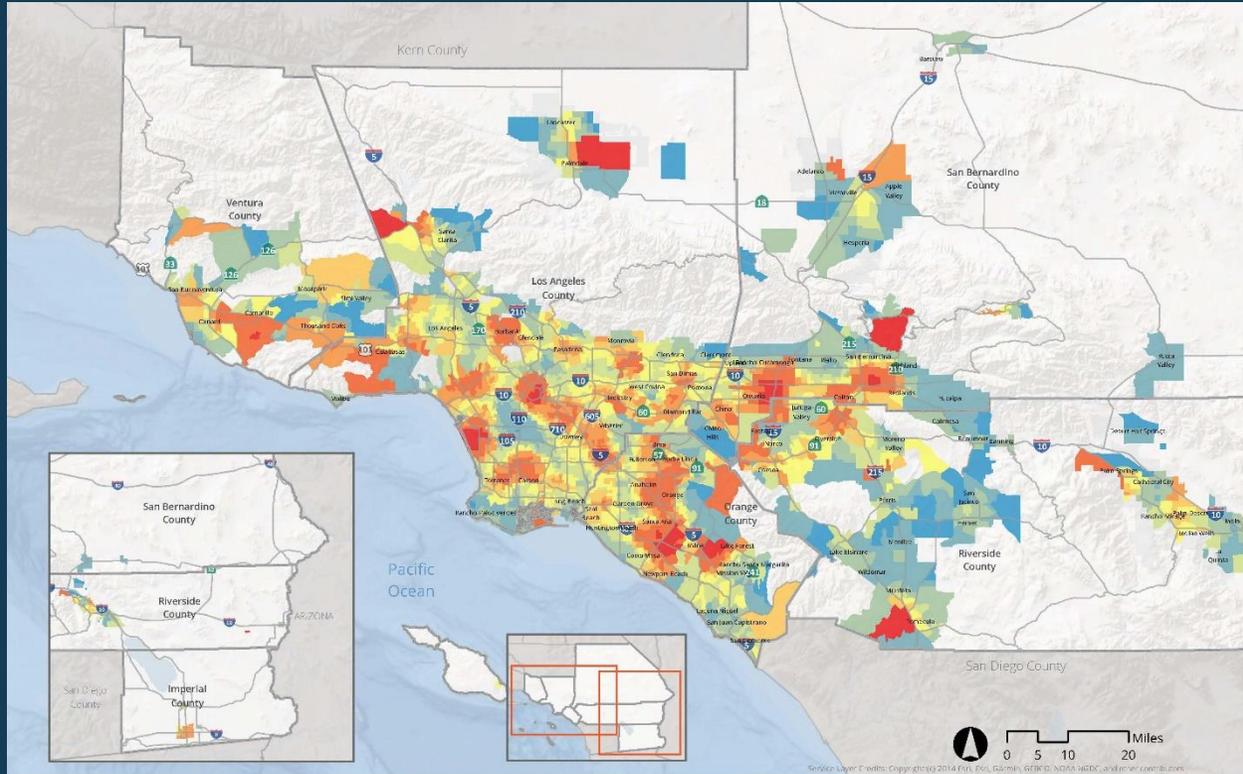
Jobs-Housing Imbalance/Mismatch

Jobs-Housing Ratio vs Low-Wage JHFIT

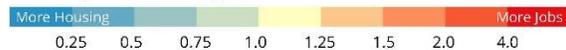


Jobs-Housing Ratio

Low-Wage JHFIT



Ratio of Jobs to Housing Units for Census Tracts, 2016



(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: Job data was obtained from U.S. Census Bureau, LEHD Origin-Destination Employment Statistics (LODES 7.4) Workplace Area Characteristics (WAC) Primary Jobs data file for year 2016 and housing data was obtained from U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

Ratio of Low-Wage Jobs to Affordable Rental Units for Census Tracts, 2016



(Note: 'Low Wage' = Jobs with earnings \$1250/month or less; 'Med. Wage' = Jobs with earnings \$1251/month to \$3333/month; 'High Wage' = Jobs with earnings greater than \$3333/month)
 Source: Job data was obtained from U.S. Census Bureau, LEHD Origin-Destination Employment Statistics (LODES 7.4) Workplace Area Characteristics (WAC) Primary Jobs data file for year 2016 and housing data was obtained from U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

Jobs-Housing Imbalance/Mismatch

Conclusions



- **Higher wage workers tend to commute longer distances than lower wage workers.**
- **The commute distance of workers in inland counties grew more rapidly than in coastal counties, especially in low wage workers in inland counties.**
- **Inland counties show a lower job-to-worker ratio than coastal counties, which indicates there are more long-distance commuters in inland counties.**
- **Coastal counties have a substantial concentration of low-wage jobs, but lack an adequate number of affordable rental units, while Inland counties have a substantial concentration of affordable rental units and workers, relative to the number of low-wage jobs that match their skills.**
- **Job-housing balance in the SCAG region may be improved due to the faster growth of employment over population in the Inland Counties through 2045. Improvements in job-housing balance may result in a reduction of transportation congestion and related air quality problems.**

Thank you

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