2015
Environmental Report Card
FOR LOS ANGELES COUNTY

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QUALITY

Overview

In Los Angeles, we often focus on what's wrong with the region. The traffic is miserable. The price of property and rents are high. And the Lakers are a disaster. Unfortunately, we don't focus on what makes the region such a great place to live. We have unbelievable weather. A person can surf, hike, bike and ski on the same day. The region's unparalleled cultural diversity has led to an endless variety of arts and music opportunities, and food choices that can satisfy any palate, just to name a few of the benefits.

With that in mind, the authors would not trade the LA region for the winters of the northeast and the rust belt, the flatlands and humidity of the southeast, or the dreariness of the northwest. We love L.A., which makes assessing the environmental quality of life for the region very difficult. We used indicators comparing our megacity to far less developed and diverse regions of the country, perhaps not the most apt approach. However, the indicators we used captured important quality of life issues and were developed by others that analyzed numerous extensive data sources to arrive at their metrics.

Community Acessibility

Ready access to work, stores, and services by walking, biking, or public transportation enhances urban life and supports efforts toward a carbon-neutral city. The region was developed during a period of inexpensive fossil fuels, abundant land resources and water, and cheap building materials. While the metropolitan region is one of the densest in the United States, labeled 'dense sprawl,' most of the region still depends on the automobile for transportation, impacting the quality of life, as well as creating air pollution and GHG emissions.

Public transportation and bicycle infrastructure have historically been fiscally constrained due to tax reduction initiatives passed since 1978. However, the 2008 passage of the county-wide half cent sales tax -Measure R, the Traffic Relief and Rail Expansion Ordinance, have invigorated public transportation improvements. Public transit use and bicycle use have been increasing, albeit slowly, but public transit infrastructure investments are clearly changing real estate dynamics across the region. An evolution is taking place. Zoning laws still stand in the way of

dramatic changes enabling more walkable and transit friendly neighborhoods, as does historic NIMBYism. Despite these entrenched patterns, there is a slow evolution that this report card will begin to track over time.

Data

We evaluated access to shops and services, bike friendliness, and access to public transportation using the Walk Score®, Bike Score™ and Transit Score® ratings developed by the company Walk

Score (www.walkscore.com), for cities throughout LA County[56]. All scores are on a scale from 0-100.

- Walk Score ratings measures walkability based on walking routes to destinations such as grocery stores, schools, parks, restaurants, and retail. Scores have been calculated for approximately 2,500 of the largest US cities.

- Transit Score ratings are a measure of how well a location is served by public transit, based on data released in a

standard format by public transit agencies. Transit Scores ratings are calculated by assigning a "usefulness" value to nearby transit routes based on the frequency, type of route (rail, bus, etc.), and distance to the nearest stop on the route.

- Bike Score measures bike accessibility on a scale from 0 - 100 based on bike infrastructure, topography, destinations and road connectivity. For a given location, a Bike Score is calculated by measuring bike infrastructure (lanes, trails, etc.), hills, destinations and road connectivity, and the number of bike commuters.

Findings

- The 141 Walk Score-rated cities with a population 200,000 or greater gave an average Walk Score of 47. The highest is 88 for New York City, followed by 84 for San Francisco. The average Walk Score for the City of Los Angeles was 64 with neighborhoods like Downtown LA, Koreatown, Westlake, Hollywood and Mid City scoring very well. (Table 39, Fig 62). The average WalkScore for the city of Long Beach was 66. (Table 39, Fig 63).

- Of the listed cities, the highest Walk Scores were in Santa Monica. No listed city scored in the "Walker's Paradise" (90-100) and only Santa Monica scored in the next tier of "Very Walkable" (70-89). Six cities scored less than 50, putting them in the "Car Dependent" category, in which most or all errands required a car.(Table 39)

- Transit Scores were only available for four of the largest 20 cities. Santa Monica and Pasadena were rated "Excellent Transit", the second highest ranking. Los Angeles and Glendale were rated "Good Transit" and "Some Transit" respectively.(Table 39)

Table 39: WalkScores, TransitScores and BikeScores for Selected Cities and Neighborhoods in L.A. County

City	Walk Score	Transit Score	Bike Score
Burbank	66		
Carson	49		
Compton	59		
Culver City	73		
Downey	54		
El Monte	56		
Glendale	66	39	
Hawthorne	64		
Inglewood	64		
Lancaster	25		
Long Beach	66		62
Los Angeles	64	50	54
Norwalk	56		
Palmdale	21		
Pasadena	62	71	
Pomona	48		
Santa Clarita	33		
Santa Monica	78	83	
South Gate	61		
Torrance	61		
West Covina	41		
LOS ANGELES NEIGHBORHOODS			
Downtown	93	99	69
Koreatown	90	78	64
Westlake	86	80	56
Hollywood	86	64	61
Mid City	75	62	61
No. Hollywood	69	49	59
South L.A.	67	60	62
San Pedro	64	32	52
Sun Valley	50	42	51
Northridge	46	38	55
Sylmar	39	39	41
Pac. Palisades	32	29	18

Scoring Legend

Score®	Walk Score	Transit Score	Bike Score
90–100	WALKER'S PARADISE Daily errands do not require a car	RIDER'S PARADISE World-class public transportation	BIKER'S PARADISE Daily errands can be accomplished on bike
70–89	VERY WALKABLE Most errands can be accomplished on foot	EXCELLENT TRANSIT Transit is convenient for most trips	VERY BIKEABLE Biking is convenient for most trips
50–69	SOMEWHAT WALKABLE Some errands can be accomplished on foot	GOOD TRANSIT Many nearby public transportation options	BIKEABLE Some bike infrastructure
25–49	CAR-DEPENDENT Most errands require a car	SOME TRANSIT A few nearby public transportation options	SOMEWHAT BIKEABLE Minimal bike infrastructure
0–24	CAR-DEPENDENT Almost all errands require a car	MINIMAL TRANSIT It is possible to get on a bus	SOMEWHAT BIKEABLE Minimal bike infrastructure

Figure 62: Los Angeles Walk Score

Figure 63: Long Beach Walk Score

- Bike Scores were only available for Los Angeles and Long Beach, both of which were rated "Bikeable", but none of the LA neighborhoods were in the Very Bikeable range despite a large increase in city bike lane mileage in recent years. (Table 39)

Data Limitations

- These three measures are trademarked methodologies that are not fully transparent to the public.

- Scores were only available by city, not for the County as a whole, and not for unincorporated areas of the County.

- Bike Scores are only available where bike infrastructure data was available from the city.

- Transit Scores are only available where local agencies provided open data through a GTFS feed.

- Some scores include attributes that cannot be addressed by city planning or individual action, such as the hilliness of a neighborhood as part of the Bike Score. Although obviously important information for prospective residents who intend to bike to work, this aspect of the score will not change with time.

- There is not a clear schedule for updates, although they have been occurring approximately every 18 months.

The County of Los Angeles is a late comer to many of these issues, and complicating this assessment is that there are 88 different cities ranging from very small to quite large, dense to dominated by single family neighborhoods. The County has no land use authority over these individual cities, thus any changes must be initiated one city at a time.

Commute Times and Modes of Transportation to Work

Commute times and mode of transportation to work are linked to many aspects of urban life including accessibility of public transportation and proximity of housing to jobs.

While the previous indicator looked at accessibility measures from a neighborhood perspective, this indicator looks at outcomes from a population perspective, namely: how are people actually getting to work and how long does it take? While land use is the responsibility of cities, the county's Metropolitan Transit Authority provides bus and rail transit to much of the region. There are also individual city transit authorities such as the Santa Monica Big Blue Bus, LADOT's DASH and Commuter Express services, the Culver CityBus, Foothill Transit, Long Beach Transit, and Torrance Transit. Thus the region has a complex transportation network, including city and county streets, state and federal freeways, and private railroads.

Data

We used data from the 2013 American Community Survey 1-year estimates for Los Angeles County. Reports were generated using the advanced search option in the US Census Bureau American FactFinder[57]. We looked at the percent of County workers (16 years and over) who drove alone, carpooled, or took public transportation.

We also looked at the mean travel time to work. Results were compared to those from the 2012 1-year survey and from the 2005 survey, which was the earliest year we could find with these data.

Findings

• Approximately 90% of those surveyed indicated that they traveled to work by one of the three modes of transportation: drove alone, carpooled, or took public transportation. (Table 40)

• The overwhelming majority, 73%, drove alone. Ten percent carpooled and 7% took public transportation. (Table 40)

• The mean travel time to work was 30 minutes. Only 7.5% of the public commuted less than 10 minutes a day while 22.6% of the workforce commutes over 45 minutes to work. The mean time for public transportation was 75% greater than that for driving alone, and 54.7% of mass transit commuters take over 45 minutes to get to work. (Table 40)

• These results differed by only 0.1-0.2 percentage points from 2012 results, well within the margin of error for the estimates.

• Compared to 2005, the number of carpoolers was 2% lower in 2013 (which is greater than the margin of error but less than the percent imputed value for means of transportation to work, which was 2.4% in 2005 and 8.6% in 2013). Differences in all other values were within the margins of error for the estimates.

Data Limitations

• These data do not provide further details on the mode of transportation for the 10% of survey respondent who did not travel to work by one of the three modes of transportation listed. We hope to provide information on the percent of people biking and walking to work in future report cards.

• Due to time and resource limitations, we were unable to research data on mode of transportation for years prior to 2005, to provide a greater context for examining commuting patterns.

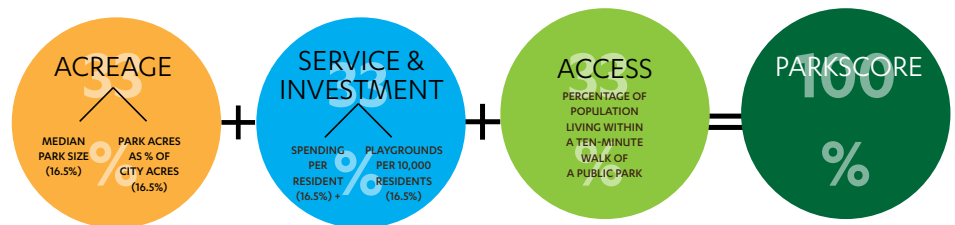| Table 40: Los Angeles County Travel Times and Modes of Transportation to Work, 2013. Source: ACS								
	Total		Car, truck, or van – drove alone		Car, truck, or van – carpooled		Public transportation (excl. taxicab)	
	Estimate	MoE	Estimate	MoE	Estimate	MoE	Estimate	MoE
Workers 16 years and over	4,492,244	+/-21,728	3,264,307	+/-21,699	449,897	+/-12,272	311,794	+/-8,038
Less than 10 minutes	7.5%	+/-0.2	7.0%	+/-0.2	6.4%	+/-0.6	0.7%	+/-0.2
10 to 14 minutes	11.2%	+/-0.3	11.6%	+/-0.3	10.9%	+/-0.8	2.9%	+/-0.7
15 to 19 minutes	13.8%	+/-0.3	14.7%	+/-0.3	13.4%	+/-0.8	4.2%	+/-0.7
20 to 24 minutes	14.4%	+/-0.3	15.2%	+/-0.3	14.7%	+/-1.0	6.7%	+/-0.9
25 to 29 minutes	5.5%	+/-0.2	6.0%	+/-0.2	4.5%	+/-0.5	2.2%	+/-0.4
30 to 34 minutes	17.3%	+/-0.3	17.5%	+/-0.4	17.8%	+/-1.1	20.1%	+/-1.3
35 to 44 minutes	7.7%	+/-0.2	7.9%	+/-0.2	7.8%	+/-0.6	8.6%	+/-0.7
45 to 59 minutes	10.0%	+/-0.2	9.8%	+/-0.3	10.8%	+/-0.7	15.2%	+/-1.1
60 or more minutes	12.6%	+/-0.3	10.3%	+/-0.3	13.7%	+/-0.9	39.5%	+/-1.6
Mean travel time to work (min)	30.0	+/-0.2	28.5	+/-0.2	30.9	+/-0.5	50.0	+/-0.9

(TRAVEL TIME TO WORK)

Park Access and Quality

Neighborhood parks contribute to the quality of urban life by providing opportunities for sociability, access to nature, outdoor recreation and enjoyment of green spaces. Measures of park access and quality aim to quantify and combine multiple attributes into a single index that can be used to compare neighborhoods. The results may inform municipal decisions on land use, community development, and public resource allocation, as well as individuals' decisions on where to live.

Data

We used measures of park access and quality created by two different organizations, as follows:

The Trust for Public Land ParkScore Methodology

- The Trust for Public Land has developed a ParkScore® that incorporates multiple attributes, including aspects of park size, services and walking distance (see methodology graphic). Publically accessible park and open space data was obtained from City, County, State and Federal agencies. Scores are given on a scale of 1-100, as well as on a scale of 1-5 "benches." ParkScore is only available at the city-level at this time, and the Cities of LA and Long Beach are the only ones within LA County that have been scored. The data are publically available on the ParkScore website[58].

- GreenInfo Network has developed a ParkIndex[59] rating based on a scale of 1-100. This tool assesses census tracts or block groups based on the extent to which it is close to parks. ParkIndex ratings have been calculated for all neighborhoods and cities throughout Los Angeles County, but are currently in a pre-release draft version. We received permission to include the ratings for LA County as a whole, as well as for the cities of Los Angeles and Long Beach, effective Oct 2014.

Both methodologies include areas such as county beaches and National Forests in their definitions of "park.".

Table 41: ParkScores and ParkIndex Scores for the Cities of Los Angeles and Long Beach			
Source:	Trust for Public Land		GreenInfo Network
	ParkScore	Rank	Index Score
Long Beach	54	24/60	41
Los Angeles	42	45/60	28

Findings

- A Park Score has been calculated by the Trust for Public Land for 60 cities within the US, and range from a high of 82 (Minneapolis) to a low of 26 (Fresno).

    – The City of Long Beach was ranked 24th out of 60 with a Park Score of 54.0 (3 out of 5 "benches"). Areas with a very high need for parks are largely in North Long Beach near the LA River. (Table 41, Fig 64)

    – The City of Los Angeles was ranked 45th out of 60, with a Park Score of 42.0 (2 out of 5 "benches"). Areas with a very high need for parks include downtown LA, South LA, East LA, and the Van Nuys area of the San Fernando Valley. (Table 41, Fig 65)

- The average ParkIndex rating calculated by GreenInfo Network across all jurisdictions within Los Angeles County is 34.

    – The City of Long Beach average ParkIndex rating was 41, above the County average. (Table 41)

    – The City of Los Angeles average ParkIndex rating was 28, below the County average. (Table 41)

Data Limitations

The current park access metrics are based largely on the distance to the park and the size of the park, but do not reflect programs, safety or natural resources in the park. Further, they have been developed for use nation-wide and do not reflect differences among cities or regions. For example, current indices do not take into consideration whether a city has a large single family dwelling stock, with each dwelling having an individual yard, or predominantly multiple family apartment buildings. Park access needs are qualitatively different for those different circumstances, and suggest prioritizing new parks in neighborhoods that lack absolute access to open space.

While we recognize the current park indicators represent a huge effort to quantify this important amenity, we believe the methodologies require further refinement to reflect the needs of neighborhoods and nuances among park types themselves.
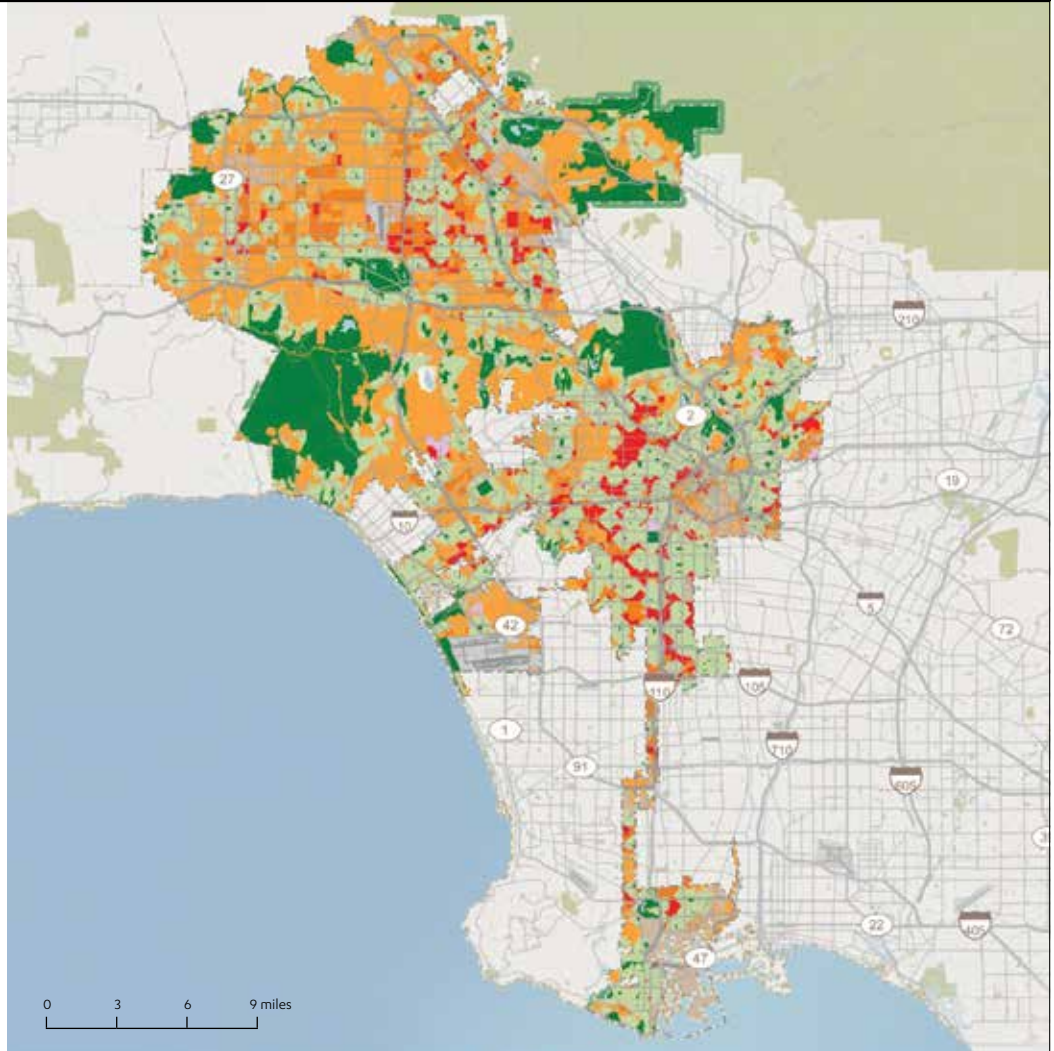
Figure 64: City of Los Angeles 2014 ParkScore Map. Source: TPL

The Trust for Public Land ParkScore® index analyzes public access to existing parks and open space. The analysis incorporates a two-step approach: 1) determines where there are gaps in park availability, and 2) constructs a demographic profile to identify gaps with the most urgent need for parkland. Park gaps are based on a dynamic 1/2 mile service area (10 minute walking distance) for all parks. In this analysis, service areas use the street network to determine walkable distance - streets such as highways, freeways, and interstates are considered barriers.

Demographic profiles are based on 2013 Forecast block groups provided by Esri to determine park need for percentage of population age 19 and younger, percentage of households with income less than 75% of city median income (Los Angeles less than $35,000), and population density (people per acre). The combined level of park need result shown on the large map combines the three demographic profile results and assigns the following weights:

50% = Population density (people per acre)
25% = Percentage of population ≤ age 19
25% = Percentage of households with income less than $35,000

Areas in red show a very high need for parks.

- Very High Park Need
- High Park Need
- Moderate Park Need
- Parks with Public Access
- Other Parks and Open Space
- Half Mile Park Service Areas
- Cemetery
- University
- Industrial
- Waterbodies

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Table 42: ParkScore Index Calculation, City of Los Angeles. Source: TPL

Rank (out of 60)	Population	Acreage (Max 40)		Services and Investment (Max 40)		Access (Max 40)	Raw Score (Max 120)	ParkScore (Max 100)
45	3,857,799	25		7		18	50	42.0
		Median Park Size	Park Land as % of City Area	Spending per Resident	Playgrounds per 10,000 Residents			
		9 (Max 20)	16 (Max 20)	6 (Max 20)	1 (Max 20)			

**Figure 65: City of Long Beach 2014 ParkScore Map. Source: TPL**

The Trust for Public Land ParkScore® index analyzes public access to existing parks and open space. The analysis incorporates a two-step approach: 1) determines where there are gaps in park availability, and 2) constructs a demographic profile to identify gaps with the most urgent need for parkland. Park gaps are based on a dynamic 1/2 mile service area (10 minute walking distance) for all parks. In this analysis, service areas use the street network to determine walkable distance - streets such as highways, freeways, and interstates are considered barriers.

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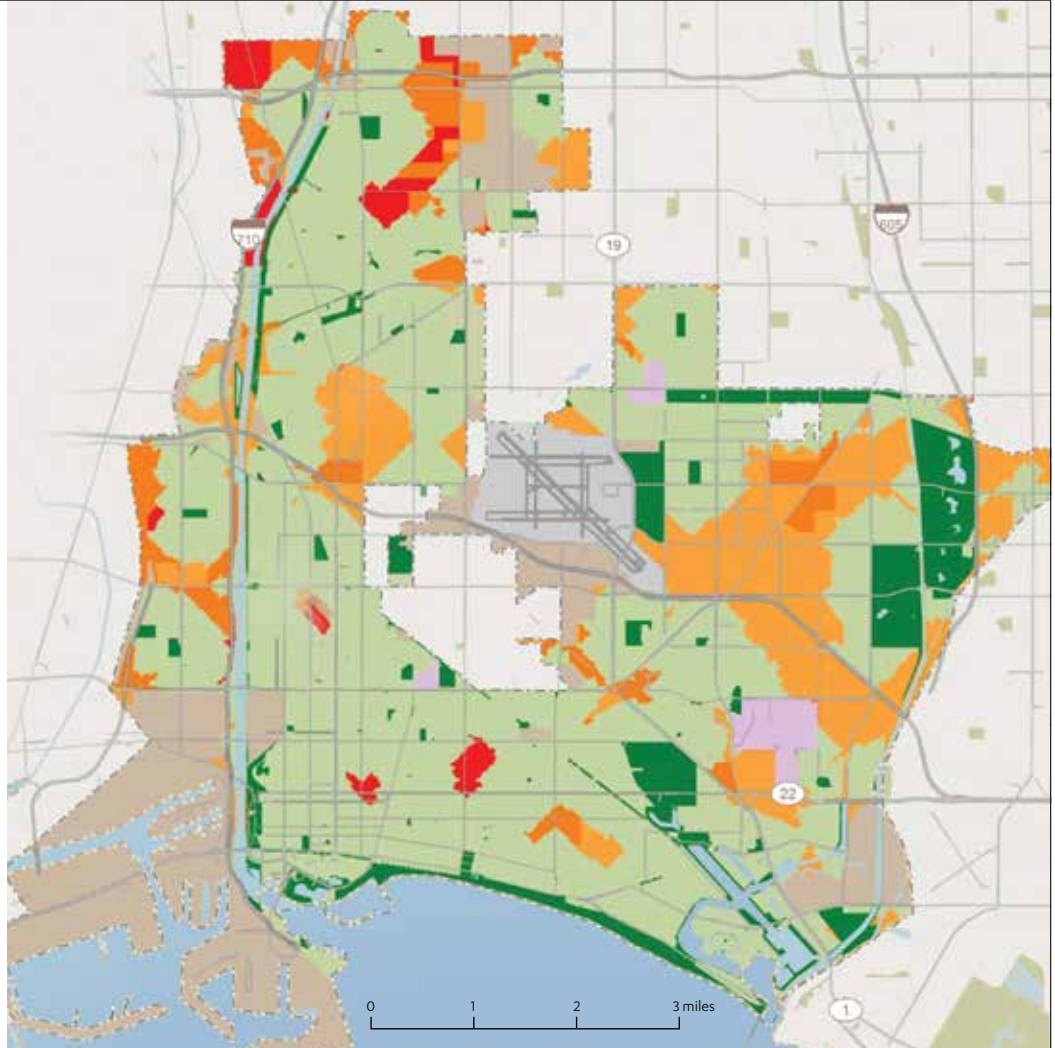
Special thanks to the following data providers: Long Beach, Esri.Information on this map is provided for purposes of discussion and visualization only. Map created by The Trust for Public Land on April 14, 2014. TPL, The Trust for Public Land, and The Trust for Public Land logo are trademarks of The Trust for Public Land. Copyright © 2014 The Trust for Public Land. www.tpl.org

Table 43: ParkScore Index Calculation, City of Long Beach. Source: TPL

Rank (out of 60)	Population	Acreage (Max 40)		Services and Investment (Max 40)		Access (Max 40)	Raw Score (Max 120)	ParkScore (Max 100)
24	467,892	15		20		30	65	54.0
		Median Park Size	Park Land as % of City Area	Spending per Resident	Playgrounds per 10,000 Residents			
		5 (Max 20)	10 (Max 20)	18 (Max 20)	2 (Max 20)			

Community Environmental Health

The California Office of Environmental Health Hazard Assessment (OEHHA) has developed a methodology for identifying environmental exposures from multiple media pathways, and for characterizing the vulnerabilities of exposed populations, through a tool called Cal EnviroScreen (version 2.0, effective August, 2014)[60]. CalEnviroScreen produces a composite score and ranks all California census tracks relative to each other.

CalEnviroScreen is primarily designed to assist OEHHA in carrying out its environmental justice mission to conduct its activities in a manner that ensures the fair treatment of all Californians, including minority and low-income populations.

Data

We used the CalEnviroScreen 2.0 calculated Pollution Burden and Overall Score as indicators of Community Environmental Health. While some individual components of the Pollution Burden score overlap with other indicators in this Report Card, we believe the cumulative nature of this measure, as well as its spatial treatment of waste-related facilities, provide a unique contribution to the report card.

Figure 66 depicts the components and relative weightings. The overall CalEnviroScreen score was calculated from the Pollution Burden and Population Characteristics groups of indicators by multiplying the two scores. Since each group has a maximum score of 10, the maximum CalEnviroScreen Score is 100. Both scores are mapped using decile categories of percentile values by census tract, based on scores across the entire state of California. Populations are based on 2010 census values. Higher scores (redder color) indicate poorer environmental quality and greater vulnerability.

Findings

- Census tracts with the highest percentiles of Pollution Burden and Overall EnviroScreen Scores are

Figure 66: CalEnviroScreen 2.0 Scoring Methodology

Pollution Burden	Population Characteristics	
Ozone Concentrations PM2.5 Concentrations Diesel PM Emissions Pesticide Use Toxic Releases from Facilities Traffic Density Drinking Water Contaminants Cleanup Sites (1/2) Groundwater Threats (1/2) Hazardous Waste (1/2) Impaired Water Bodies (1/2) Solid Waste Sites and Facilities (1/2)	**X** Children and Elderly Low Birthweight Asthma Emergency Room Visits Educational Attainment Linguistic Isolation Poverty Unemployment **=**	**CalEnviroScreen Score**

widespread across the southern half of Los Angeles County, the area with the lowest income. As expected, these tracts correspond to major transportation corridors and industrial areas. They include tracts near the ports, south LA, Downtown LA, East LA, much of the San Gabriel Valley, and the Pacoima-San Fernando area. (Tables 44 and 45, Fig 67 & 68)

- Twenty-one percent of the County's population lives in census tracts ranking in the top (worst) 10% of Pollution Burden scores within the State, and over 80% of the County's population lives in census tracts ranking in the top half of Pollution Burden scores within the State (Table 1, Figure 2). Only 2% of the population lives in areas ranking in the lowest 10% of Pollution Burden scores. (Table 44, Fig 67)

- Over 19% of the County's population lives in census tracts ranking in the top (worst) 10% of Overall EnviroScreen

scores within the State, and over 70% of the County's population lives in census tracts ranking in the top half of Overall EnviroScreen scores within the State (Table 2, Figure 3). Under 4% of the population lives in areas ranking in the lowest 10% of Overall scores. (Table 45, Fig 68)

Data Limitations

- CalEnviroScreen provides a relative ranking of communities based on a selected group of available datasets, through the use of a summary score. This score is not an expression of health risk.

- Further, as a comparative screening tool, the results do not provide a basis for determining when differences between scores are significant in relation to public health or the environment. Accordingly, the tool is not intended to be used as a health or ecological risk assessment for a specific area or site.

Table 44: Percentile Category of Pollution Burden

Score	Population	Percent of Population
0-10	234,785	2%
10-20	216,149	2%
20-30	211,351	2%
30-40	426,657	4%
40-50	739,370	7%
50-60	1,107,576	11%
60-70	1,467,345	15%
70-80	1,705,513	17%
80-90	1,856,652	18%
90-100	2,086,724	21%
Total	**10,052,122**	

Figure 67: CalEnviroScreen 2.0 Pollution Burden by Census Tract
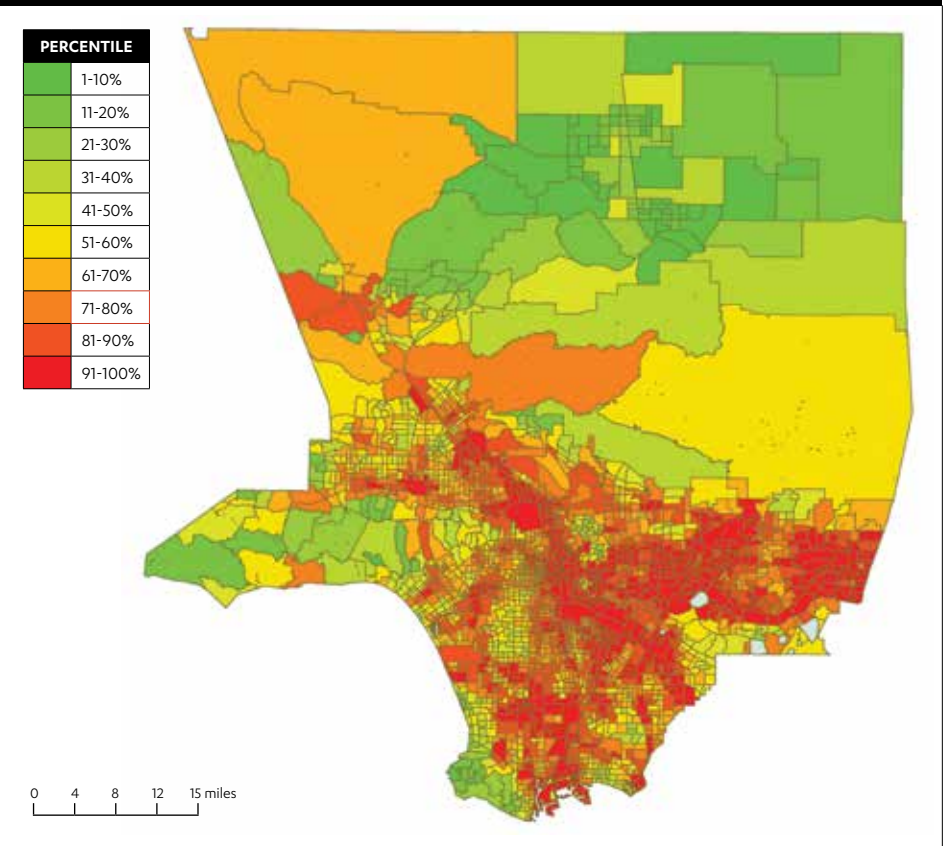
Table 45: Percentile Category of Overall CalEnviroScreen

Score	Population	Percent of Population
0-10	379,571	3.8%
10-20	431,491	4.3%
20-30	524,831	5.2%
30-40	761,258	7.6%
40-50	814,622	8.1%
50-60	887,559	8.8%
60-70	1,206,205	12.0%
70-80	1,344,352	13.4%
80-90	1,775,426	17.7%
90-100 (highest)	1,926,807	19.2%
Total	**10,052,122**	

Figure 68: CalEnviroScreen 2.0 Overall Scores by Census Tract
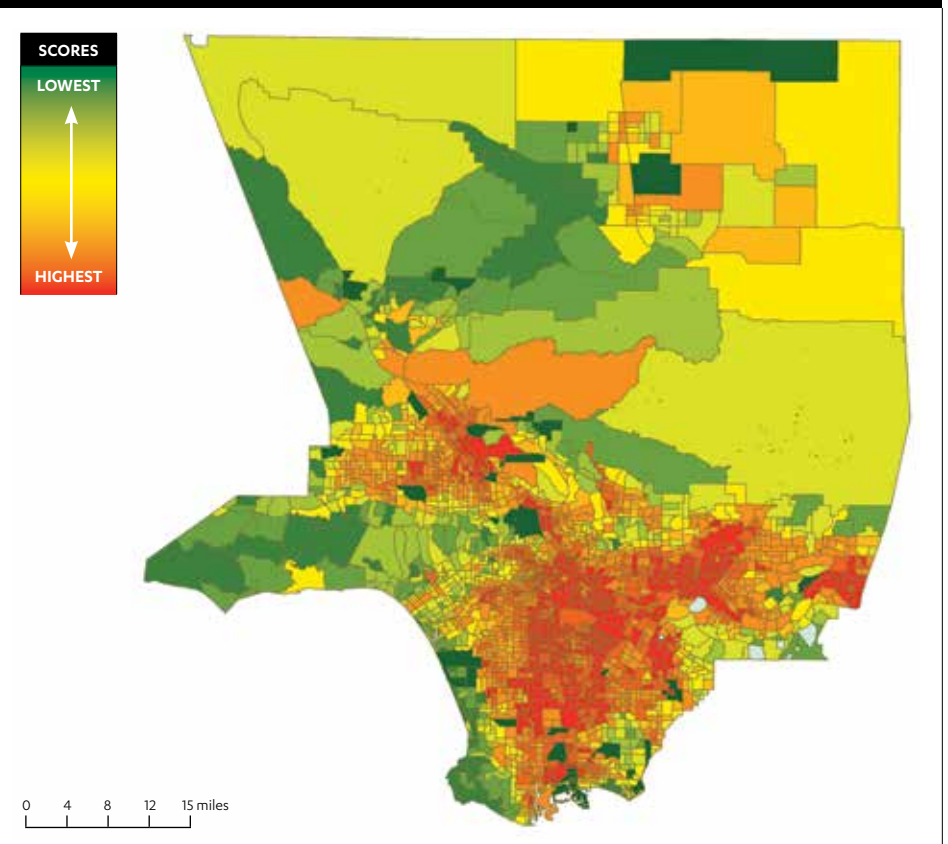
Grade for Environmental Quality of Life = C+

Based on the indicators we analyzed alone, the region would get a C grade or worse for environmental quality of life. However, there are many aspects of the region's quality of life that have improved dramatically over the last two decades. There have been substantial investments in parks through Proposition 12 and County Measure A, and through efforts from the Trust for Public Land, People for Parks, Amigos de Los Rios, North East Trees, Los Angeles Neighborhood Land Trust, and local and state conservancies and the Los Angeles Conservation Corps. Even measures like LA's stormwater bond, Proposition O, have added greatly to parks in a region surrounded by beaches and mountains.

Public mass transportation has improved dramatically with Federal investments and Measure R funds catalyzing numerous far-reaching projects. The vast majority of residents in the region live within walking distance of public transportation. City walkability is a challenge in many areas, but programs like Mayor Garcetti's Great Streets, and efforts in numerous coastal cities give one optimism that communities are becoming more welcoming to pedestrians. And the miles of bike lanes have increased greatly over the last five years as activists and CicLAvia have brought widespread awareness to the need for more bikeable communities.

But despite these numerous regional and local improvements in quality of life metrics, the region's traffic if often untenable and far too many people are living in areas with low EnviroScreen scores: a strong sign of poor environmental health in many communities. As such, the environmental quality of life score is a C+.