



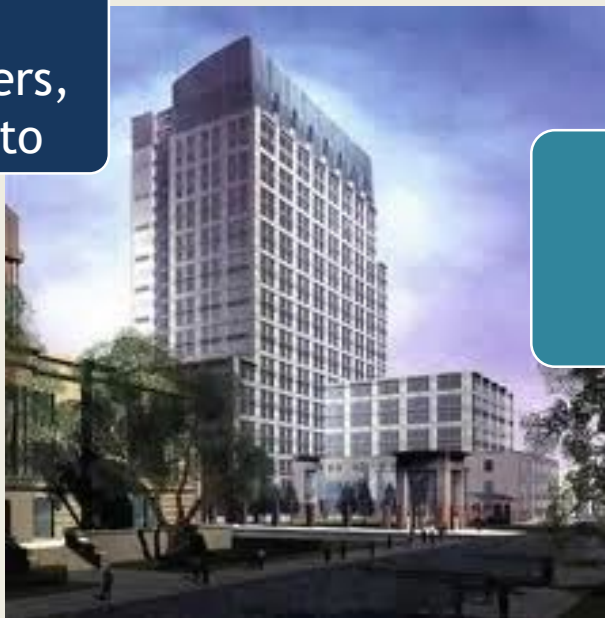
# CalEnviroScreen

Office of Environmental Health Hazard Assessment  
California Environmental Protection Agency

John B Faust, PhD | Jul 28, 2021



CalEPA  
Headquarters,  
Sacramento



CalEPA



Office of Environmental  
Health Hazard Assessment

Air Resources Board

CalRecycle

Department of  
Pesticide Regulation

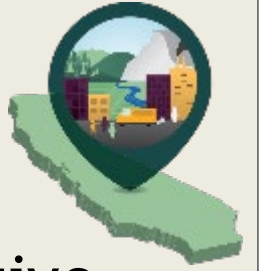
Department of Toxic  
Substances Control

State Water Resources  
Control Board

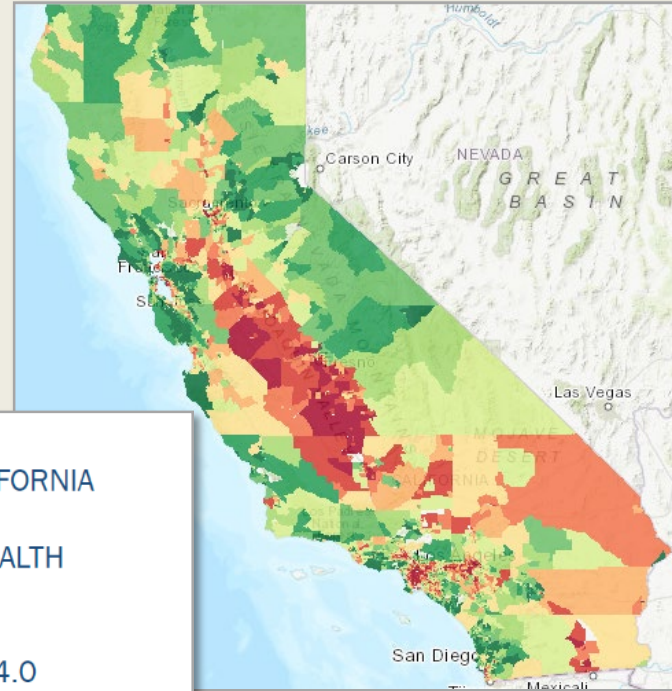
Elihu M Harris  
Building,  
Oakland







# What is CalEnviroScreen?



- Spatial analysis of relative burdens in California communities from pollution and population vulnerability
- 21 indicators combined into a single score
- Census tract scale
- Draft CalEnviroScreen 4.0 will be finalized soon.





## California EJ Statutes

1999-2000



2004



## Cumulative Impacts Work Group

2008-2013



2010-2018



## CalEnviroScreen Public Versions 1.0 to 3.0 (4.0 draft)

2013-2021

Advisory  
Committee  
Recommendations  
& CalEPA EJ  
Action Plan

Workshops and  
Consultation  
Processes



California Environmental  
Protection Agency

OCTOBER 2004  
ENVIRONMENTAL JUSTICE  
ACTION PLAN





**Exposures:**  
Direct contact with pollution



**Environmental Effects:**  
Adverse environmental conditions caused by pollutants



## CalEnviroScreen Components



**Sensitive Populations:**  
Populations with physiological conditions that result in increased vulnerability to pollutants



**Socioeconomic Factors:**  
Community characteristics that result in increased vulnerability to pollutants


























# CalEnviroScreen Process



# Draft CalEnviroScreen 4.0 Indicators



Pollution Burden		Population Characteristics	
Exposures	Environmental Effects	Sensitive Populations	Socioeconomic Factors
 Ozone  PM2.5  Diesel PM  Drinking Water Contaminants  Toxic Releases from Facilities  Traffic  <b>*New*</b> Children's Lead Risk from Housing  Pesticide Use	 Solid Waste Sites and Facilities  Cleanup Sites  Hazardous Waste Generators and Facilities  Groundwater Threats  Impaired Water Bodies	 Asthma  Cardiovascular Disease  Low Birth Weight Infants	 Educational Attainment  Housing Burden  Linguistic Isolation  Poverty  Unemployment

# Data Sources

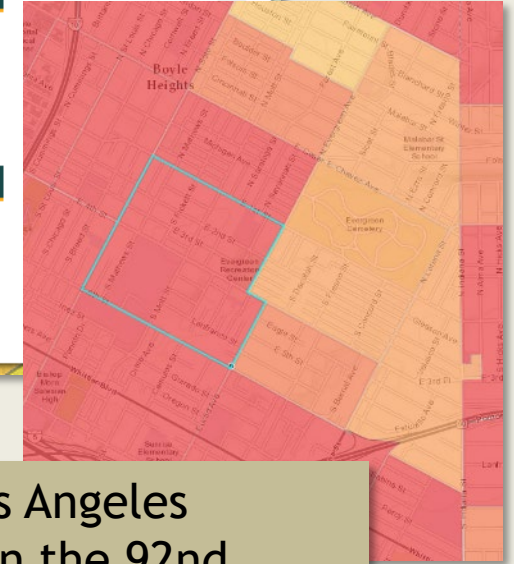
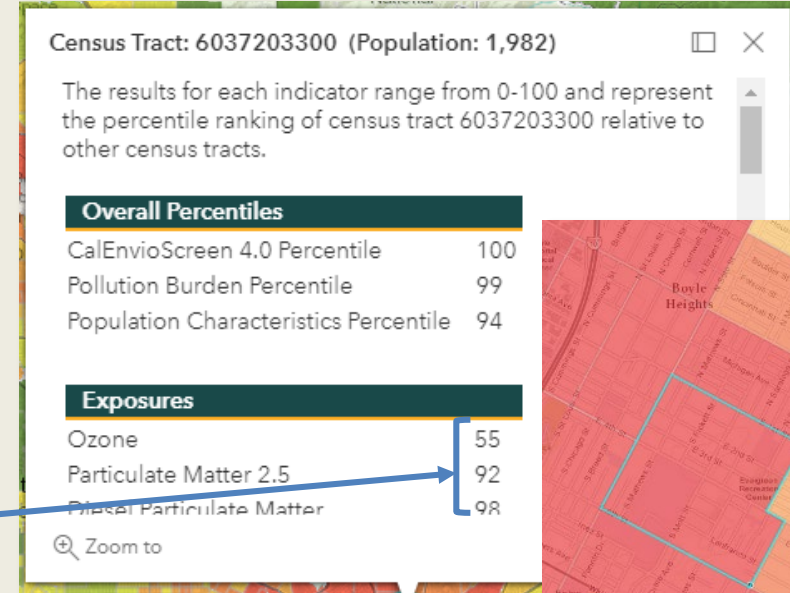
- California Environmental Protection Agency's Boards and Departments
  - California Air Resources Board
  - State Water Resources Control Board
  - Department of Toxic Substances Control
  - Department of Pesticide Regulation
  - CalRecycle
- US Environmental Protection Agency
- Office of Statewide Health Planning and Development
- California Department of Public Health
- US Census Bureau



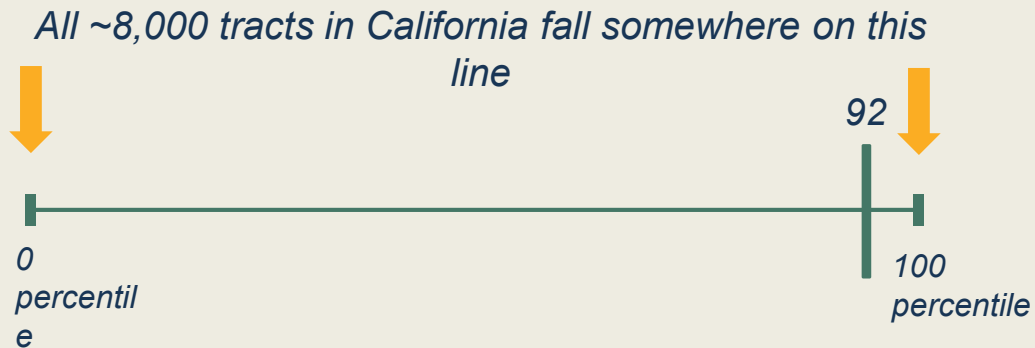


# Indicator Scoring

- Each census tract's raw indicator score is assigned a percentile value based on where it falls among values state-wide
- Percentiles represent relative scores for each of the 21 indicators



For example, this Los Angeles area census tract is in the 92nd percentile for PM2.5, meaning its value is higher than 92% of all other census tracts in California.



# CalEnviroScreen Model



## Pollution Burden

### EXPOSURES

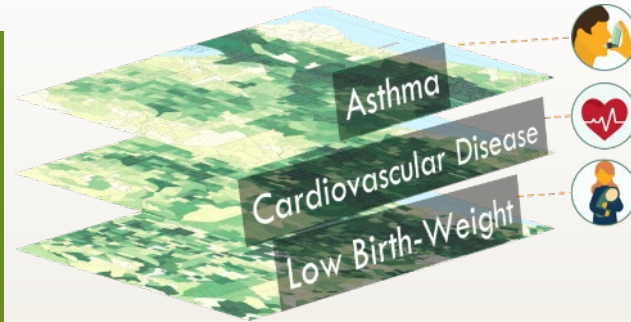


### ENVIRONMENTAL EFFECTS (1/2)

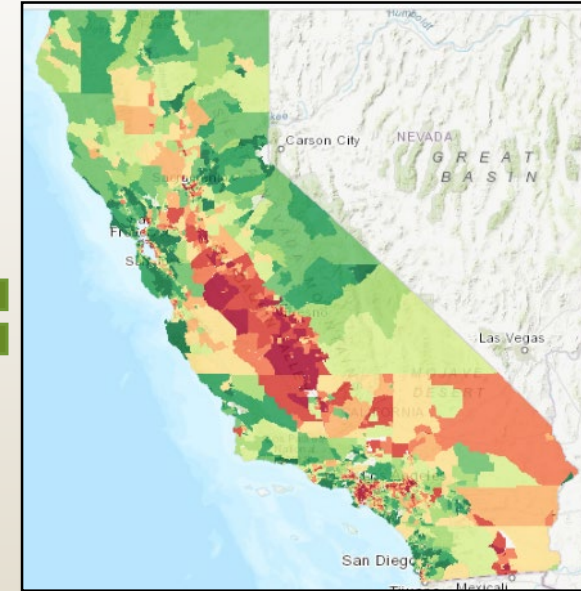


## Population Characteristics

### SENSITIVE POPULATIONS



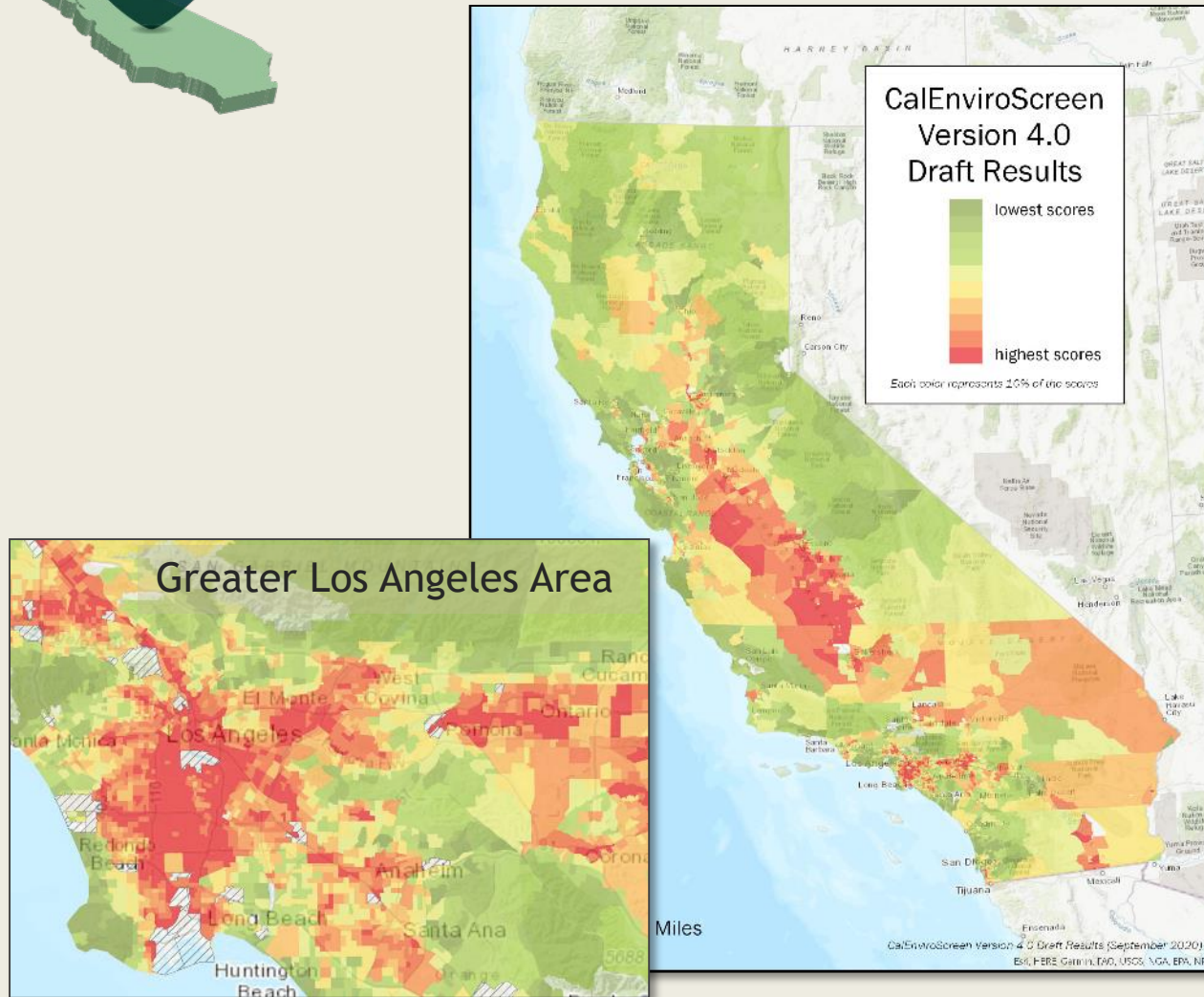
### SOCIOECONOMIC FACTORS







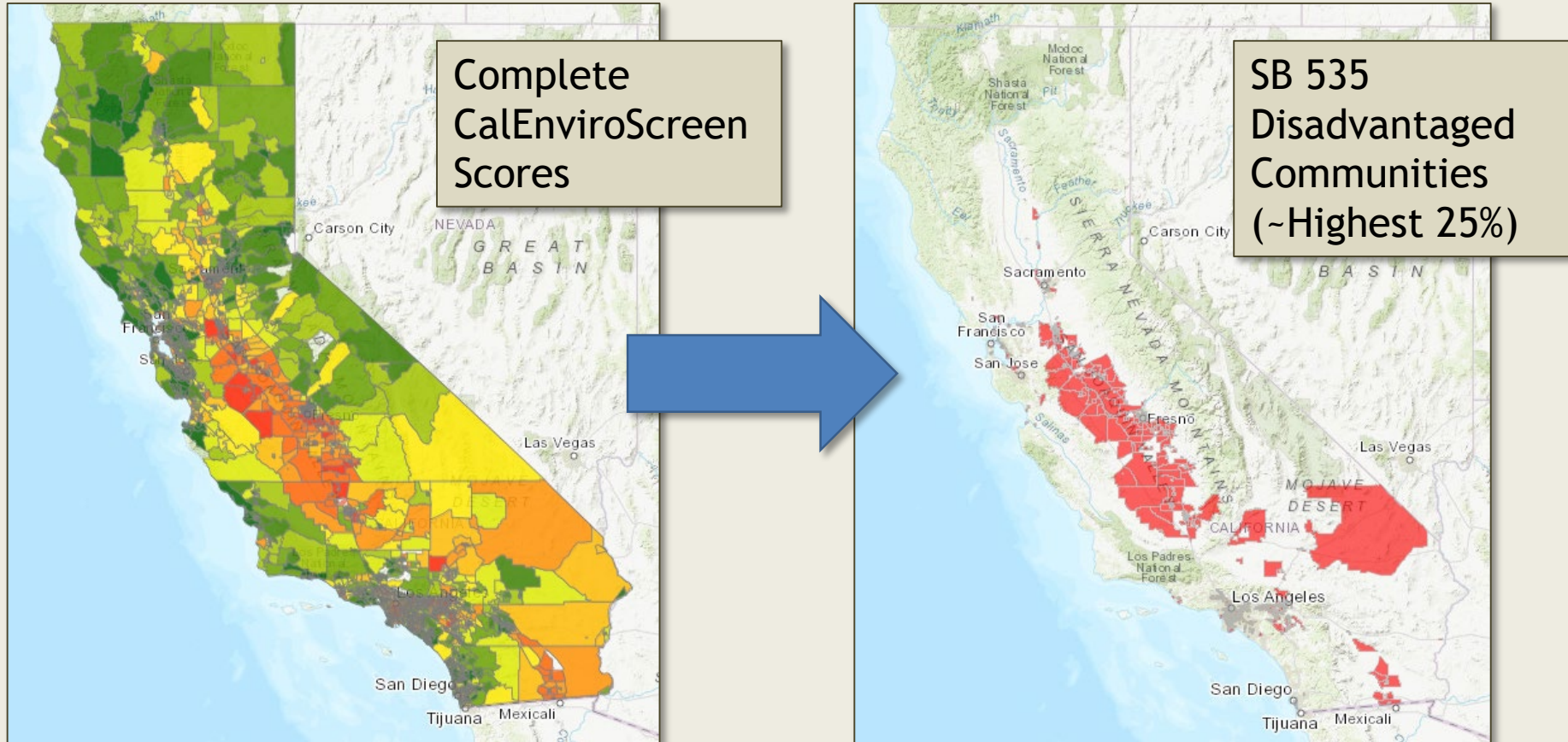
# Overall Draft CalEnviroScreen 4.0 Results



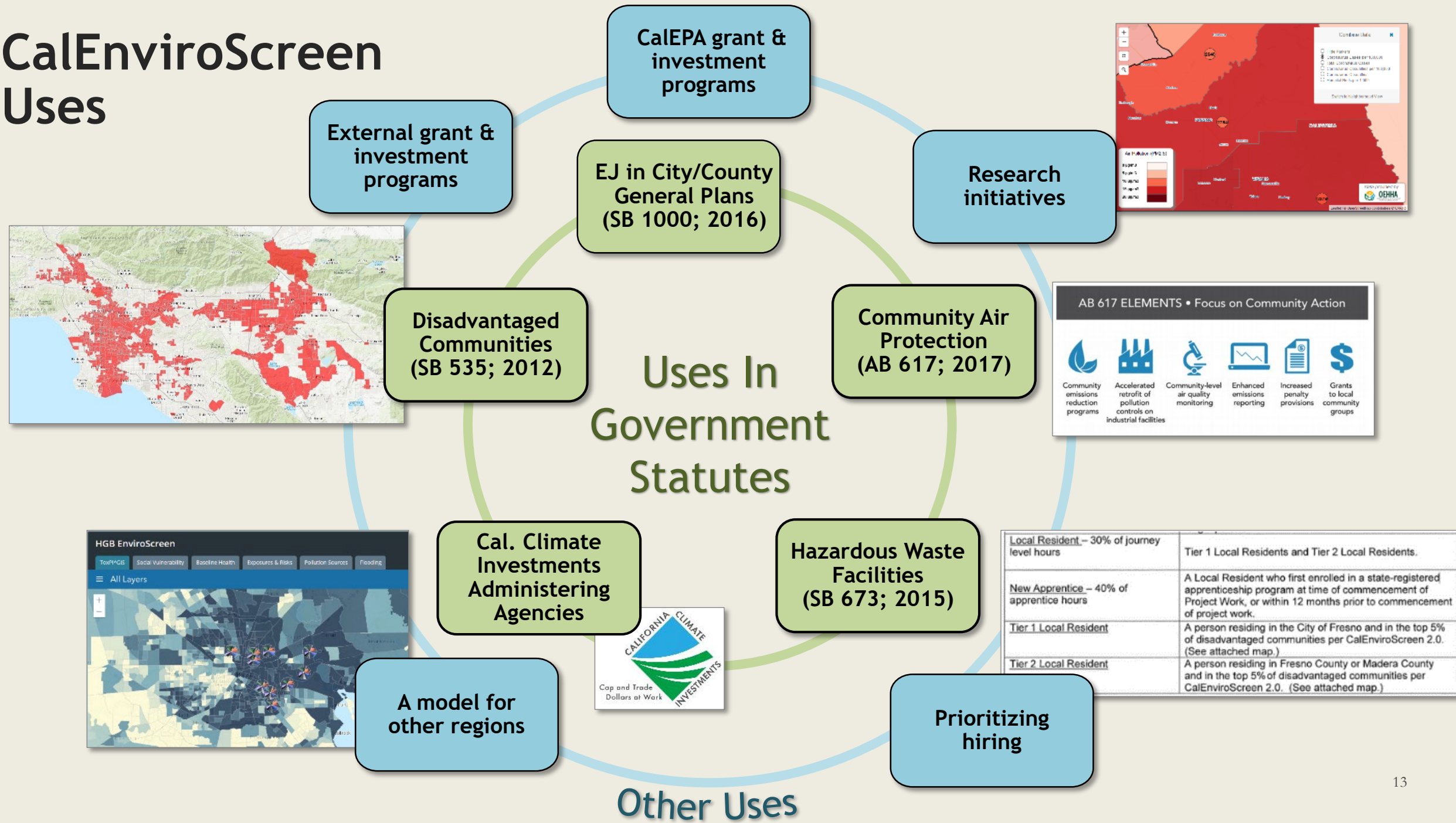
- Highlights areas of the state with highest burdens and population vulnerability.
- Disproportionate high scores in Greater Los Angeles Area and the San Joaquin Valley.
- Broad similarity across versions of CalEnviroScreen.



# CalEnviroScreen and the Designation of SB 535 “Disadvantaged Communities”

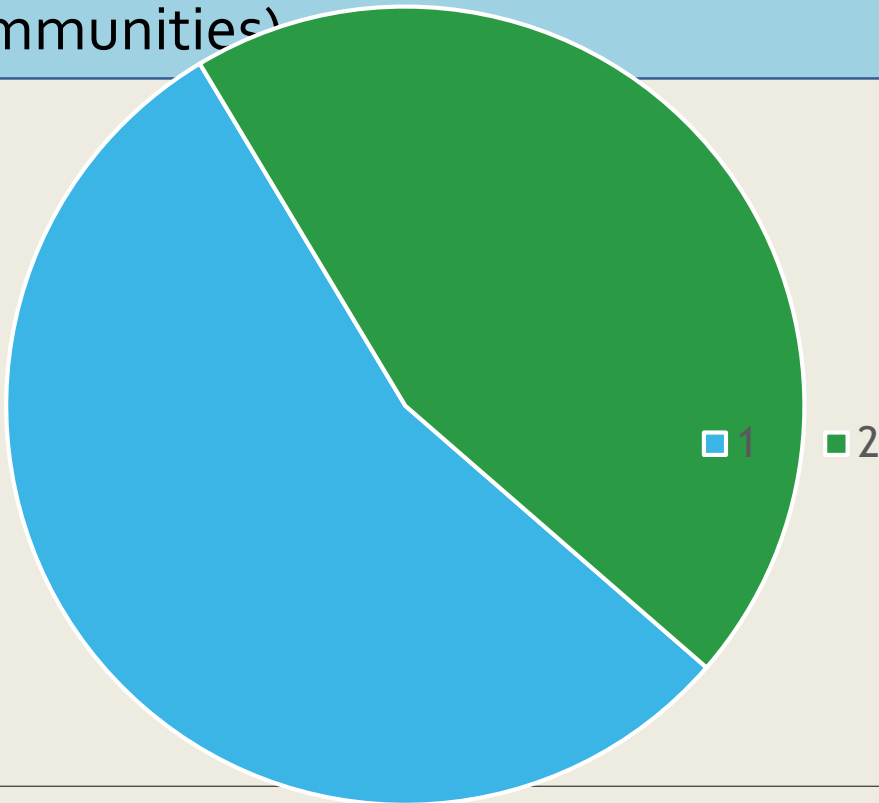


# CalEnviroScreen Uses



# SB 535 & AB 1550 Outcomes

\$3.5 billion (55%) benefiting priority populations (includes disadvantaged communities)



## Cumulative Project Outcomes



55% of funding benefiting priority populations (\$3.5 billion)



456,000+ individual projects implemented



6,400+ affordable housing units under contract



118,000 urban tree plantings



769,000+ acres of land preservation or restoration



600+ transit agency projects funded, adding or expanding transit service



122,000+ projects installing energy efficiency measures in homes



318,000+ rebates issued for zero-emission and plug-in hybrid vehicles

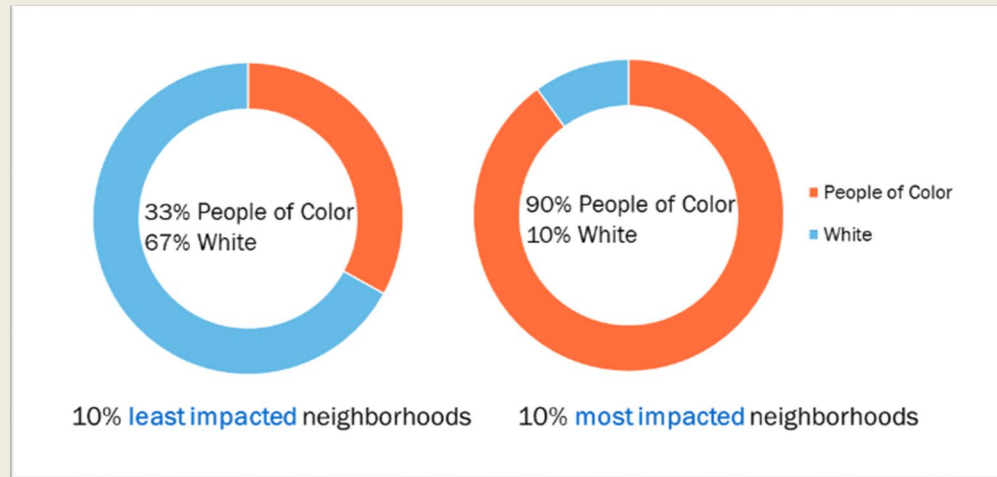
As of May 2020



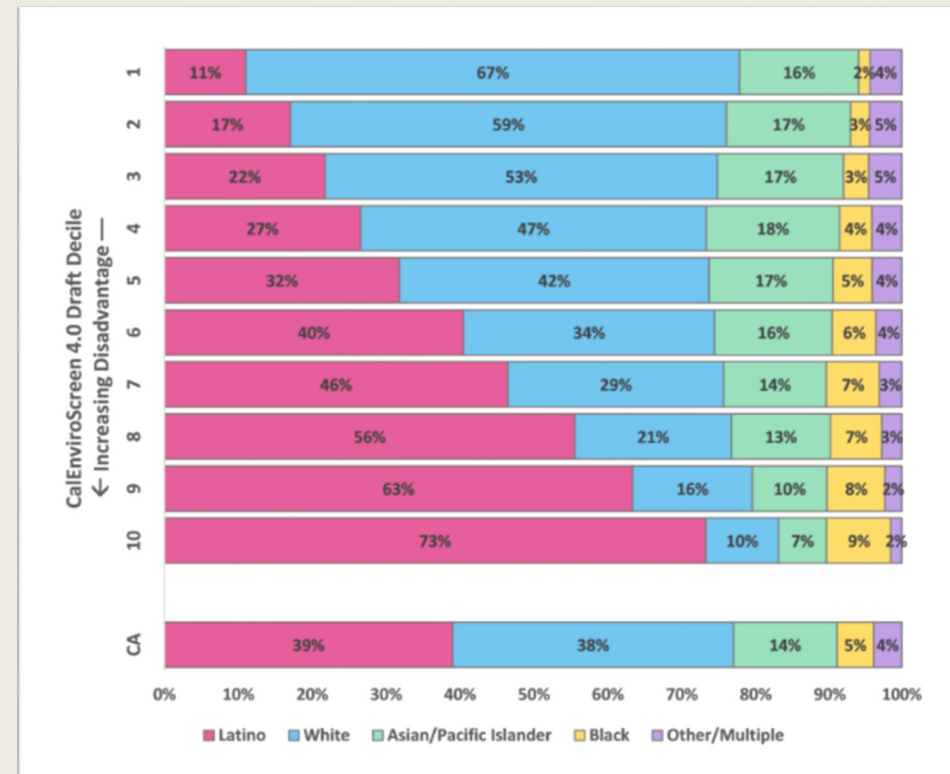


# Race/Ethnicity Preliminary Analysis

Race in the least and most impacted census tracts by draft CalEnviroScreen 4.0 decile

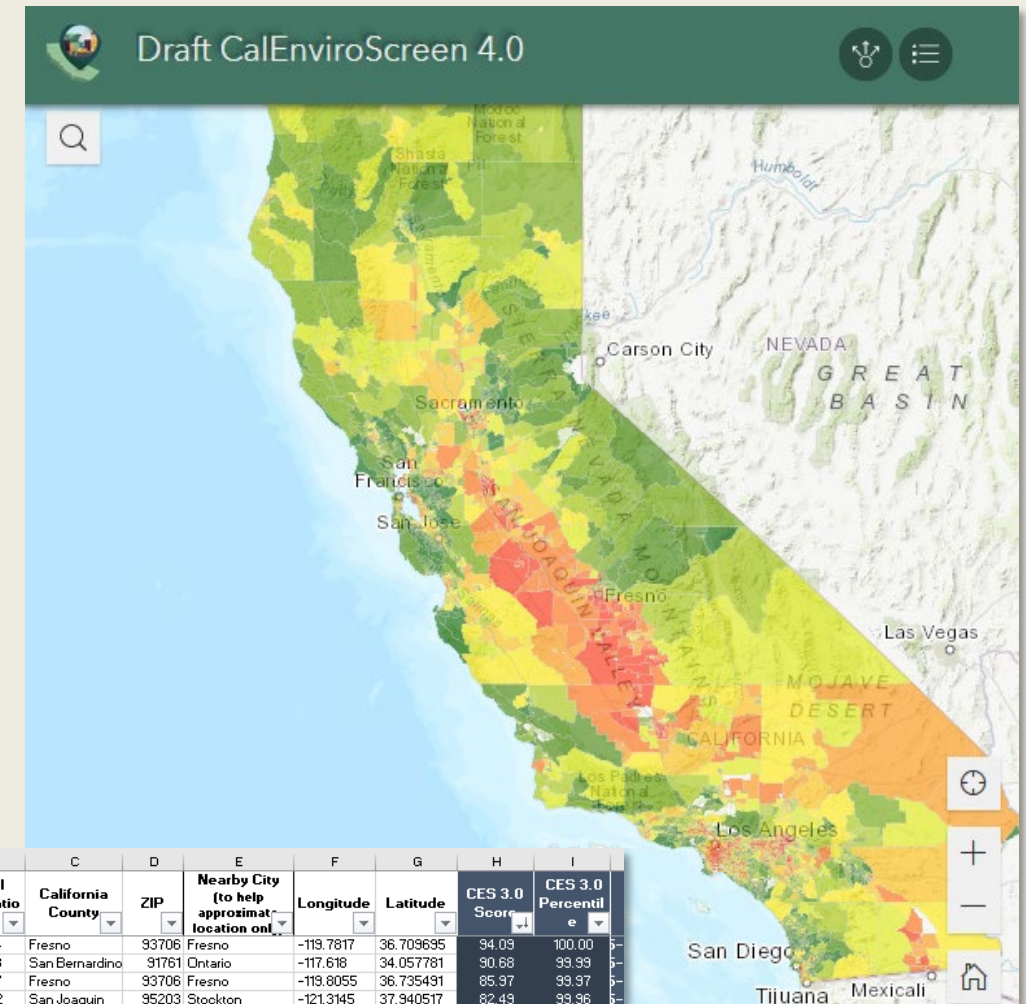


Racial makeup of each decile of draft CalEnviroScreen 4.0 scores



# Online Resources

- CalEnviroScreen website
  - <https://oehha.ca.gov/calenviroscreen/>
  - Reports, mapping tool, data sets
  - Public workshop and webinar notices
- Program email
  - [CalEnviroScreen@oehha.ca.gov](mailto:CalEnviroScreen@oehha.ca.gov)



	A	B	C	D	E	F	G	H	I
	Census Tract	Total Population	California County	ZIP	Nearby City (to help approximate location only)	Longitude	Latitude	CES 3.0 Score	CES 3.0 Percentile
1									
2	6.02E+09	3174	Fresno	93706	Fresno	-119.7817	36.709695	94.09	100.00
3	6.07E+09	6133	San Bernardino	91761	Ontario	-117.618	34.057781	90.88	99.99
4	6.02E+09	3167	Fresno	93706	Fresno	-119.8055	36.735491	85.97	99.97
5	6.08E+09	6692	San Joaquin	95203	Stockton	-121.3145	37.940517	82.49	99.96
6	6.02E+09	2206	Fresno	93725	Fresno	-119.7178	36.6816	82.03	99.95
7	6.04E+09	2538	Los Angeles	90023	Los Angeles	-118.1975	34.0175	80.73	99.94
8	6.08E+09	2396	San Joaquin	95203	Stockton	-121.3021	37.952421	80.18	99.92
9	6.02E+09	4106	Fresno	93706	Fresno	-119.8043	36.697751	80.13	99.91
10	6.04E+09	2146	Los Angeles	90023	Los Angeles	-118.2245	34.029904	79.03	99.90
11	6.02E+09	6343	Fresno	93721	Fresno	-119.7762	36.727656	78.53	99.89
12	6.1E+09	4165	Stanislaus	95354	Modesto	-120.9667	37.628761	78.52	99.87
13	6.03E+09	9122	Kern	93307	Bakersfield	-118.992	35.337254	78.41	99.86
14	6.02E+09	6161	Fresno	93721	Fresno	-119.7934	36.743063	78.41	99.85
15	6.02E+09	5936	Fresno	93725	Fresno	-119.7578	36.710752	78.05	99.84
16	6.04E+09	3618	Los Angeles	90023	Los Angeles	-118.218	34.018755	78.04	99.82
17	6.02E+09	5252	Fresno	93706	Fresno	-119.8043	36.717769	77.85	99.81
18	6.04E+09	2382	Los Angeles	90023	Los Angeles	-118.2867	34.02734	77.50	99.80