

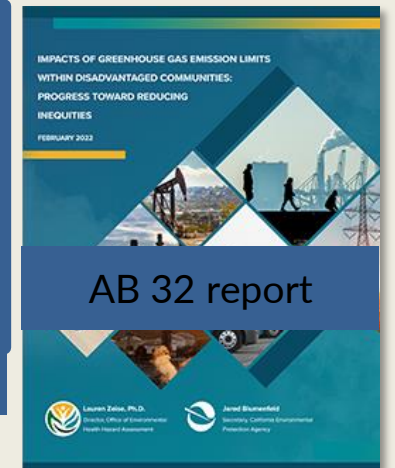
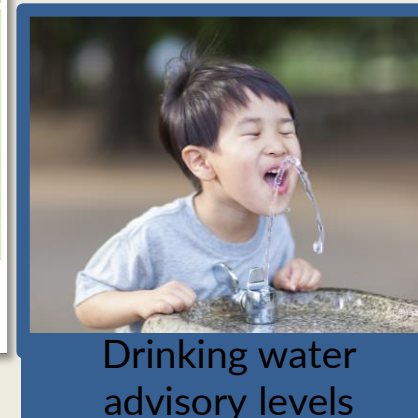
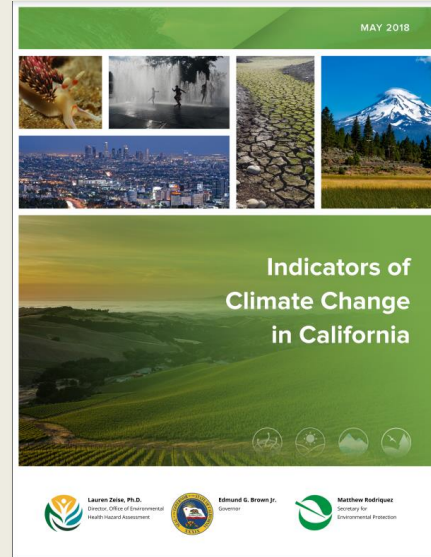


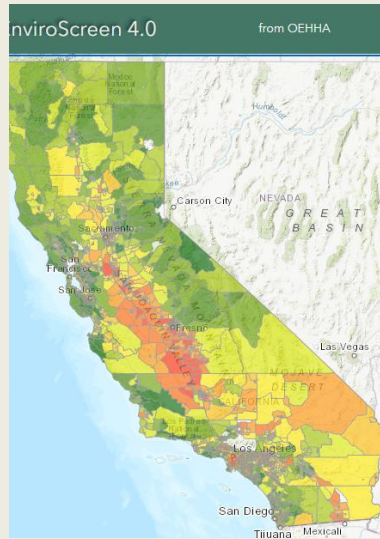
CalEnviroScreen

Walker Wieland, Research Scientist
Office of Environmental Health Hazard Assessment
California EPA



Science to Support Decision-Making





CalEnviroScreen 4.0

- Environmental Justice Screening Method and Tool: Cumulative analysis of relative burdens in California communities from pollution and population vulnerability
- Geographic focus: 21 indicators combined into a single score at the census tract scale
- Identifies California communities that are most affected by many sources of pollution, and where people are especially vulnerable to the effects of pollution
- Version 4.0 was released in 2021

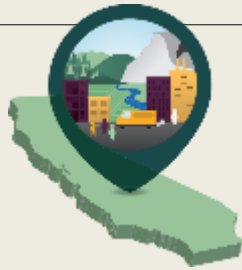


What are cumulative impacts?






















“Cumulative impacts means exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socioeconomic factors, where applicable and to the extent data are available.”

CalEPA Interagency Working Group on Environmental Justice (2005)





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  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

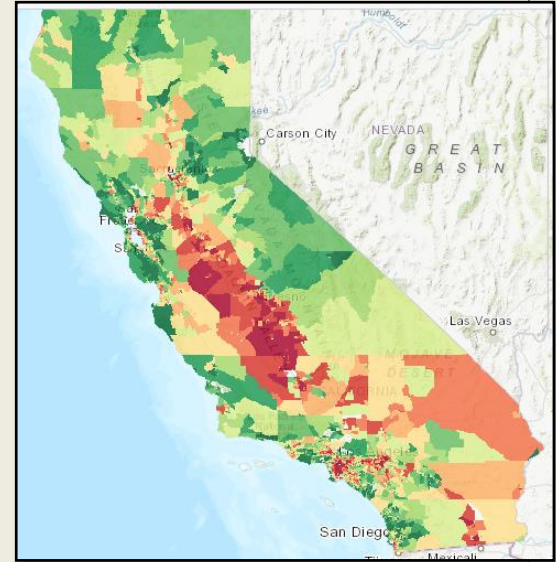
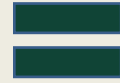
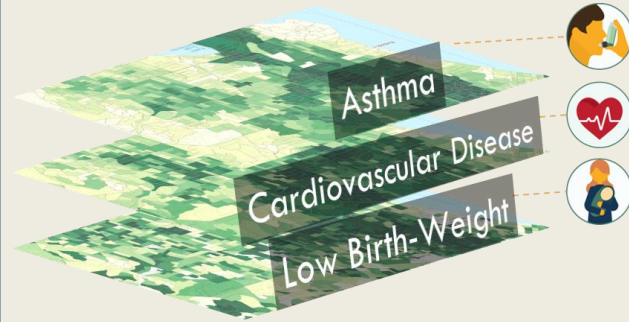
CalEnviroScreen Model



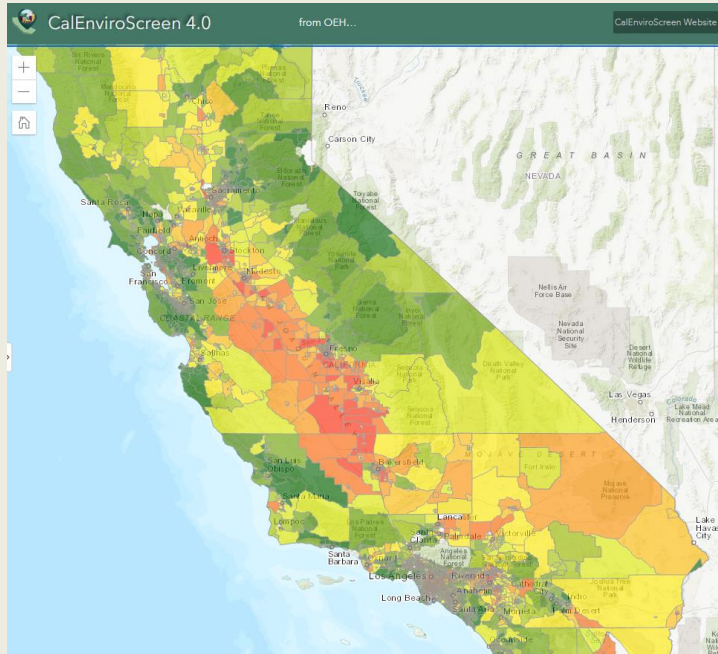
Pollution Burden



Population Characteristics



CalEnviroScreen Interactive Products



CalEnviroScreen 4.0 Indicator Maps Results Map

Pollution Burden

- Ozone
- PM2.5**
- Diesel Particulate Matter
- Drinking Water Contaminants
- Children's Lead Risk from Housing
- Pesticide Use
- Toxic Releases from Facilities
- Traffic Impacts
- Cleanup Sites
- Groundwater Threats
- Hazardous Waste
- Unemployment

Population Characteristics

- Asthma
- Cardiovascular Disease
- Low Birth Weight
- Education
- Housing Burden
- Linguistic Isolation
- Poverty
- Unemployment

What is PM2.5?

Particulate matter or PM2.5 is very small airborne particle pollution, less than 2.5 micrometers, which is less than the thickness of a human hair. PM2.5 is a mixture of particles that can include organic chemicals, dust, soot and metals. These particles can come from cars and trucks, factories, wood burning, and other activities. They can travel deep into the lungs because they are so small and cause various health problems including heart and lung disease. Children, the elderly, and people suffering from heart or lung disease, asthma, or chronic illness are most sensitive to the effects of PM2.5 exposure.

More information can be found in the PM2.5 chapter in the CalEnviroScreen 4.0 report and the PM2.5 indicator page.

Legend

PM 2.5 Monitors

- Orange dot: PM 2.5 Monitor

PM 2.5 Percentile

- Dark blue: > 90 - 100
- Medium blue: > 80 - 90
- Light blue: > 70 - 80
- Very light blue: > 60 - 70



CalEnviroScreen 4.0 Data Dashboard

Area, Indicator, and Race/Ethnicity Filters*

County Name: No county selected

City Name: No city selected

Senate District: No senate district selected

Assembly District: No assembly district selected

CalEnviroScreen Percentile: -1 - 100

Ozone Percentile: 0 - 100

PM2.5 Percentile: 0 - 100

*-1 represents null values

Average CES 4.0 Percentile

50

8,035 census tracts are selected

Average Pollution Burden

50

Average Population Characteristics

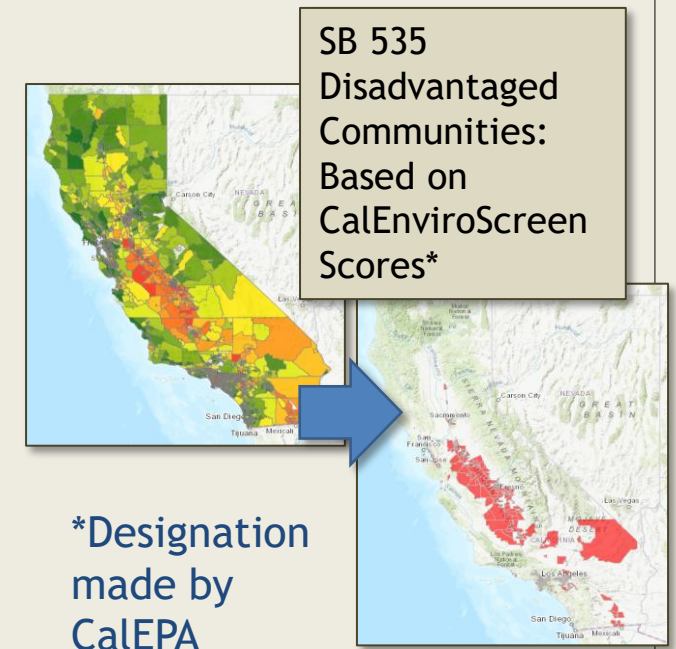
50

Quick stats | Indicators | Race/Ethnicity

Uses of CalEnviroScreen

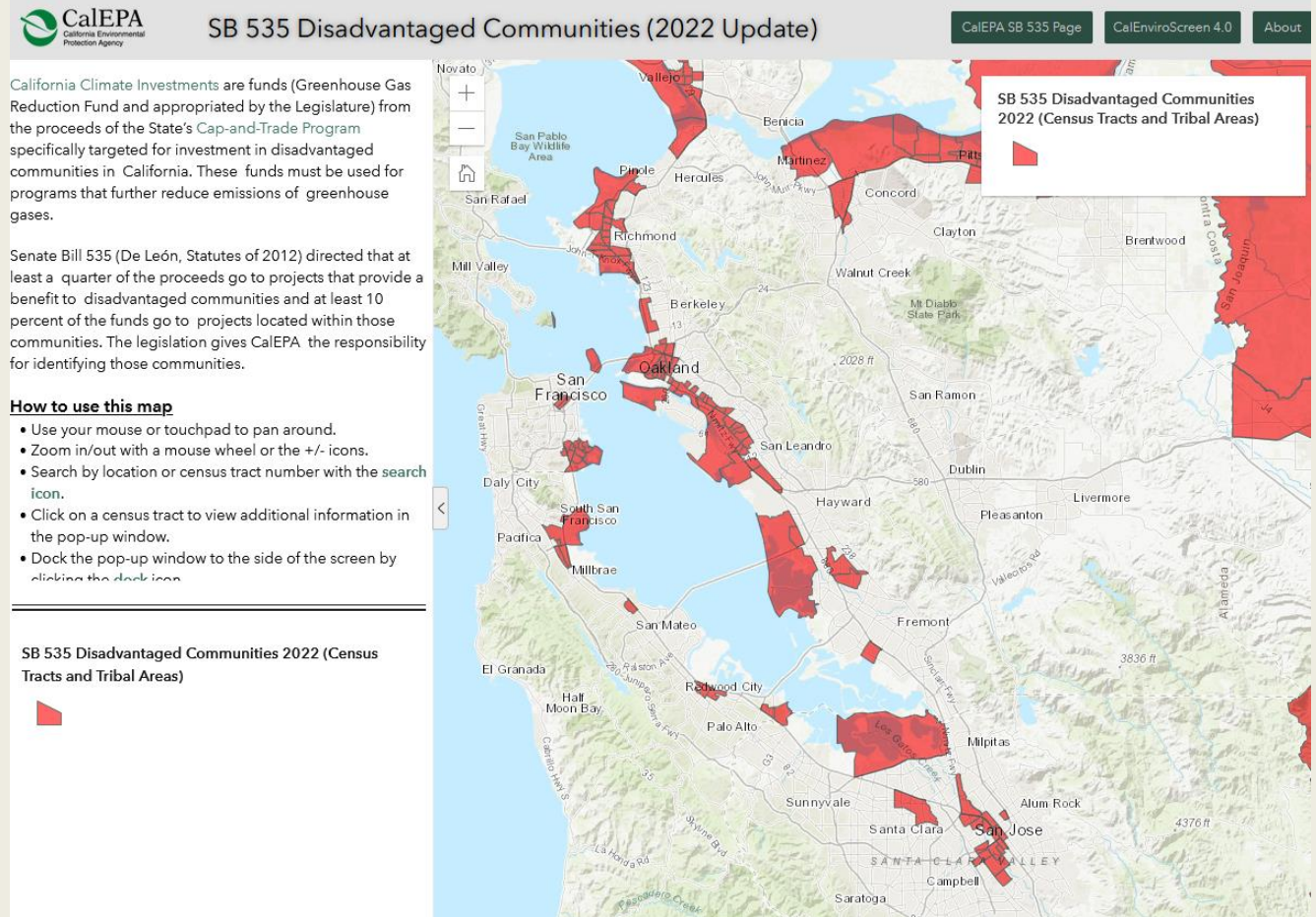
■ In State Government

- Training opportunities
- To designate disadvantaged communities (DACs)* for investments from Greenhouse Gas Reduction Fund
- To support identification of enforcement priorities
- To consider cumulative impacts in DTSC permitting hazardous waste facilities (SB 673)
- To support CARB's identification of communities for air pollution reduction (AB 617)
- Public Utilities Commission and Energy Commission: funding prioritization tool
- CA Natural Resources Agency: equity decision support layer
- Local use: integrating EJ element into city general plans (SB 1000)

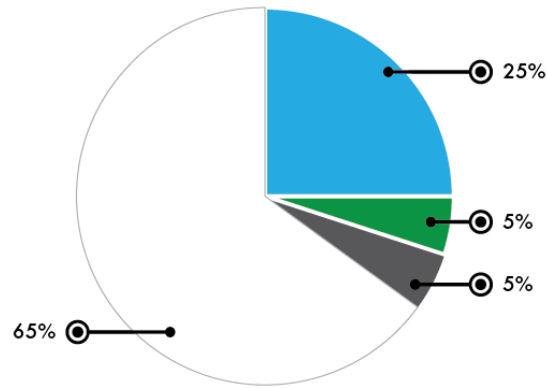


SB 535 Disadvantaged Communities (May 2022)

- Top 25 percent of overall scores in CalEnviroScreen 4.0
- Top 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores (but with no scores in CalEnviroScreen 4.0)
- 2017 DAC designated tracts, regardless of their scores in CalEnviroScreen 4.0
- Lands under the control of federally recognized tribes.



Per [SB 535](#) and [AB 1550](#), California Climate Investments must be allocated, at minimum, as follows:



65 percent of funds can be spent anywhere in the state, including in disadvantaged and low-income communities.

A minimum of 25 percent of the proceeds be invested in projects that are located within and benefiting individuals living in disadvantaged communities;

An additional minimum of 5 percent be invested in projects that are located within and benefiting individuals living in low-income communities or benefiting low-income households statewide; and

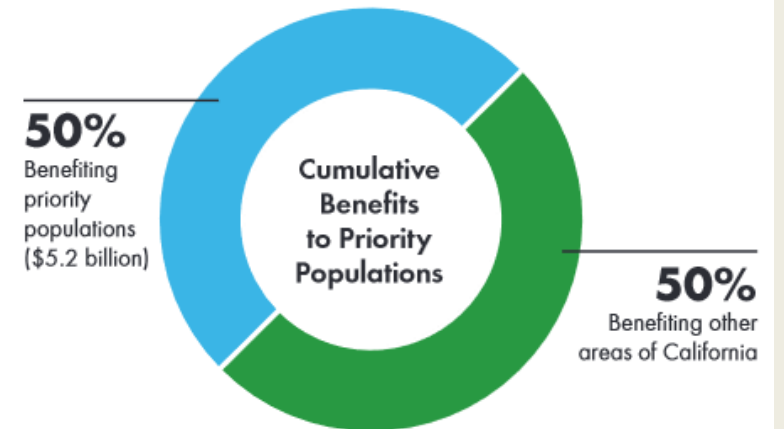
An additional minimum of 5 percent that are located within and benefiting individuals living in low-income communities, or benefiting low-income households, that are within a 1/2 mile of a disadvantaged community.

California Climate Investments

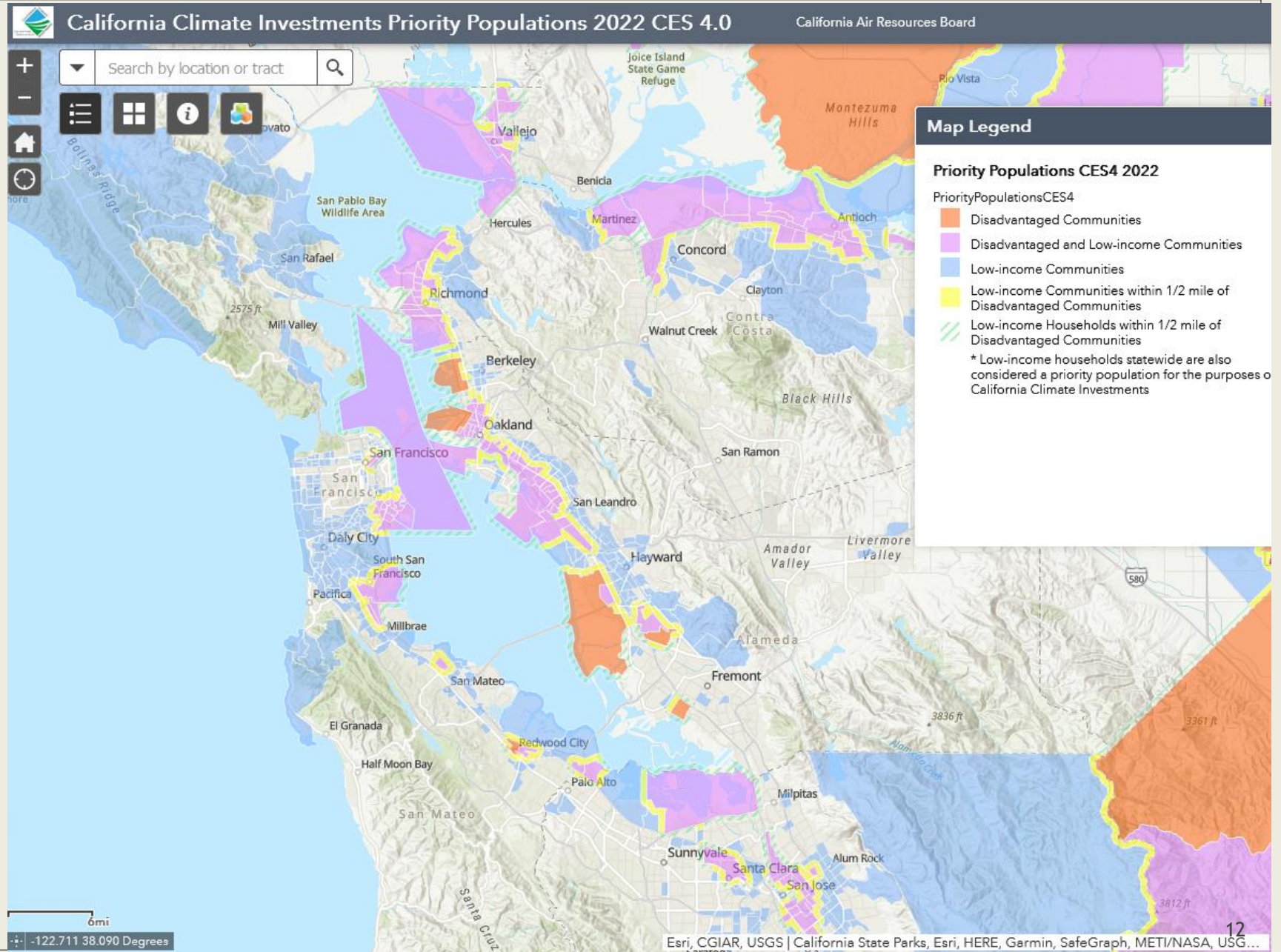
Benefits to Priority Populations

Per statute, a minimum of 35 percent of California Climate Investments must benefit priority populations, which include disadvantaged communities and low-income communities and households across the state per [Senate Bill 535](#) (De León Chapter 830, Statutes of 2012) and [Assembly Bill 1550](#) (Gomez, Chapter 369, Statutes of 2016).

Cumulatively, 50 percent, or \$5.2 billion, of implemented California Climate Investments project funding is benefiting priority populations, greatly exceeding the statutory minimums. To view a more detailed analysis, visit the [Priority Populations webpage](#) on the [California Climate Investments website](#).



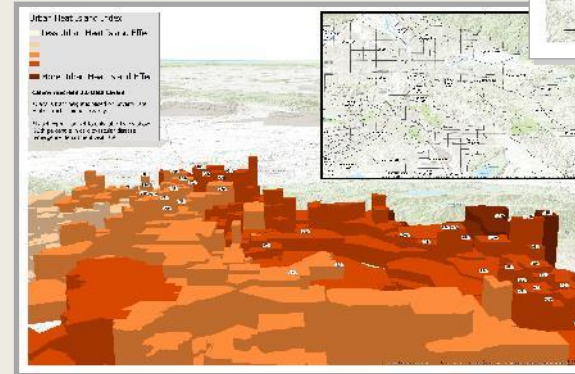
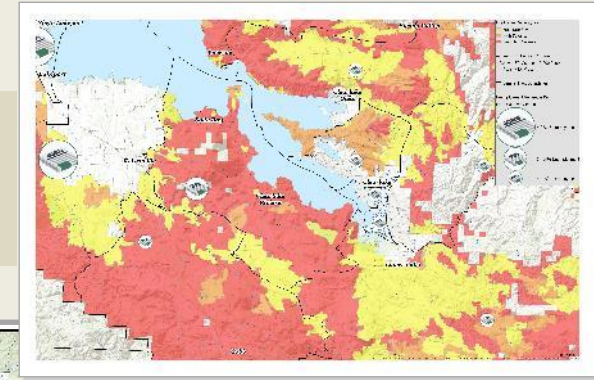
Priority Populations (SB535 DACs + AB1550 Low- Income Communities)



CalEnviroScreen and Climate Change

- Indicators of climate change and climate change vulnerability are not included in CalEnviroScreen.
- CalEnviroScreen and its indicators have been related to various climate change metrics.
 - Wildfire vulnerability tool coming out soon (separate from CES)
- California agencies with relevant work:
 - [Climate Change and Health Vulnerability Indicators](#) (California Department of Public Health)
 - [Integrated Climate Adaptation and Resiliency Program](#), Climate Vulnerable Communities (Governor's Office of Planning and Research)
 - Plan to develop a centralized place to host indicators to assess climate vulnerability

*Wildfire
vulnerability and
unemployment*



*Urban heat islands
and poverty*

*Sea level rise and
waste and cleanup
sites*



Next Steps and Resources

- Evaluating Change: working to develop methods to measure trends in CalEnviroScreen data
- OEHHA Evaluates benefits and impacts of climate change policies in disadvantaged communities. E.g., “What are the trends in stationary source GHG emissions in DACs vs. non-DACs? <https://oehha.ca.gov/environmental-justice/report/ab32-benefits>
- From DWR: Disadvantaged Communities Nomenclature Within the State of California: Findings and Conclusions
 - <https://tinyurl.com/48knbufc>

CalEnviroScreen@oehha.ca.gov