

**DOCKETED**

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# CalEnviroScreen 3.0

## Overview

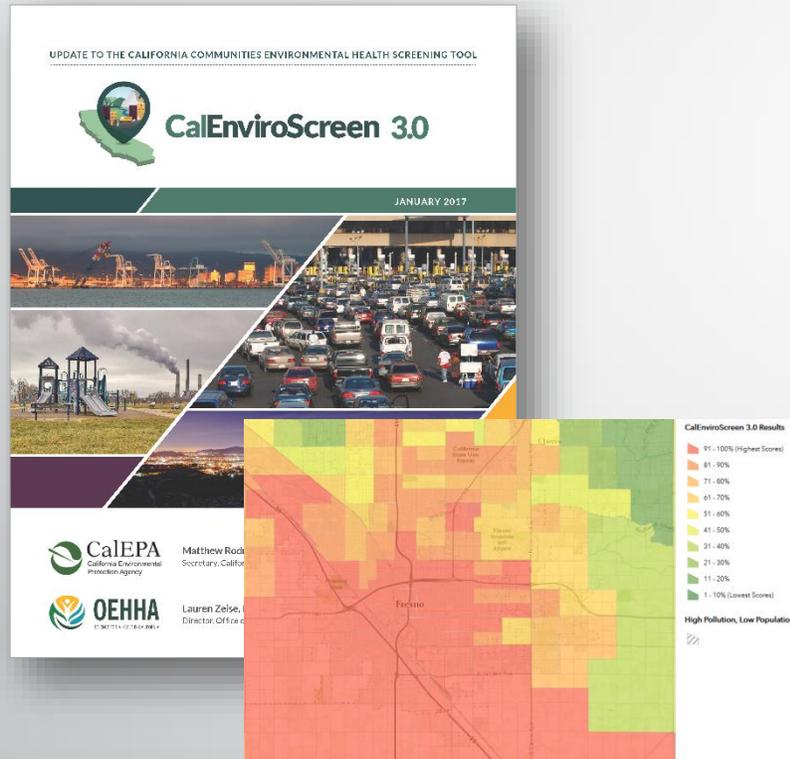
California Energy Commission  
Tribal Solicitation Workshop  
May 14, 2019



*Office of Environmental Health Hazard Assessment*

# CalEnviroScreen 3.0

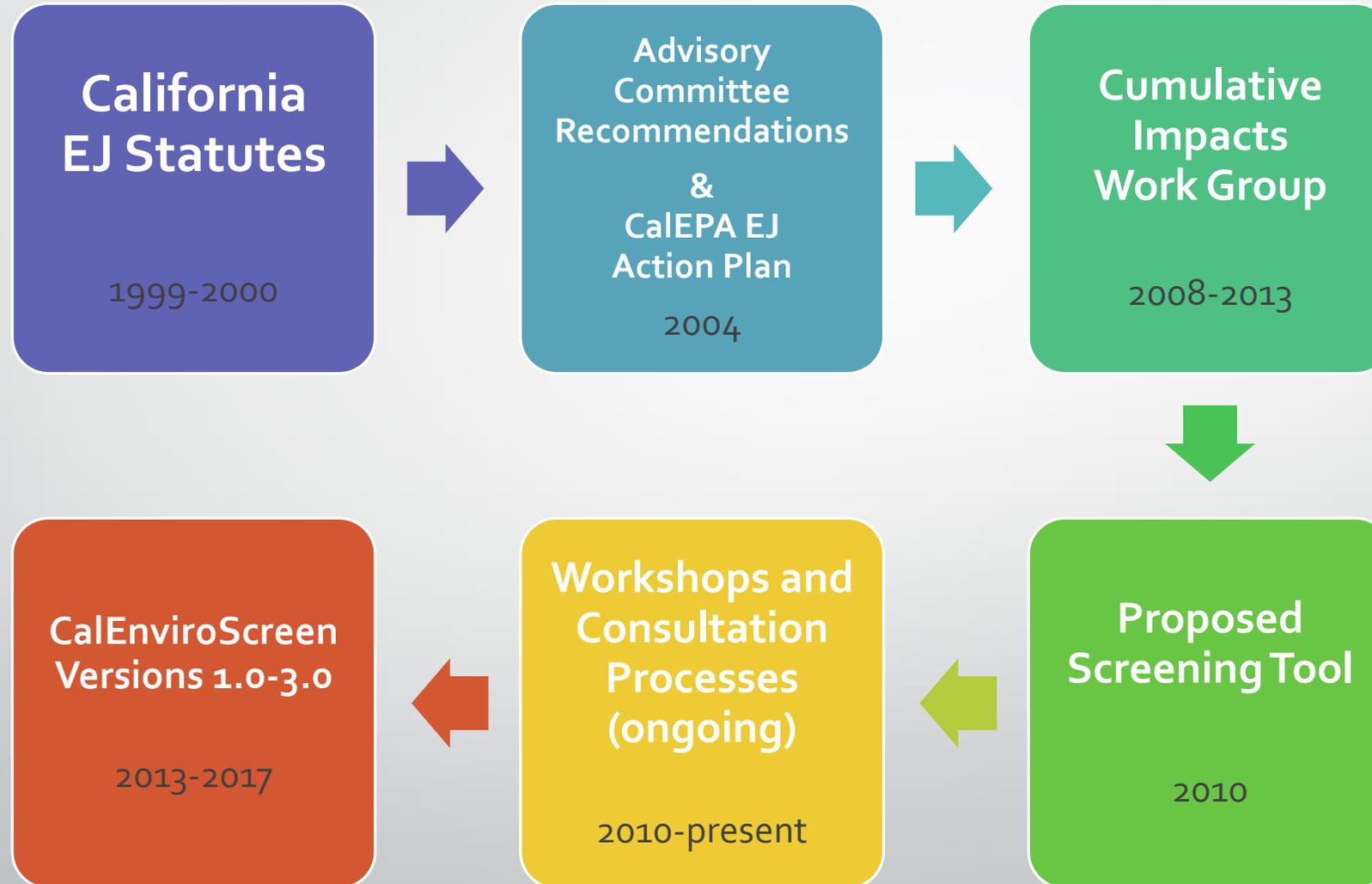
Released January 2017



- Spatial analysis of relative burdens in California communities from pollution and population vulnerability
- 20 indicators combined into a single score
- Census tract scale (~8,000 in California with ~4,000 people per tract)

Available at: <http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

# Development of CalEnviroScreen



# Focus of CalEnviroScreen

- "...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."
  - Definition of cumulative impacts by CalEPA Interagency Working Group on Environmental Justice



**Exposures:**  
*Contact with pollution*



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



**Sensitive Populations:**  
*Populations with biological traits or health status that may magnify the effects of pollutant exposures*



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



# The CalEnviroScreen Model

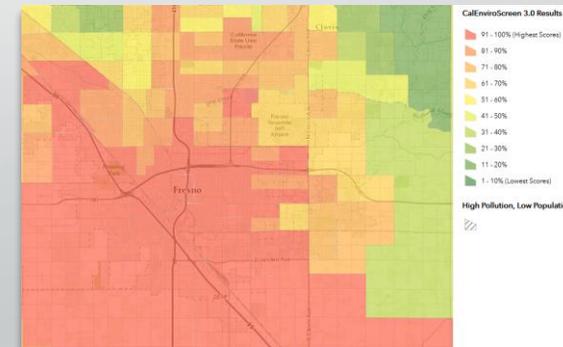
- ❖ Compares pollution levels in communities



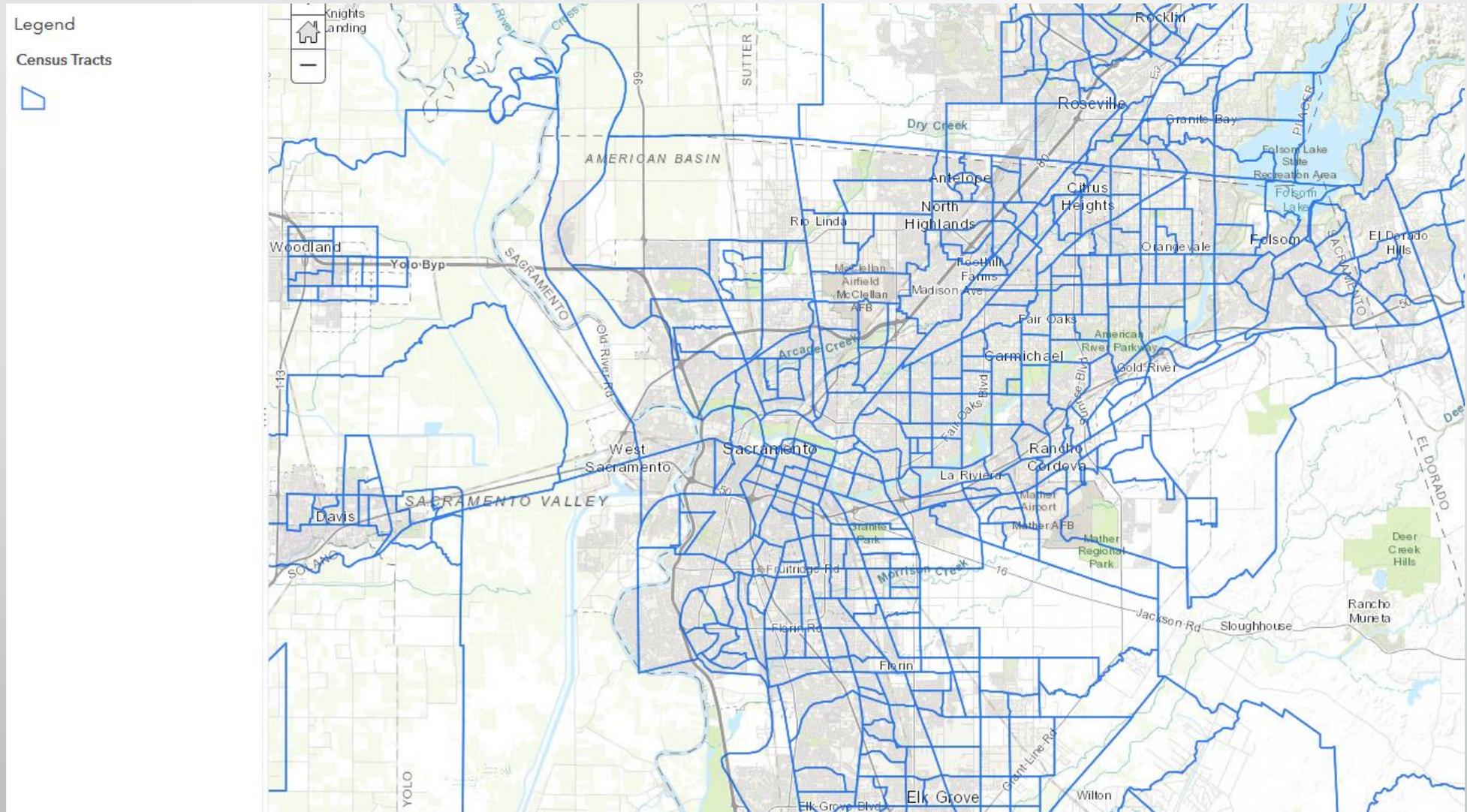
- ❖ Examines if communities are more vulnerable to pollution using health and socioeconomic data



- ❖ **Identify communities that have high pollution and high vulnerability**



# Geographic Unit: Census Tracts



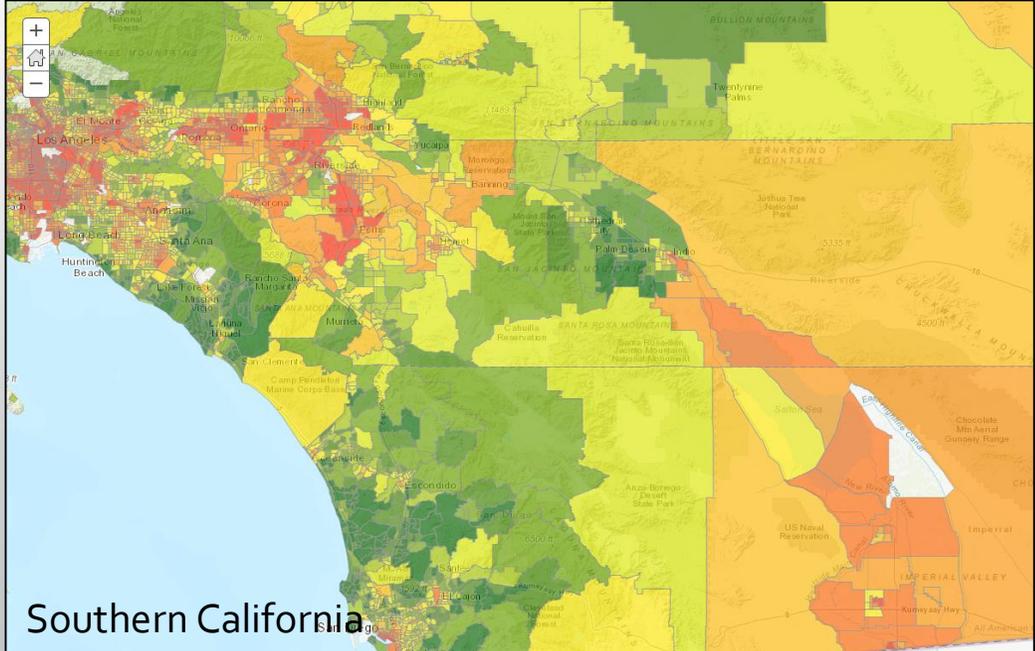
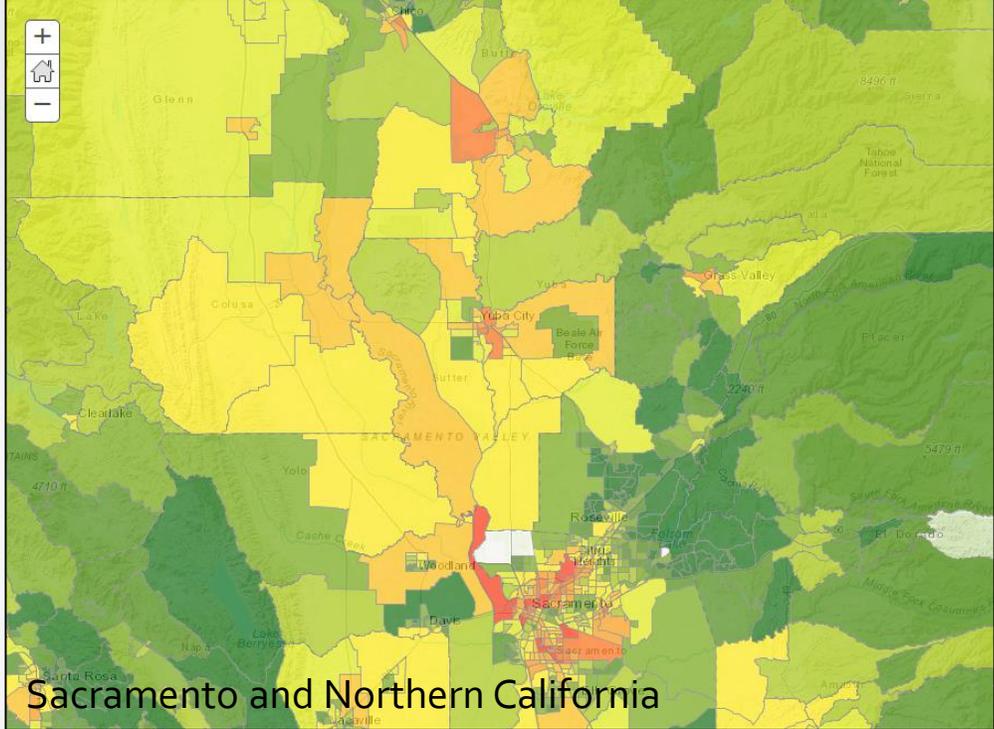
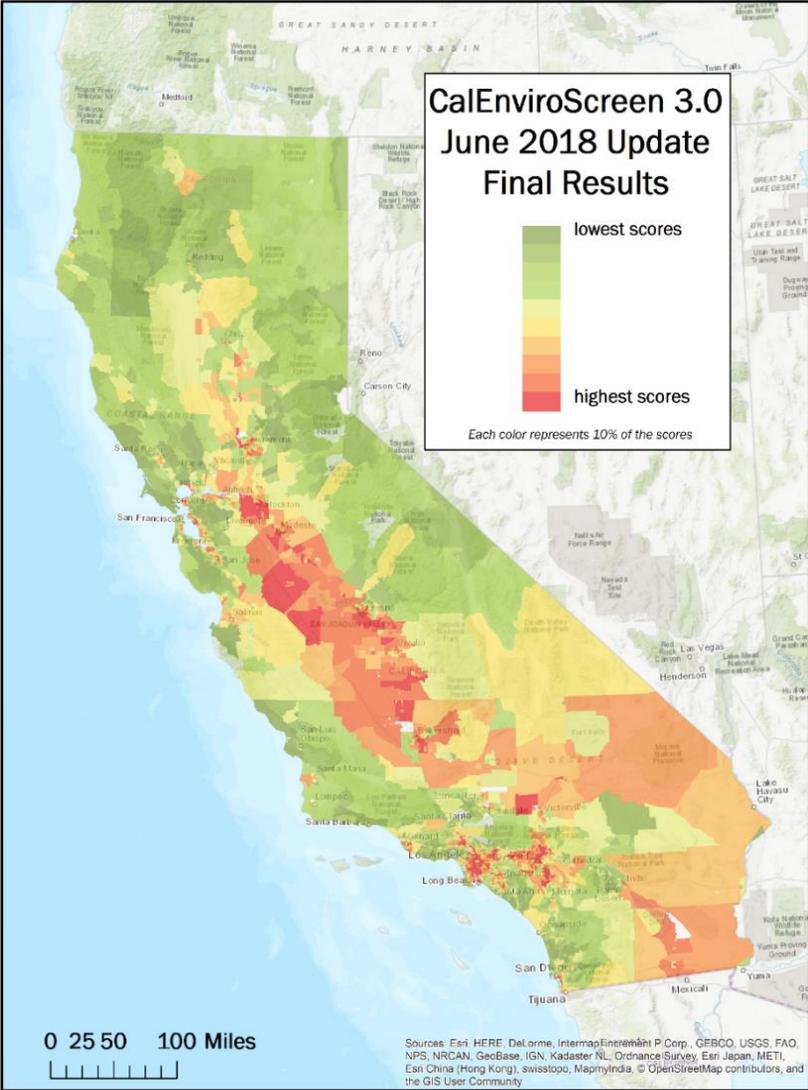
Map of census tract boundaries near Sacramento



# CalEnviroScreen 3.0 Indicators

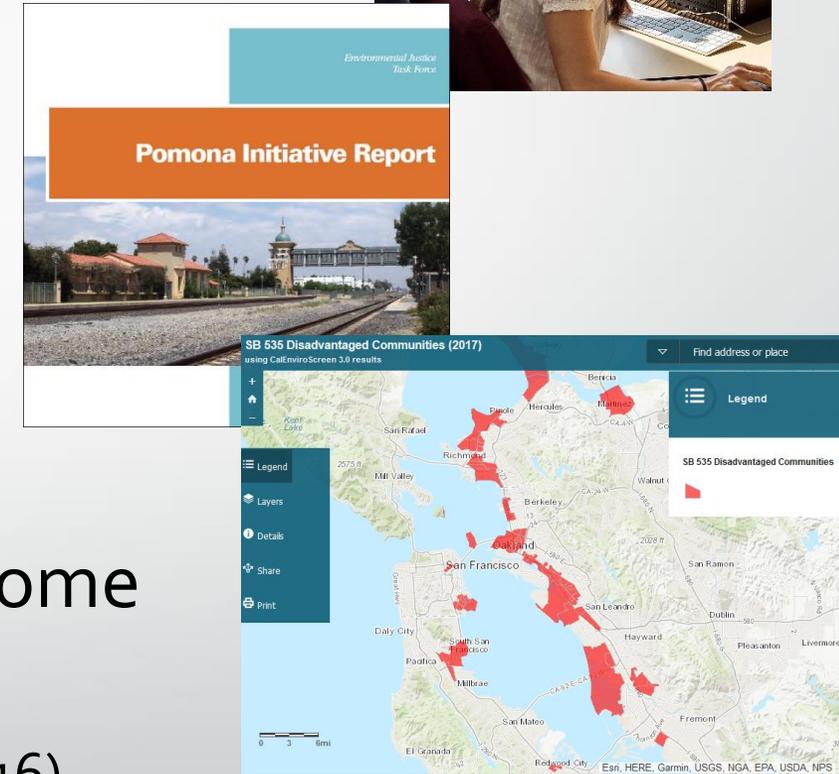
Pollution Burden		Population Characteristics	
Exposures	Environmental Effects	Sensitive Populations	Socioeconomic Factors
 Ozone  PM2.5  Diesel Particulate Matter  Drinking Water Contaminants  Toxic Releases from Facilities  Traffic  Pesticide Use	 Solid Waste Sites and Facilities  Cleanup Sites  Groundwater Threats  Impaired Water Bodies  Hazardous Waste Generators and Facilities	 Asthma  Cardiovascular Disease  Low Birth Weight Infants	 Educational Attainment  Housing Burden  Linguistic Isolation  Poverty  Unemployment

# CalEnviroScreen 3.0 Results



# Using CalEnviroScreen

- Ongoing planning, prioritization and decision-making within CalEPA
  - Trainings and outreach to CalEPA boards & departments
  - Environmental Justice Task Force
  - EJ Small Grant Program
- Greenhouse Gas Reduction Fund Proceeds Disadvantaged and Low-income Communities Investments
  - SB 535 (de León, 2012) and AB 1550 (Gomez, 2016)
  - The top 25 percent of census tracts in CES 3.0 are designated disadvantaged communities for the purpose of investing cap-and-trade proceeds



# Key Gaps in Tribal Data

- Some CalEnviroScreen indicators in the current version have data gaps for Tribal lands. Some examples:
  - Pesticide use: reporting of pesticides used on Federal Tribal lands not required
  - Drinking water contamination: data not available for Tribal water systems (next slide)
  - Impaired water bodies: Tribal beneficial uses to be included in the future
  - Socioeconomic data from the US Census may undercount Native Americans
  - For sensitive population indicators, there may be a lack of information on asthma and heart attacks emergency department visits.
- Additional data for inclusion in CES 4.0:
  - Tribal drinking water data quality and service areas
  - Mine pollution

# Drinking Water Data: Gaps

- Water systems operated by Tribes are not in California's drinking water monitoring database.
  - There are 92 water systems operated by Tribes in California.
- Our current method uses data from California public water systems or groundwater monitoring for areas of the state not served by a public water system.
- Next steps: We are working to better characterize Tribal drinking water systems in CalEnviroScreen and possibly incorporate Tribal data when a Tribe gives OEHHA permission to access data.

# New Data: Mine Pollution

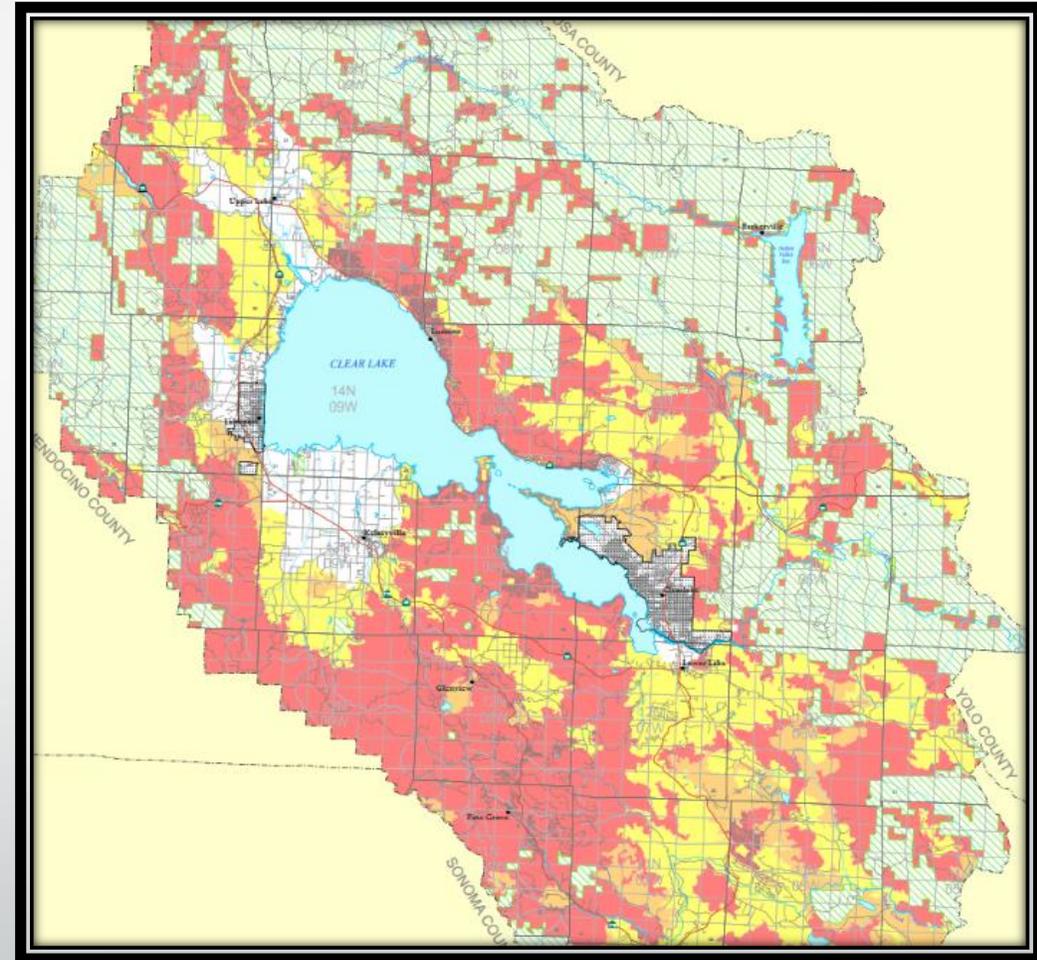


<https://www.conservation.ca.gov/>

- Pollution from historical mines may impact rural communities, including Tribes.
- Contaminants from mines can travel to nearby waterbodies or infiltrate into groundwater. Some mines are hazardous waste cleanup sites.
- OEHHA is evaluating existing Federal and State databases and programs on historical mining
  - There are over 40,000 mines in California.
  - We are evaluating projects from US EPA, Department of Toxic Substances Control and Department of Conservation that have prioritized mines based on mine pollution

# Other Relevant Data: Wildfires

- There are wildfire data representing burned area, modeled emissions, plume transport, population vulnerability, wildfire risk.
- OEHHA is researching suitable data and methods to characterize wildfire risk or vulnerability.



CalFIRE Fire Hazard Severity Zones around Clear Lake

# Next Steps

- Release a draft update CalEnviroScreen (tentatively in 2019):
  - Updated data and improvements for most indicators
  - Exploring new indicators (such as lead risk from housing)
  - Addressing Tribal data gaps:
    - Working with the CalEPA Tribal Advisory Committee
    - Exploring how to obtain and include Tribal drinking water data
    - Exploring other indicators of interest to Tribes (such as mines and wildfires)
    - Evaluating suitability of other types of data to address Tribal data gaps (evaluation of US Census data and areas with low response, literature and data on other health conditions like diabetes).

# Thank you!

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*More information:*

[www.oehha.ca.gov/calenviroscreen](http://www.oehha.ca.gov/calenviroscreen)

