

# MAJOR CHANGES IN CALENVIROSCREEN 2.0



CalEnviroScreen 2.0 updates the Version 1.1 screening tool in a number of important ways. The major changes in this version are described briefly below. Additional detail is available in the Method description for each individual indicator in the revised report. Two additional minor changes were made in October 2014 and are also described below.

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## **Census Tract Scale Analysis**

CalEnviroScreen 2.0 results have been analyzed at the census tract scale. The previous Version 1.1 was analyzed at the ZIP code scale. California is comprised of approximately 8,000 census tracts, compared to approximately 1,800 ZIP codes. This scale of analysis represents a finer level of resolution for many parts of the state. ZIP codes are familiar and easy for the public to understand. However, a more substantial set of demographic data is associated with each census tract. Census tracts are, on average, more uniform in population than ZIP codes. Census tracts do not cross county boundaries, while ZIP codes frequently do. The Method section for each indicator has been updated to reflect how each indicator's score is calculated at this scale.

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## **New Indicator: Drinking Water Contaminant Index**

Drinking water is an important potential pathway for exposure to chemical and bacterial contaminants. Here, an index for drinking water contaminants across California has been added to the screening tool which takes into account the number and concentration of contaminants.

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## **New Indicator: Unemployment Rate**

Unemployment has been associated with poor health outcomes and psychosocial stress in communities. An indicator using the 5-year estimate of the unemployment rate (2008-2012) has been included as a Socioeconomic Factor in CalEnviroScreen 2.0.

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## **Proximity Adjustment for Environmental Effects Indicators**

The scoring for many of the Environmental Effects indicators in CalEnviroScreen has been adjusted to emphasize hazards that are closer to where people live. Census tracts are made up of numerous census blocks, some of which are populated and others that are unpopulated. Hazards that are located further than certain specific distances from any populated census block within a tract were either reduced in scoring weight based on the distance or eliminated from the scoring for that census tract. How these adjustments were applied for each Environmental Effects indicator is described in the indicator's Method section.

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<b>Groundwater Threats: Revised Weighting</b>	Different types of sites that are included in the Groundwater Threats indicator are weighted differently based on site type and status. The weighting scheme has been revised in CalEnviroScreen 2.0 to reflect the relative levels of hazard that are potentially present at the site.
<b>Rate of Low Birth Weight Infants: Data Modeling</b>	Many estimates of the rate of low birth weight infants for census tracts can be unreliable because of the relatively low number of births that occur in an area that size. Spatial modeling was used for the estimation of the low birth weight rates in CalEnviroScreen 2.0 to calculate more reliable estimates, especially in census tracts with fewer people.
<b>Hazardous Waste Facilities and Generators</b>	Additional weight has been applied to permitted hazardous waste facilities with older permits reflecting concerns that these may not reflect current conditions.  Hazardous waste generator data have also been limited to large-volume generators with some hazardous waste in Version 2.0.
<b>Increased Use of Data on Hazards on Tribal Land</b>	Additional data on certain types of environmental hazards that are present on tribal land but not included in CalEnviroScreen 1.1 were obtained from the US Environmental Protection Agency. The data for these sites/facilities was integrated into the appropriate indicator for the CalEnviroScreen 2.0. These sites are in Riverside County and result in contributions to Solid Waste and Cleanups indicator scores in the Coachella Valley area.
<b>Ozone: Data Modeling</b>	CalEnviroScreen 2.0 uses the amount of the daily maximum 8-hour ozone concentration over the state 8-hour standard (0.070 ppm), averaged over three years, 2009 to 2011. Version 1.1 used the federal 8-hour standard (0.075 ppm) for this calculation.
<b>PM2.5: Data Modeling</b>	The modeling of the air monitoring data for PM 2.5 has been updated. This change results in a greater emphasis on data from the nearest air monitoring stations, rather than neighboring stations. Partially missing data from a monitoring station in Calexico were also supplemented with modeled data to fill a data gap for one year in that area.
<b>Updated Datasets</b>	Many data sets in the CalEnviroScreen 2.0 have been updated with more recent data. These include the indicators for Ozone, PM2.5, Pesticide Use, Cleanup Sites, Hazardous Waste, Solid Waste, Groundwater Threats, Impaired Water Bodies, Linguistic Isolation, Educational Attainment, and Poverty.
<b>U.S.-Mexico Border Data</b> <b>[October 2014]</b>	A minor change in two indicators was made to account for gaps in environmental data along the U.S.-Mexico border. Additional data on diesel particulate matter (DPM) emissions and traffic density within census tracts along the border were incorporated.  To account for DPM emissions from idling commercial trucks waiting in Mexico to cross into the U.S., DPM emissions estimates for census tracts

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where commercial truck crossings occur were adjusted. Emission estimates were calculated using an equation provided by the Air Resources Board that takes into account the number of trucks going through the border crossings per day, the time spent idling at the border, and an average emission rate. As a result, two census tracts at the Otay Mesa and Calexico East border crossings were updated with new DPM emissions.

Traffic density from roads in Mexico in close proximity to California was adjusted for census tracts along the border in two ways. First, traffic volumes for the six border crossings were used to update the traffic density to reflect impacts within 150 meters south of the border. This is consistent with the 150 meter buffer that the traffic-density indicator applies to all California census tracts, but prior to this update the indicator did not consider traffic in Mexico. Second, the San Diego Association of Governments provided traffic volume and road network data for Tijuana, Mexico, which allowed for two major roadways within 150 meters of the border to be incorporated. As a result of the two adjustments, the traffic density for seven census tracts increased.

Additional information on these updates is described in the [SB 535 response to comments](#).

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