

## Summary of Major CalEnviroScreen Revisions to CalEnviroScreen 1.0 (Changes from January 3, 2013 Version)

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### **New Indicator** *Hazardous Waste Facilities and Generators Indicator*

Hazardous waste facilities were previously included as part of a combined “Solid Waste Sites and Facilities, and Hazardous Waste Facilities” indicator. This new indicator combines information on the locations of hazardous waste facilities as well as hazardous waste generators. Information on the location of hazardous waste generators comes from the Department of Toxic Substances Control’s Hazardous Waste Tracking System.

Class I hazardous waste facilities that did not fall within the boundaries of ZIP codes (or within the 250 meter buffer) were attributed to the facility’s ZIP code listed in the database. Previously these were not counted.

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### **Changes to Indicators** *Solid Waste Facilities and Sites and Hazardous Waste Facilities indicator*

This indicator was updated to remove the Hazardous Waste facilities, which are now captured in a separate indicator described above. The weighting matrix for composting facilities was reduced slightly in this version.

Solid waste facilities that scored higher than seven under the weighting matrix that did not fall within the boundaries of ZIP codes (or within the 250 meter buffer) were attributed to the facility’s ZIP code listed in the database. Previously these were not counted.

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### *Traffic Density indicator*

The indicator in the January 2013 CalEnviroScreen draft report is more accurately described as traffic volume, rather than traffic density. For this reason, the traffic metric was adjusted to account for total road length within the ZIP code, which is a truer measure of the density of traffic within the area. The revised measure is the segment-length adjusted traffic volume divided by total ZIP code road length (the total kilometers of road length monitored in the Highway Performance Monitoring System within 150 meters of the ZIP code boundary).

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### *Toxic Releases indicator*

In the January 2013 CalEnviroScreen draft report, if a Toxics Release Inventory (TRI) facility’s one-kilometer (km) buffer intersected multiple ZIP codes, the toxicity-weighted pounds associated with that facility were applied to each ZIP code it intersected. To address the issue of counting a facility’s emissions multiple times, we updated the method.

Using the updated method, if the 1 km buffer crossed adjacent ZIP codes, a portion of the toxicity-weighted emissions were applied to the ZIP codes based on the portion of the buffer located in each ZIP code area.

In addition, the toxicity-weighted pounds associated with a facility (or its 1 km buffer) that did not fall within the boundaries of a ZIP code were attributed to the facility’s ZIP code listed in the TRI database.

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***Cleanup Sites indicator***

We made adjustments to the weighting matrix for the EnviroStor cleanup sites indicator based on comments to consider whether a site poses a threat. Some closed sites have been retained in the analysis, with a lower weight than active sites, out of residual concern for the presence of hazards. Some site types with low statuses are now excluded from the analysis. Please see the revised indicator description in the report for details.

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***Diesel Particulate Matter indicator***

In response to comments concerning the use of the National Air Toxics Assessment (NATA) database for diesel particulate matter (PM) concentrations, we updated the data source for this indicator. The California Air Resources Board has provided us with statewide estimates of diesel PM emissions as kilograms per day for on-road and non-road sources. For this reason, information from the NATA database is no longer used.

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***Asthma indicator***

In the January 2013 draft report, ZIP codes with fewer than 12 asthma emergency department (ED) visits were not available and were assigned their county rate. In an effort to exclude all county-level data, the asthma indicator was spatially modeled. All ZIP codes now have a spatially modeled asthma ED rate and county rates are no longer used.

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***Low Birth Weight indicator***

The criteria used to assess data quality changed and the data were updated. In the January 2013 draft, a ZIP code had to have five low birth weights and 100 births occurring in the ZIP code over five years to be included. The birth criterion (greater than 100 births) was viewed as sufficient for statistical stability and therefore the five low birth weights criterion was excluded. We also updated the time period to 2007-2011 to reflect more current data.

County rates are no longer being used to approximate the low birth weight rates for ZIP codes with fewer than 100 births over the five years and these ZIP codes are not assigned an estimate.

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***Linguistic Isolation, Poverty, and Education indicators***

Some estimates from the American Community Survey (ACS) were not reliable due primarily to inadequate sample size. Information on the margin of error (MOE) reported in the ACS was used to evaluate the reliability of each estimate. Highly unreliable estimates were not used.

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**CalEnviroScreen  
Score Calculation**

CalEnviroScreen scores were not calculated for the 10 California ZIP Codes with zero population.

To address missing data in the population characteristics component, if a ZIP code had no data for four or more population characteristic variables, a CalEnviroScreen score was not calculated.

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**Revisions to  
Report Text**

Scientific literature and rationale sections for individual indicators were updated. Method sections were updated to reflect changes to indicators and to provide additional clarification.

**Sensitivity Analysis** Over the course of the development of CalEnviroScreen, sensitivity analyses were conducted to guide decisions and reflect upon model structure and indicator selection. A sensitivity analysis is used to examine the responsiveness of a model to changes in inputs.

This type of analysis helped guide development of the tool and has informed version 1.0 of CalEnviroScreen, allowing us to understand relationships among indicators and to make decisions based on a variety of tests and comparisons. We have applied a series of statistical tests, as well as simpler numerical and visual comparisons, to answer questions about the uncertainty in our model and the confidence we place in the results. These are provided as an appendix to the report.

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