

California Environmental Justice Conflicts Database Project

Data Layers Dictionary

Last Updated December 15, 2022

Case Layers

These layers were developed as part of the CA EJ Conflict Database project research process. Each point on the map represents a single location of a case. For more information on case mapping, request access to the CA EJ Mapping Methodology Report.

Data Layer	Description
All California EJ Conflict Cases	Each point on the map represents a single location of a case. Cases are symbolized by the same colored dot.
Cases by Spatial Typology	<p>Each point on the map represents a single location of a case. Cases are symbolized by color according to their Spatial Typology: Single Location, Multiple Discrete Location, Corridor, and State/Region/County Wide.</p> <p><i>Single Location:</i> Cases that occur in a single location (at an address, on a block, in a neighborhood, in a city, etc.).</p> <p><i>Multiple Discrete Location:</i> Cases that have occurrences at multiple locations (e.g., multiple schools).</p> <p><i>Corridor:</i> Cases that occur along a corridor, like a river, a highway, or a railway.</p> <p><i>State/Region/County Wide:</i> Cases that occur or involve impacts at a county, region, or statewide level.</p>
Cases by Primary Source of Conflict	<p>Each point on the map represents a single location of a case. Cases are symbolized by color according to their Primary Source of Conflict.</p> <p><i>Energy:</i> Fossil fuels, refineries, power plants, renewables, greenhouse gas emissions, etc.</p> <p><i>Transportation and Infrastructure Networks:</i> Roads, railways, hydroways, canals, pipelines, ports, etc.</p> <p><i>Water Management:</i> Floods, droughts, waste overflow, water pollution, water quality, water supply, water affordability, etc.</p> <p><i>Public Health Impacts:</i> e.g., due to industrial, manufacturing, extractive, or agricultural activities; lack of access to health services; etc.</p> <p><i>Land Development Conflicts:</i> Housing, construction, developing citing,</p>

	<p>land use, urban planning, etc.</p> <p><i>Access to Natural Spaces:</i> Coastal or shoreline access, beach access, open/ greenspace access, parks access, etc.</p> <p><i>Waste:</i> Hazardous waste, waste management facilities, etc.</p> <p><i>Indigenous/ Tribal:</i> Indigenous or tribal land access, land management, land dispossession, disproportionate impacts of pollution/ enviro harms, etc.</p> <p><i>Other:</i> The conflict did not easily fit into any of the categories above.</p>
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Source of Conflict CalEnviroScreen Score Layers

These layers were developed as part of the CA EJ Conflict Database project research process. CalEnviroScreen Score Data was used to recalculate scores for each census tract based on different groupings of indicators under specific Sources of Conflict. These SOC Scores reflect communities' exposure to specific environmental pollution hazards and their socioeconomic vulnerability to environmental hazards. The layers are visualized as Statewide Percentiles.

Data Layer	Description
Energy	CalEnviroScreen Score recalculated based on a specific set of indicators: <i>Ozone, PM2.5, Toxic Release from Facilities</i>
Water Management	CalEnviroScreen Score recalculated based on a specific set of indicators: <i>Drinking Water, Pesticides, Groundwater Threats, Impaired Water Bodies</i>
Public Health	CalEnviroScreen Score recalculated based on a specific set of indicators: <i>Lead Exposure, Toxic Release from Facilities, Pesticides</i>
Waste	CalEnviroScreen Score recalculated based on a specific set of indicators: <i>Toxic Release from Facilities, Cleanup Sites, Hazardous Waste, Solid Waste</i>
Transportation and Infrastructure Networks // Land Development	CalEnviroScreen Score recalculated based on a specific set of indicators: <i>PM2.5, Traffic, Diesel PM</i>

Healthy Places Index Layers

These layers come from the [Healthy Place Index Mapping Initiative](#).

Data Layer	Description
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Tree Canopy	<p>Measure of the percent of land with tree canopy (weighted by the number of people per acre).</p> <p><i>Connection to Health:</i> Everybody should have trees and other plant life near their home. Trees are beneficial for mental and physical health in many ways. They can provide shade and cool surrounding areas, reduce stress, and promote health, wellness and physical activity. Trees are essential to mitigate the effects of climate change, especially extreme heat events.</p> <p><i>Technical Definition:</i> Population-weighted percentage of the census tract area with tree canopy.</p> <p><i>Data Source:</i> CDPH/National Land Cover Database</p> <p><i>Year(s):</i> 2011</p>
Park Access	<p>Measure of the percent of people living within walkable distance (half-mile) of a park, beach, or open space. This is a Well-being In the Nation (WIN) indicator.</p> <p><i>Connection to Health:</i> Everybody should have access to parks and other open spaces near their home. Parks can encourage physical activity, reduce chronic diseases, improve mental health, foster community connections, and support community resilience to climate change and pollution.</p> <p><i>Technical Definition:</i> Percentage of the population living within a half-mile of a park, beach, or open space greater than 1 acre</p> <p><i>Data Source:</i> California Department of Public Health</p> <p><i>Year(s):</i> 2017</p>

EJScreen Demographic Layers

These layers come from the [EPA's EJScreen Initiative](#).

Data Layer	Description
People of Color	Percent of individuals who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. ¹
Low-Income	Percent of the population in households where the household income is less than or equal to twice the federal "poverty level."
Unemployment Rate	Percent of the population that did not have a job at all during the reporting period, made at least one specific active effort to find a job during the prior 4 weeks, and were available for work (unless temporarily

¹ "Alone" indicates that the individual is of a single race, not multiracial.

	ill).
Limited English Speaking	Percent of people living in limited English speaking households. ²
Less than High School Education	Percent of people age 25 or older whose education is short of a high school diploma.
Under age 5	Percent of people under age 5.
Over age 64	Percent of people over age 64.

CalEnviroScreen 4.0 Layers

Data Layer	Description
CalEnviroScreen 4.0 Results	<p>CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, where people are often especially vulnerable to pollution's effects.</p> <p>CalEnviroScreen ranks census tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors and the prevalence of certain health conditions. Data used in the CalEnviroScreen model come from national and state sources.</p> <p>For more information, visit CalEnviroScreen 4.0 OEHHA.</p>
Tribal Areas (2022)	<p>Tribal areas intersecting with California, as identified by the US Census 2021. This file includes all Tribal areas that intersect with the California boundary. Tribal areas that lie within California and a bordering state have been split along the CA border, resulting in a polygon for each state.</p> <p>This file contains legal AIANNH entities for which the Census Bureau publishes data. The legal entities consist of federally recognized American Indian Reservations (AIRs) and Off-Reservation Trust Lands (ORTL).</p> <p>Downloaded in 2022 from the US Census website here: TIGER/Line Geodatabases.</p> <p>For more information on SB 535 Disadvantaged Communities Tribal Areas mapping, see:</p> <p>https://ucsdonline.maps.arcgis.com/home/item.html?id=3e35e54e2f2c44c9aa7ba0e37e0940eb</p>

² A household in which all members age 14 years and over speak a non-English language and also speak English less than "very well" is limited English speaking.

<p>SB 535 Disadvantaged Communities (2022)</p>	<p>This map shows the 2022 disadvantaged communities designated by CalEPA for the purpose of SB 535. These areas represent:</p> <p>Highest scoring 25% of census tracts from CalEnviroScreen 4.0, along with census tracts scoring in the top 5% of the Pollution Burden indicator but without an overall CalEnviroScreen score due to unavailable or unreliable Population Characteristics indicator data and score.</p> <p>All census tracts currently identified as disadvantaged but not in the highest scoring 25% census tracts in version 4.0 (i.e., the highest scoring 25% of census tracts in CalEnviroScreen 3.0 along with the census tracts with the highest 5% Pollution Burden scores, but without an overall CalEnviroScreen score). See the Disadvantaged Communities 2017 map here.</p> <p>For more information on SB 535 Disadvantaged Communities mapping, see:</p> <p>https://ucsdonline.maps.arcgis.com/home/item.html?id=3e35e54e2f2c44c9aa7ba0e37e0940eb</p>
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Indicator Layers

All indicator layers except for California Highways, Traffic Volume County, Major Traffic Generators, and Port Boundaries comes from [Indicators Overview | OEHHA](#). Brief descriptions from the OEHHA website are included below.

Data Layer	Description
<p>California Highways</p>	<p>Polyline layer of California Highways, symbolized by US, Interstate, and State designation.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=48e63c82e8194039ab5a560fbe4c075f</p>
<p>Traffic Volume Count Locations (AADT)</p>	<p>This is a point GIS dataset representing Traffic Volumes (Annual Average Daily Traffic (AADT)) on the California Department of Transportation (Caltrans) state highway network.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=d8833219913c44358f2a9a71bda57f76</p>
<p>Major Traffic Generators</p>	<p>The Major Generators point feature class represents transfer facilities that generate major truck traffic in California.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=72401c319db345f39af6b632785d5559</p>

Permitted Hazardous Waste Storage Facilities	<p>Permitted facility data were obtained from the DTSC website.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
Chrome Platers	<p>Chrome plating facility data were obtained from CARB, which maintains a list of chrome plating facilities. Only active chrome plating facilities were included in the analysis.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
Groundwater Threats Sites	<p>Hazardous chemicals are often stored in containers on land or in underground storage tanks. Leaks from tanks can contaminate soil and groundwater. Common soil and groundwater pollutants include gasoline and diesel fuels at gas stations, as well as solvents, heavy metals and pesticides. Leaking tanks can affect drinking water and expose people to contaminated soil and air. The land and groundwater may take many years or decades to clean up. The State Water Resources Control Board maintains a database of places where groundwater may be threatened by certain sources of pollution.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
Impaired Water Bodies	<p>Streams, rivers and lakes are used for recreation and fishing and may provide water for drinking or agriculture. When water is contaminated by pollutants, the water bodies are considered impaired. These impairments are related to the amount of pollution that has occurred in or near the water body. Groups such as tribal or low income communities may depend on fish, aquatic plants and wildlife in nearby water bodies more than the general population. The State Water Resources Control Board maintains information on water bodies in California that are impaired by pollutants.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
Impaired Rivers, Creeks, Etc.	<p>Streams, rivers and lakes are used for recreation and fishing and may provide water for drinking or agriculture. When water is contaminated by pollutants, the water bodies are considered impaired. These impairments</p>

	<p>are related to the amount of pollution that has occurred in or near the water body. Groups such as tribal or low income communities may depend on fish, aquatic plants and wildlife in nearby water bodies more than the general population. The State Water Resources Control Board maintains information on water bodies in California that are impaired by pollutants.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
<p>Solid Waste Facilities</p>	<p>Solid waste facilities are places where household garbage and similar kinds of waste are collected, processed, or stored. These include landfills and composting or recycling facilities. The waste material may come from homes, factories or businesses. Most of these operations require permits. CalRecycle maintains information on solid waste facilities in California.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
<p>Toxic Release Facilities</p>	<p>Facilities that make or use toxic chemicals can release these chemicals into the air. Information is available on the amount of chemicals released for over 500 chemicals for large facilities in the United States. The U.S. Environmental Protection Agency (US EPA) provides public information on the amount of chemicals released into the environment from many facilities. The US EPA used information on these chemical releases to estimate where they may be spreading in the air for the years 2017-2019. These estimates take into account weather conditions and the landscape around the facilities. Some chemicals are more toxic than others, which is taken into account in the estimate. Emissions from facilities in Mexico near the US-Mexico border were also accounted for in the indicator.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b</p>
<p>Port Boundaries</p>	<p>The PORT_BND feature class is a polygon feature class representing port boundaries in California. The PORT_BND feature class was created by transferring the linework from port maps submitted by various ports onto the Caltrans County Maps and then digitized.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ca25a3a15fa2448c801499638300780e</p>

Landfill Boundaries	<p>There is an increasing demand within CalRecycle to analyze data based on proximity to landfills. In the past, CalRecycle staff have used points based on the address of the landfill given in the Solid Waste Information System (SWIS); however, this has not been sufficient at capturing the large areas that landfills encompass. This resource was developed in order to better represent the actual area of landfill boundaries in the State of California by georeferencing pictures of printed maps from SWIS files and digitizing the shape of the entire landfill.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=ead50079b6044908af45f191b406700b&sublayer=9</p>

Geopolitical Boundary Layers

These layers represent relevant geographic and political boundaries.

Data Layer	Description
California County Boundaries	<p>California County Boundaries. This layer provides an initial offering as "best available" at 1:24,000 scale. Hosted on CAL FIRE AGOL.</p> <p>In this dataset, all bays (plus bay islands and constructed features) are merged into the mainland, and coastal features (such as islands and constructed features) are not included, with the exception of the Channel Islands which ARE included.</p> <p>This service represents the latest released version and is updated when new versions are released.</p> <p><i>Data Source:</i> https://ucsdonline.maps.arcgis.com/home/item.html?id=8713ced9b78a4abb97dc130a691a8695</p> <p>Credit to the U.S. Bureau of Reclamation, California Department of Conservation, California Department of Fish and Game, California Department of Forestry and Fire Protection, National Oceanic and Atmospheric Administration</p>
CA Block Groups 2022	<p>California Block Group Boundaries.</p> <p><i>Data Source:</i> https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-geodatabase-file.html</p>
USA Census Tracts	<p>This layer presents the USA 2020 Census tract boundaries of the United</p>

States in the 50 states and the District of Columbia. It includes total population and details of the county/parish and state in which each tract is located.

Data Source:

<https://ucsdonline.maps.arcgis.com/home/item.html?id=20f5d275113e4066bf311236d9dcc3d4>