



CalEnviroScreen 4.0

Public Workshops Summaries on the draft CalEnviroScreen 4.0

The Office of Environmental Health Hazard Assessment (OEHHA) held six workshops on the draft CalEnviroScreen 4.0 in April 2021. Five of the workshops focused on specific regions in California and one was a workshop open to topics relevant to any part of the state. At each workshop, a community-based organization along with OEHHA and CalEPA welcomed participants. OEHHA then shared background on CalEnviroScreen and the proposed updates to the tool before participants broke into small groups to give public comments and ask questions. The workshop closed with a report back of some of the comments that came up during the breakout sessions. All workshops were held virtually via the Zoom platform. Spanish interpretation was available.

During the breakout sessions, OEHHA staff sought comments and suggestions related to the draft CalEnviroScreen 4.0, including the updates to the tool, the indicators, methodology, suggestions for new indicators, and uses of the tool. Comments and questions from workshop participants are summarized below for each workshop. Similar or related comments within a workshop were consolidated and categorized.

San Joaquin Valley

April 7, 2021

The first regional workshop on the CalEnviroScreen 4.0 draft was for the San Joaquin Valley (SJV) region. The workshop attracted over 30 participants from community organizations, local and state government, as well as local residents.

New lead indicator

- Does the lead indicator include schools as well as households?
- Does the use of low-income housing in the lead indicator score confound the total score since one of the indicators is low-income?
- It looks like income-based weighting is being used, with an assumption that low-income people have children. It seems that there are data for age, so why not use that?

- Sometimes the plumbing pipes may be older than the house and people may be exposed, but this may already be captured in the water quality indicator.
- It would be good to include exposure at schools, since kids spend a lot of their time there (may live in newer home but drink water at an older school). Include age of schools.

Exposures

- In the ozone indicator, there are not a lot of monitoring stations and the methodology does not take topography into account. It is good that satellite data is being used for PM2.5, but ozone may also be a good candidate for satellite data because of its methodology.
- Drinking water is a main concern, but so is affordability of drinking water. Many residents are paying large amounts for water that is unusable. Is there a way to add an indicator for the percentage of income spent on water bills?
- Are there any plans for using this tool in providing organic produce through vertical gardens or vouchers to replace older vehicles?
- Is diesel exhaust from trains included in the diesel PM value?

Environmental effects

- Contaminants in groundwater are represented, but there is no measure for levels of groundwater in California. Groundwater is so low to the point that property owners of private wells are completely going dry and the ground is sinking.
- Wanted to express support the incorporation of dairies and feedlots, as many communities are grappling with them.
- Is it captured whether dairy lagoons are unlined, single, or double lined? New, double-lined lagoons have less risk to ground water than older ones that may be unlined. Those dairies that receive California Department of Food and Agriculture funds may have double lined lagoons.
- Are small hazardous waste generators included? If not, are there are any drawbacks to not including them?

Sensitive populations

- There is an ongoing concern about data gaps and geographic isolation in rural communities. For example, lack of air quality monitoring in rural areas, distance to emergency departments, and exclusion of PO boxes in the calculation of the low birth weight indicator. How are these gaps being addressed?

Socioeconomic factors

- The housing burden indicator does not use the most updated Comprehensive Housing Affordability Strategy (CHAS) data from the Department of Housing and Urban Development (HUD). It states that it uses the CHAS 2012-2016 report, but the 2013-2017 report was published by HUD in August 2020.

New indicator ideas

- Include a measure of water affordability.

- Wildfire impacts should be included, especially since they are a concern for agricultural workers who spend 8-10 hours a day outdoors breathing poor air quality index air for days on end.
- Include groundwater aquifer levels.

Geography/methodology

- Some census tracts may be too big and can distort Disadvantaged Communities (DACs) within census tracts.
- Are each of the indicators still equally weighted to determine the total score? Some areas that are actually disadvantaged can score lower since one indicator skews them toward being less disadvantaged.
- Include population density map.

Tracking changes between versions

- Have you gone back and looked at differences in total scores between this version and the last version? Some tracts may not get funding because they have to meet a certain percentage. What are the ramifications of new data and new methods?
- As an overarching trend, was there an increase or a decrease overall in CES 4.0 scores in the San Joaquin Valley?
- Will there be an analysis on race and ethnicity and how they benchmark across CalEnviroScreen 4.0 as compared to 3.0?
- What is the distinction between the last and current update on geography? Does the map indicate an increase in an area from last time? Local shifts and how those shifts compare to other areas in the state should be explored further. A lot of this will come out in funding, and how it is broken down in metrics is important for different areas to get funding.

San Diego Area

April 8, 2021

The second regional workshop on the draft CalEnviroScreen 4.0 was for the San Diego region. The workshop attracted nearly 40 participants from community organizations, local and state government, as well as local residents.

New lead indicator

- How much did the lead indicator change overall scores?
- What age groupings are used since older housing has more lead?
- Are Housing and Urban Development (HUD) low to moderate income (LMI) data used in the indicator?
- Are renters included in the lead indicator? If not, they should be.
- How much did the lead indicator change overall percentiles?

Exposures

- Do we have an idea on how much lead exposure is from airborne sources (diesel trucks, etc.)? Would that fall under Diesel PM?
- Some regional diesel percentiles changed drastically from previous versions – how did that happen?
- In the major indicator updates for Drinking Water, what are some concerning changes, if any?

New indicator ideas

- Airports should be included as an indicator since many airports are located in disadvantaged communities.
 - California has many regional airports.
 - They are often a source of greenhouse gases (GHGs), carcinogens, lead, and other air pollutants.
 - Airports are a source of noise pollution.

Climate change

- A lot of climate action funding is now dependent on CalEnviroScreen, and there has been more of a desire/push from communities for climate change related indicators. What is being done to incorporate more sustainability/environmental goals/metrics/indicators into this tool?
- Will thermal mapping and consideration of climate change/vulnerability indicators be included in the future?

General

- Given the expected rollout of the new census numbers, shouldn't we see a change in the size or number of census tracts within the state? If so, how would that affect the numbers and the maps that OEHHA has put together? It would be unfortunate if any communities were left out due to any potential changes.

- It was mentioned that CalEnviroScreen could be used as a model. Could other cities potentially explore it and use it as a model?
- What are levels of uncertainty and precision in the data? For which indicators is the difference between scores more pronounced? For example, is there a meaningful difference between scores two to three percentile points away from each other, or do you have to get to a five percentile point difference to conclude tracts are different from one another?
- Do cities, governments, or other entities with different indices/screening technologies communicate with OEHHA about CalEnviroScreen?
- Are there some tracts that were in top 25% that are no longer included in the top 25% in 4.0?
- If a certain community does not have data that can be shared for the draft CalEnviroScreen, what data can be used? (Ex.: City Heights does not have local air quality monitors like other communities.). Could affect grants and funding for those communities.
- A certain county may not have as many disadvantaged communities according to CalEnviroScreen indicators but may still have many low-income communities. This may affect grants/funding.
- Could this also be used to for CEQA analyses?

Border

- One of the main challenges for people who live/work along the border is trying to get hands on data from both sides of the border. How is the impact that is felt by border communities reflected in CalEnviroScreen? For future iterations of the tool, it would be interesting to discuss how much survey data can be taken from ports of entry at the border.
- There is a dataset within the Toxics Release Inventory that is specific to water releases. This dataset might exist on the Mexico side as well.
- Are border wait times factored into the metric for crossings? Longer wait times for idling vehicles increase the pollution vs. "faster" moving vehicles.

Using the tool/mapping

- Is there a way to save maps and go back to look at previous searches/results from search?
- Consider having map data in KML format so anyone could add it to Google Earth and zoom in/out as they wish.
- Can you overlay layers on top of one another (e.g., hazardous waste and low birth weight)?
- Will there be a map that compares what census tracts are new to the 4.0 version vs. the 3.0 version (ex.: for folks who don't have access to GIS or a GIS-type system)?

Military facilities and service territories

- On the maps, it looks like there are military facilities that are not shaded in and included. To what level is CalEnviroScreen including pollution from these facilities?

- The navy yard's pollution not only impacts people living close by, but also those who live beyond neighboring communities. Regional airports measure PM2.5, PM10, and ozone, so these should be included. Pollution knows no borders or boundaries.
 - Communities within 10 miles of airports are impacted by pollutants. It would be useful to evaluate from this point of view.
- When drawing hard borders with the census tracts, is there any thought on making borders softer through service territories?
 - In the city of Chula Vista, of the programs servicing the police department and city hall, one received a bonus as a disadvantaged community and other did not. It seems like there are situations where this might prohibit a project from going forward.

Greater Los Angeles Area

April 12, 2021

The third regional workshop on the draft CalEnviroScreen 4.0 was for the Greater Los Angeles Area. The workshop attracted over 20 participants from community organizations, local and state government, as well as local residents.

Exposures

- Look into using NASA's TEMPO satellite data on criteria pollutants in the future.
- Show the location of companies involved in metal forging.
- Provide a list of toxic air contaminants and their risk factors associated with cancer, like benzene and chromium.
- Include per- and polyfluoroalkyl substances (PFASs) and other contaminants of emerging concern (CECs). The Water Board has mapping data.

Environmental effects

- Are the extent and location of brownfields considered?
- Methane, asphalt factories, and groundwater plumes are of concern. It is unclear how extensive a groundwater plume is by looking at a dot on a map.
- Are the locations of the chrome plating facilities available as a layer?

New lead indicator and other lead comments

- Expand the scope of how lead is being considered by including ghost lead smelters as a source of lead. Eckel created a list of sites.
- How are smelting and environmental metals at Exide captured in CalEnviroScreen? They are of great local concern.
 - The lead in housing indicator does not directly account for smelting at Exide.
 - The use of lead in copper rule data has improved the way lead in drinking water is captured.
 - Is Exide itself captured in the cleanup sites indicator?
- Other smelters and lead acid battery factories in the area are potentially contributing to high lead levels in soil.

New indicator ideas

- Include schools and daycare centers as either extra information or possibly a susceptibility indicator.
 - The Department of Social Services has geocoded locations for registered day care centers.
 - Children need to be protected from excess metal exposures in these settings.
 - Early Education, Early Head Start, Head Start, Pre-K and K-12 facilities should all be added.
- Percentage natural area (such as vegetation or green space)
 - These sequester carbon and combat the heat island effect.
 - The city of Los Angeles uses percentage of population within a half-mile of a green space.

- Infrastructure vulnerabilities
 - Focus on financial benefits of fixing issues now compared to rebuilding once destroyed by sea level.
 - US EPA's CREAT: <https://www.epa.gov/crwu/climate-resilience-evaluation-and-awareness-tool-creat-risk-assessment-application-water>
 - Used by City of Los Angeles Sanitation.
- Wildfire pollution
- Climate vulnerability, with an urban heat island layer
- Data related to COVID-19, including deaths or community spread
- Potential radon intrusion
- Political district boundaries as a layer
- Tool to draw your own boundary

General

- How is OEHHA collaborating with the Governor's Office of Planning and Research on the climate vulnerability tool?
- 2020 US Census Update
 - Using the 2020 census data would help in using CalEnviroScreen for redistricting
 - How do the geographies change from one census to another?
- It would be helpful to have layers indicating where data are being compiled from. This would help gauge accuracy of data for areas.
- It would be interesting to see a redlined communities layer.
- Do draft CalEnviroScreen 4.0 scores account for any possible skewing resulting from quarantine?
- In different versions of CalEnviroScreen, some areas have high pollution and low population. These show up differently in different versions. How is this being addressed in CalEnviroScreen 4.0?

Los Angeles City area

- The city of Los Angeles is not correctly represented by the attribute data. Only the greater metro area of the city is included, but it does not include the valley or the harbor to the south as part of Los Angeles.
- How is the boundary of Los Angeles determined? The boundary shown for Los Angeles is more circular than the actual shape.
- There are some discrepancies between what communities identify as boundaries and what CalEnviroScreen labels as boundaries, which may affect applying for funding.

Statewide

April 14, 2021

The fourth regional workshop on the draft CalEnviroScreen 4.0 was open to topics for the entire state of California. The workshop attracted over 20 participants from community organizations, local and state government, as well as local residents.

New lead indicator

- How much did the new lead exposure indicator change overall scores?
- There should be more info on lead in soils, as well as in people's bodies.
 - The Los Angeles Department of Public Health has data on children's blood lead levels.

Exposures and Environmental Effects

- How do the updates to the PM2.5 methodology account for spikes associated with wildfires? How does the long-term average compare to the intense peaks over the summer?
 - It would be good to account for magnitude and duration of wildfire PM2.5 spikes.
- When working in a rural region it is exciting to see satellite data since CARB monitors are not common in those areas.
- Why did diesel PM change so much from CalEnviroScreen 3.0 to the 4.0 draft? Is it because of methodology or actual score change in DPM?
- What determines scores for community water systems? Are homes or schools included?
- Self-reported data for air toxics should be used to have better data.
- Kettleman City is only 3 miles from a hazardous waste facility but has a low hazardous waste score, and should be included considering that the facility has a very high toxic releases score.

New indicator and map ideas

- Include impacts from oil and gas wells
 - <https://maps.conservation.ca.gov/doggr/wellfinder/#/>
- Being able to filter tracts by city boundaries would be great since the census tracts go out of the city boundaries in some places.
- Some indicators are not in CalEnviroScreen but are in the Healthy Places index.
 - Indicators like overcrowded housing should be explored in terms of how they relate to pollution.

General

- Are there more data in CalEnviroScreen 4.0 for rural communities?
- How can CalEnviroScreen 4.0 be used in grant writing proposals in identifying EJ communities?
- Is there a way to quickly or easily map all the census tracts that are in a single city? Is there a way to download the data for those census tracts?

- Why are there no indicators of race/ethnicity?
- Will OEHHA release a document or Excel file showing specific changes between versions?
- The pie charts for each census tract within the mapping tool are helpful to communicate data to community members.
- How can CES adapt to better look at environmental protection?

Tribal considerations

- Which federally recognized tribes fit into the top 25%?
- Is there any language around the nuances of federally/non-federally recognized tribes, and is there any guidance on its use?
- Regional Water Quality Control Boards do not have jurisdiction on tribal lands.
- Wonder if there is an opportunity to consider Tribal Toxic Pathways or Tribal Beneficial Uses, as tribes are at times disproportionately impacted by indicators that other populations might not be.
- Is there an opportunity to incorporate Traditional Ecological Knowledge alongside the Western Ecological Knowledge we are using?

Imperial and Coachella Valleys

April 19, 2021

The fifth regional workshop on the draft CalEnviroScreen 4.0 was for the Imperial and Coachella Valley areas. The workshop attracted nearly 20 participants from community organizations, local and state government, as well as local residents.

Indicators in CalEnviroScreen

- What is behind the Ozone and Asthma indicator changes in tracts, particularly the percentile decreases in the eastern Coachella Valley?
- Is any air district data used in the methodology for air quality indicators?
- Public records on nitrates from the agriculture commissioner could be incorporated into CalEnviroScreen to discover the sources of nitrate concentrations.

New indicator ideas/ideas for improving existing indicators

- Does OEHHA collect information on health survey data conducted by health coalitions like the Health Assessment and Research for Communities (HARC, Inc.)?
- Will OEHHA include more qualitative data from community experiences? Some areas in the eastern Coachella Valley like Thermal and Mecca have poor air quality monitoring coverage, low access to healthcare, and low census response rate due to distrust, which result in tracts not in the top 25% even though they are similar to nearby communities in the top 25%. Community experience data would help solve these gaps in indicators.
- The map is not representative of health or environmental contaminants in Salton City or the Imperial Valley. Including testimonies from residents would make the map more accurately reflect the impacts of wastewater, geothermal plants, and pesticides that go into the Salton Sea and affect the health of children and elders.
- A noise pollution indicator is something that is missing and should be addressed. There are large military aircraft along Interstate 8 that make a lot of noise. Wind farms can also create noise pollution. Noise pollution affects people's health and noise from military aircraft in particular can impact those with PTSD.

CalEnviroScreen uses in policy

- Does OEHHA look at programs that use CalEnviroScreen to distribute climate investment funds? If so, does OEHHA look at whether these funds are being allocated in a way that was intended? The AB 617 program seems to work well in urban communities to decrease greenhouse gas emissions but does not work as well in rural areas (e.g., AB 617 incentivizes industrial farms to compost, but that doesn't do much to address community concerns).
- Since the tool is now being used for local municipalities' General Plans (in accordance with SB 1000) and other uses, will OEHHA be developing community user guides or other guidance for how communities can use the tool?

San Francisco Bay Area

April 20, 2021

The sixth regional workshop on the CalEnviroScreen 4.0 draft was for the San Francisco Bay Area. The workshop attracted nearly 20 participants from community organizations, local and state government, as well as local residents.

New lead indicator

- How does CalEnviroScreen differentiate between renovated older housing and dilapidated older housing that has not been remediated for lead paint?
- Single Room Occupancy is difficult to track for housing stock, since children and elderly populations are not supposed to live there but sometimes do. This results in certain areas of San Francisco like the east side scoring low for the Children's Lead Risk from Housing indicator when this might not be true.

Exposures and Environmental Effects

- May want to look at independent assessment (air quality modeling) from Bay Area Air Quality Management District instead of using distance weighted monitoring data.
- Is small-source pollution (e.g., auto body shops, trains, railroads) included in the draft CalEnviroScreen 4.0?
- To some extent, residents living in or near areas zoned as industrial could experience direct impact/exposure from environmental effects.
- OEHHA should look into airport data because the area near Oakland Airport ranks very high, but this does not appear to be the case with San Francisco International Airport (SFO). Are CalEnviroScreen scores near San Jose Airport similar to scores near Oakland Airport and SFO?
- Does CalEnviroScreen account for exposures in industrial areas where people do not necessarily reside but still spend 40 hours a week there for work?

CalEnviroScreen uses

- Some areas do not make it into the top 25% of scores because they have low pollution burden, even if they score high in population characteristics.
- California Public Utilities' use of Disadvantaged Community designations to make investments is of concern. Many communities are disadvantaged by other measures but are still excluded from these investments by Investor Owned Utilities.

Changes between CalEnviroScreen versions and methodology

- How did indicators change in the greater Bay Area between CalEnviroScreen 3.0 and Draft CalEnviroScreen 4.0?
- Why did PM2.5, diesel PM, and asthma indicator scores improve from CalEnviroScreen 3.0 to draft CalEnviroScreen 4.0?
- Census tracts that left the top 25% of scores between 3.0 and Draft 4.0 seemed to have a small decrease in population characteristics scores. The top 25% changes seem to vary by data source. What has contributed to changes in population characteristics indicators?

- Census tracts that were newly included in the top 25% of scores between 3.0 and draft 4.0 seem to have slightly higher pollution burden scores.
- Have wildfire-impacted communities that experience higher PM2.5 and asthma seen increases in draft CalEnviroScreen 4.0 scores compared to 3.0 scores?
- OEHHA should consider releasing a tool for comparing CalEnviroScreen scores across versions.
- Environmental effects indicators appear to have a larger impact on draft CalEnviroScreen 4.0 scores than CalEnviroScreen 3.0 scores, resulting in some new top 25% census tracts in Draft CalEnviroScreen 4.0.

San Francisco Bay feedback

- Draft CalEnviroScreen 4.0 leaves out key communities like SOMA, Mission, Tenderloin, and Chinatown. The final CalEnviroScreen 4.0 should better reflect local disparities in San Francisco and fix gaps.
- Why did Solano County gain 6 top 25% tracts and Santa Clara County lose 5?
- CalEnviroScreen 4.0 could isolate an indicator that could work locally, but this may not work in other areas of the state.
- Draft CalEnviroScreen 4.0 seems to prioritize less dense population areas, and does not capture the difficult living in urban areas. There may be an indicator that better captures this issue, like housing burden or overcrowding. San Francisco Environmental Justice Framework and General Plan uses median household income in addition to CalEnviroScreen data.
- Western Addition and the Tenderloin District are inaccurately represented in the poverty indicator.
- Are high scores for asthma/cardiovascular disease emergency department visits in Sacramento due to the homeless population there?
- May want to consider regional ranking within Investor Owned Utility areas instead of statewide ranking. Ranking the 25% highest scoring tracts in each region would increase the number of Disadvantaged Communities designated in the Bay Area.
 - Regional ranking should be made official by CalEPA or OEHHA so that it can be used in local policy.