CalEnviroScreen 5.0

Responses to Major Comments on the CalEnviroScreen 5.0 Draft

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OVERVIEW

The Office of Environmental Health Hazard Assessment (OEHHA) released a draft of the CalEnviroScreen 5.0 update for public review on January 28, 2026. CalEnviroScreen is California's leading environmental justice and public health mapping tool that describes the cumulative impacts of pollution and socioeconomic burdens on California communities. The tool is updated on an ongoing basis through partnerships with public stakeholders and the most current statewide environmental, health, and socioeconomic data.

OEHHA received more than 100 public comments on the CalEnviroScreen 5.0 update through:

- Written public comments submitted on the OEHHA website; and
- Feedback provided during seven statewide and regional public workshops, held in person and online (see Summary of Public Workshops for more details).

This document responds to the major themes raised in those comments. For clarity, we organized comments into 12 categories, including the CalEnviroScreen model, indicator choices, map usability, and score changes between versions, along with general feedback on government uses of CalEnviroScreen and how OEHHA engages communities in this work. Our responses also include a section specific to the Bay Area due to the volume of comments received related to that region.

Responses describe several short-term actions OEHHA has taken to improve CalEnviroScreen, including data corrections, clarifying methods, and improving user guidance. We have also identified issues that require longer-term focus, such as evaluating climate-related indicators, updating methodologies, and improving guidance on the tool's uses. Throughout the document, we emphasize that CalEnviroScreen is a statewide environmental justice screening tool with important limitations. As a screening tool, CalEnviroScreen is not designed to capture localized environmental or

socioeconomic conditions. As such, local data, community knowledge, and lived experiences are also critical sources of information when evaluating and addressing pollution burden and cumulative impacts.

In our responses, we cite individual comment letters and refer to specific examples or suggestions shared where possible. While we worked to reflect the full range of input received, not every comment or suggestion received during the public comment period is cited or addressed in detail. Comments that are not directly addressed in this document were still reviewed by OEHHA and will help guide short- and long-term planning for CalEnviroScreen. When OEHHA prepares to update CalEnviroScreen, we consider all input received during this and previous public comment periods, including suggestions about data sources, indicators, and overall methods. Changes to CalEnviroScreen reflect ongoing public feedback received and continued stakeholder engagement with the tool.

The final version of CalEnviroScreen 5.0 was released on July 1, 2026. Please visit OEHHA's website to access all CalEnviroScreen 5.0 resources, including the results maps, technical report, and open data portal. As you explore and begin to utilize the tool, we invite you to share additional suggestions for improving the tool, questions, examples of how you are using CalEnviroScreen in your work or community, or requests to discuss the latest results in greater detail. You can reach us at CalEnviroScreen@oehha.ca.gov.

RESPONSES TO COMMENTS

Integrating Climate Risk and Resilience

Summary. Many comments strongly support adding climate-related indicators into CalEnviroScreen to better reflect the growing climate burdens faced by disproportionately impacted and vulnerable communities statewide. Suggested topics included extreme heat, wildfire risk, flooding, sea level rise, groundwater rise, and drought. Comments emphasized that features of the built environment, like tree canopy and green space, should also be considered for inclusion as they directly influence climate resilience. Comments urged OEHHA to explore how to include climate indicators in the near term, arguing that California's shoreline, agricultural, and rural communities are already experiencing negative climate-driven health and pollution impacts.[8, 11, 12, 13, 18, 23]

OEHHA Response. OEHHA appreciates the many comments expressing strong support for incorporating climate-related indicators. The comments received reflect concerns that have been consistently raised by California communities regarding the increasing health, environmental, and socioeconomic burdens associated with climate change. Specific climate change impacts mentioned included extreme heat, wildfires, flooding, sea level

rise, groundwater rise, and drought. OEHHA recognizes that climate change is already affecting communities across California, with disproportionate impacts on low-income communities, communities of color, Tribes, rural communities, and other populations facing environmental and health inequities.

OEHHA also acknowledges comments highlighting the role of built environment factors, including green space and tree canopy, which influence climate resilience and how communities experience climate burdens.

As described in the CalEnviroScreen 5.0 Technical Report, OEHHA is committed to developing a strategy for evaluating climate- and climate resilience-related data for potential consideration in version 6.0. Climate vulnerability indicators require scientific assessment and public input before they can be incorporated into the tool. In response to these comments, previous public feedback, and priorities identified through the CBO co-design process (see Co-Design Report), OEHHA will begin evaluating this data in 2027.

During the CBO co-design process for version 5.0, the participating CBOs all identified climate risk and resilience as priorities for future versions of the tool. CBOs and many other commenters highlighted extreme heat, urban heat islands, and access to cooling centers as important considerations, particularly in rural and agricultural areas of the state. Co-design partners also highlighted the intersection of sea level rise, industrial sites, and socioeconomic vulnerability affecting coastal urban communities.

Commitment to Evaluating Climate Risk

Following this release of version 5.0, OEHHA will develop a workplan outlining how to evaluate the integration of climate change into the CalEnviroScreen model. Beginning in 2027, OEHHA intends to implement this workplan through a transparent and inclusive process that will combine scientific rigor, technical expertise, and meaningful engagement with communities most impacted by climate change. As part of this effort, OEHHA will proactively engage with communities and potentially establish a multi-stakeholder advisory group with diverse representation. Similar to the Cumulative Impacts and Precautionary Approaches (CIPA) work group OEHHA convened from 2008 to 2013 to inform the framework for CalEnviroScreen, a new advisory group could provide technical input and recommendations on climate-related concerns, available data, and approaches for incorporating that data into the tool. OEHHA will provide updates and seek public input as this process moves forward.

As CalEnviroScreen provides a statewide snapshot of current conditions, in-depth evaluation is needed to determine how dynamic climate-change data and models fit within a standardized statewide screening tool. In the near term, OEHHA will begin reviewing the types of climate-related hazard and built environment data available, as well as any relevant tools such as OEHHA's CalHeatScore. OEHHA will consult and coordinate with

CalEPA and other State partners working on climate-related data and mapping, such as the Office of Land Use and Climate Innovation's Vulnerable Communities Platform, which maps climate hazard data with social vulnerability factors.

Consistent with OEHHA's established criteria for adding new indicators, any future climate-related metrics should be evaluated within the context of the CalEPA definition of cumulative impacts. Under the current definition, cumulative impacts considers pollution burden and population characteristics that increase the vulnerability to pollution. Climate-related hazards do not fit this definition; however, climate change can intensify pollution burdens and exacerbate health risks. As part of the broader public process around evaluating climate-related indicators, OEHHA may also consider expanding the definition of cumulative impacts.

Green Space Access and Tree Canopy

During this comment period, a commenter submitted a letter recommending the addition of a tree canopy indicator and provided information on a new U.S. Forest Service data layer. We agree that tree canopy and green space are important factors in achieving environmental justice. However, they do not directly measure pollution burden or population vulnerability, which are the core focus of the CalEnviroScreen model. Although green space offers well-documented health benefits, it is not yet clear how an indicator measuring access to green space and presence of tree canopy would fit within the current CalEnviroScreen model. The strongest connection between tree canopy and vulnerability relates to protection from extreme heat. We plan to evaluate the new California Urban Tree Canopy dataset recommended by the commentor as part of our upcoming work on considering how climate resilience metrics fit into CalEnviroScreen.

Uses of CalEnviroScreen and Need for Guidance

Summary. Some comments expressed concern about the use of CalEnviroScreen by local and State government agencies to guide funding and regulatory decisions. For example, some note that CalEnviroScreen's use in setting grant eligibility thresholds can limit participation by communities facing environmental or social burdens that are not yet captured by the tool. Some comments suggested that agencies should carefully consider whether the Disadvantaged Community designation is the most appropriate criteria to use as part of program or funding eligibility. Several commenters asked for clearer OEHHA guidance on what the tool should and should not be used for, including how it could best inform enforcement action, local planning efforts, and community advocacy. Comments also requested greater transparency on how CalEnviroScreen is used in practice by State and local government agencies.[7, 10, 12, 14]

OEHHA Response. As the developer of CalEnviroScreen, OEHHA recognizes its role in supporting appropriate use of the tool by a wide range of stakeholders, including government agencies. The public and accessible nature of CalEnviroScreen is a significant strength, enabling government agencies and other users to readily consider existing environmental, health, and socioeconomic burdens in their decision-making processes. However, because the tool is used for a wide range of purposes, OEHHA cannot always monitor or track all applications of the tool and therefore cannot ensure that it is being used appropriately in every decision-making context.

In response to public comments, we have added language to our CalEnviroScreen 5.0 Technical Report offering some basic guidelines on best uses in accordance with its specific design and purpose. CalEnviroScreen is a statewide environmental justice screening tool designed to quantify cumulative impacts. While the tool has been widely adopted and has successfully supported environmental justice efforts over the last 10 years, we acknowledge that it was not designed to serve as a solution for every program, funding decision, policy action, or research need.

To address these limitations, OEHHA is committed to developing more comprehensive guidance on the appropriate uses of CalEnviroScreen. Future guidance will help users better understand the strengths, limitations, and intended applications of the tool and identify situations where local data and more community engagement is needed. As part of this commitment, OEHHA intends to engage with partner State agencies, community organizations, Tribes, researchers, and other stakeholders as we continue to learn and track how CalEnviroScreen is applied across various sectors. The goal of this guidance will be to help government, academic, community, and other users make informed decisions when using CalEnviroScreen and understand when additional data may be needed.

OEHHA will also continue to provide user training for government agencies and other entities upon request to support the effective use of our tool and resources. Potential users across all levels of government should reach out to OEHHA prior to using CalEnviroScreen for a particular action. We can provide a technical overview of how to use the tool for specific purposes and provide insights on particular data sets, as appropriate.

As we refine future guidance, we also welcome examples of how CalEnviroScreen or its underlying data are being used in practice. Stakeholders are encouraged to share examples with us at CalEnviroScreen@oehha.ca.gov to help us develop additional guidance as needed.

Refining Data Sources, Weighting, and Model Assumptions

Summary. Some commenters encouraged OEHHA to explore refinements to the overall CalEnviroScreen model that can help better capture cumulative burden statewide. For example, some comments questioned the reliability of certain datasets in the tool, such as U.S. American Community Survey (ACS) unemployment estimates, Centers for Disease Control and Prevention (CDC) PLACES health data, and datasets lacking information on undocumented populations. Requests were made for stronger data quality checks or adjusted weighting for small or rapidly changing census tracts. Some comments also suggested a close review of how the CalEnviroScreen model combines and weights indicators, noting that the composite score may not fully reflect, for example, the experiences of high-cost urban regions or large rural tracts.[2, 5, 6, 10, 15, 17, 19]

OEHHA Response. OEHHA values feedback on the CalEnviroScreen model, including its datasets, indicators, and scoring method. This feedback helps us ensure the tool continues to reflect the cumulative impacts faced by communities across California.

During and between each CalEnviroScreen update, we closely review the strengths and weaknesses of every indicator and underlying data. To best represent each aspect of pollution burden or population vulnerability included in CalEnviroScreen, we carefully select the most robust and reliable dataset available at the time of adding or revising an indicator. When considering potential alternative or new datasets, we evaluate whether they are publicly available and provide statewide geographic coverage at the census tract level.

We recognize that some datasets, such as the U.S. American Community Survey (ACS), can have limitations in local accuracy. For example, the ACS may have continuous shifts in unemployment estimates or potential undercounting of undocumented or unhoused community members. CalEnviroScreen includes estimated data from ACS and other sources that inherently have a level of uncertainty but have been selected because they are the best available databases. The ACS also has regular multi-year updates and availability at the census tract level. OEHHA will continue to be transparent about any data limitations in CalEnviroScreen, including explaining those limitations in our reporting, and will evaluate whether other datasets may better support certain indicators in the future. We will also continue to ground our work in the methods used in the latest cumulative impacts science, including recommendations provided in the National Academies report *State of the Science and the Future of Cumulative Impact Assessment* .

Statewide cumulative impacts screening tools like CalEnviroScreen must be generalizable across diverse regions. As highlighted in a 2025 paper, generalized screening tools like CalEnviroScreen support broad applicability, transparency, and fairness in resource allocation. However, OEHHA recognizes that a tradeoff of a relative ranking tool like CalEnviroScreen is that it is limited in its ability to reflect highly localized conditions within a census tract. Considering this limitation, we will also continue to advise government and

other stakeholders to carefully assess whether CalEnviroScreen is the right tool or data source for a specific project (see response to Uses of CalEnviroScreen and Need for Guidance).

Suggestions to make major structural changes to CalEnviroScreen, such as altering indicator weighting, modifying model components, or adding new factors outside the current cumulative impacts framework, were not feasible for version 5.0. The current model has been refined and developed over many years with input from organizations and communities across the state. Major model changes require longer-term evaluation, including careful research on methods and continued stakeholder engagement. Suggestions on model weighting will be an important part of our committed evaluation of how climate data can be included in CalEnviroScreen (see response to Integrating Climate Risk and Resilience).

Score Changes and Disadvantaged Communities (DAC) Eligibility

Summary. Some commenters expressed concern about score changes for their census tract between CalEnviroScreen versions 4.0 and 5.0. Comments noted that large swings could reflect new U.S. Census boundary updates, data revisions, or methodological shifts rather than improvements in local environmental or health conditions. Comments expressed concern that these technical changes can cause long-standing environmental justice communities to lose disadvantaged community (DAC) status, which may reduce access to important funding and resources. Many commenters asked OEHHA and CalEPA to provide clearer explanations for major score changes and explore ways to maintain DAC status across versions.[6, 8, 10, 11, 12, 16, 17, 21]

OEHHA Response. OEHHA understands the concerns raised by comments regarding score changes between CalEnviroScreen versions, and the potential implications for communities that experience disproportionate environmental, health, and socioeconomic burdens. We recognize that access to funding and resources is important for communities to address longstanding environmental justice issues. When CalEnviroScreen is used by government agencies and programs to help identify priority communities for funding, changes in scores can affect whether a community qualifies for resources to address pollution burden. With this in mind, we continue to advise government and other users of the tool to consult with OEHHA to assess the tool's ability to inform decisions for specific programmatic, funding, and policy actions. OEHHA is committed to better understanding the implications of score changes and addressing gaps in collaboration with other State agencies and funding sources.

When preparing each CalEnviroScreen update, including CalEnviroScreen 5.0, OEHHA closely reviews all new and existing datasets and works with community partners to ensure that changes in scores reflect communities' relative pollution burdens as accurately as possible. When public comments identify possible scoring issues within a census tract, we re-examine the underlying data to identify and address any potential gaps or inconsistencies, or to flag areas of deeper focus. Areas of deeper focus could include specific indicator methodology or the overall model (see response to Refining Data Sources, Weighting, and Model Assumptions). We are also in the process of reviewing trends across multiple CalEnviroScreen versions to better understand if and how these score changes reflect overall shifts in pollution burden across California.

DAC Designation

The designation of DACs for prioritized California climate investments is a separate decision process from the CalEnviroScreen 5.0 update. CalEPA is responsible for identifying DACs under Senate Bill (SB) 535 (De León, Statutes of 2012). SB 535 requires that DAC designation be based on geographic, socioeconomic, public health, and environmental hazard criteria. CalEPA has used CalEnviroScreen as the primary tool for this purpose and has updated the criteria for DACs with every release of updated CalEnviroScreen versions in 2014, 2017, and 2022. For the 2022 DAC designation, CalEPA maintained DAC designation status for census tracts identified as DACs in 2017, regardless of whether their CalEnviroScreen scores changed in version 4.0.

OEHHA has shared public comments related to SB 535 implementation with CalEPA, who will consider them in their separate public process for DAC designation that will begin shortly after the release of CalEnviroScreen 5.0. We encourage interested stakeholders to participate in that public process by attending one of CalEPA's upcoming workshops or submitting public comments.

Score Changes Between Versions

Score changes between versions of CalEnviroScreen are part of the update process – data is new, methods may have been updated and improved, and new geographic representations are used. This makes it challenging to pinpoint exactly where and why score changes between versions occur. Reasons for indicator score decreases can include new geographic boundaries, updated methods to improve data accuracy, and/or improvements in indicator scores due to changing environmental conditions or community characteristics. Because scores are relative, the score for a local community is also affected by what is occurring in other parts of the state. Future trends work may help understand changing conditions and the reasons why indicator scores may be increasing or decreasing.

Regarding census tracts with large score changes, 183 tracts in the state (about 2% of the state) had a greater than 30 percentile point change between versions 4.0 and 5.0. Of these 183, just 38 tracts had a CalEnviroScreen 4.0 score above the 75th percentile. Most of the score decreases for these 38 tracts can be attributed to changes in census tract boundaries between 2010 and 2020. The shifting boundaries are often the result of refining a larger census tract into multiple smaller tracts that better reflect the population size. Because there is potential for continued vulnerability of longer-term residents in census tracts with these large reductions in scores, we are providing a flag in the data popup on the CalEnviroScreen 5.0 map. This will note any sharp score changes between versions 4.0 and 5.0 and advise that more local knowledge and data may need to be examined when considering the burdens and vulnerabilities in these communities.

Improving Map Usability and Access

Summary. Comments expressed strong interest in improving the usability and accessibility of the CalEnviroScreen map, noting that the current interface can make it difficult for some users to understand cumulative impacts or interpret indicator results. Many requested new features such as the ability to view multiple indicators at once, jurisdictional boundaries, qualitative neighborhood information, and better explanations of data gaps or uncertainty. Commenters also asked for more accessible tools to help interpret and act on the data, including indicator description pop-ups, multilingual materials, higher-resolution maps, improved performance on older devices, contact information for stakeholders that can help address pollution issues, and clearer distinctions between "zero" values and missing data.[2, 9, 22]

OEHHA Response. OEHHA appreciates the feedback we received on ways to improve the CalEnviroScreen map and other tools. We are always working to make these tools and their data easier for everyone to use, whether by introducing new or updated features or including clearer guidance language. For example, we will carefully evaluate how to potentially allow users to view sites included in multiple environmental indicators at the same time on the map without creating a new combined score. The online mapping application now includes a splash screen outlining what the tool is and certain limitations in what the data can provide.

Adding jurisdictional boundaries directly onto the CalEnviroScreen map is challenging because these boundaries often do not align with census tracts, which can lead to inconsistent results. However, similar to the data dashboard introduced with CalEnviroScreen 4.0, the CalEnviroScreen 5.0 dashboard will allow users to filter scores by county, city, Senate District, or Assembly District. The data dashboard will also have other

features that can help tailor the CalEnviroScreen experience, such as disadvantaged community and percentile sliding scale filters. We expect to release a CalEnviroScreen 5.0 data dashboard later in 2026.

We will also work closely with community partners to explore and potentially develop features that help users understand and contextualize CalEnviroScreen data, such as qualitative neighborhood data and contacts for local policymakers or organizations that can help address the pollution burdens displayed in the tool.

General Bay Area Community Concerns About Scores

Summary. Commenters from the San Francisco Bay Area shared concerns that many historically-burdened neighborhoods or cities saw significant drops in or had lower-than-expected CalEnviroScreen 5.0 scores despite continued pollution burden. Commenters mentioned neighborhoods such as South of Market (SoMa), the Mission, Chinatown, and Bayview Hunters Point in San Francisco, East Palo Alto, North Fair Oaks, Belle Haven, and North San Mateo on the Peninsula, Alviso in San Jose, and parts of San Rafael in Marin County. They argued that these scores do not match community conditions and may reflect data gaps, census tract boundary changes, or the effects of gentrification on Population Characteristics indicators, rather than improvements in environmental or health burdens. Commenters raised concerns that census tract-level analysis may be masking local disparities and requested more granular block group or block-level data as well as regional and inter-county comparisons to better reflect conditions in communities Community groups urged OEHHA to re-examine the data for these neighborhoods, engage with impacted residents, and ensure the tool accurately reflects cumulative burdens in the region.[1, 2, 3, 5, 6, 10, 11, 12, 14, 17, 18, 20, 21]

OEHHA Response. The concerns raised by Bay Area community organizations, local and elected government representatives, and other stakeholders reflect real experiences of living and working in California communities. Housing pressures, displacement, gentrification, changing environmental conditions, and economic changes are reshaping neighborhoods and influencing how communities experience pollution burdens. We recognize that these factors can significantly influence how communities experience environmental burdens and access resources, and that community members are often the first to identify emerging challenges that may not yet be fully reflected in statewide datasets or tools.

We also recognize concerns regarding reductions in CalEnviroScreen scores between versions 4.0 and 5.0 for some Bay Area communities (see response to Score Changes and Disadvantaged Communities (DAC) Eligibility). Lower relative scores do not necessarily

indicate that environmental burdens have been eliminated or that environmental justice concerns no longer exist. CalEnviroScreen is designed to compare cumulative impacts across communities statewide, meaning that scores reflect relative conditions across California rather than absolute levels of need within a particular community. As a result, communities that experience significant local environmental health concerns could still hold a low CalEnviroScreen score. OEHHA recognizes that statewide screening tools have limitations and may not fully capture highly localized conditions, neighborhood-level disparities, community assets, historical disinvestment, displacement pressures, or rapidly changing community conditions. For this reason, CalEnviroScreen should be used alongside local data, community knowledge, lived experience, and meaningful engagement with affected communities when evaluating environmental burdens and informing decisions that may affect environmental justice outcomes. For regions with lower statewide scores such as the Bay Area, more granular local knowledge and data needs to be examined when considering community-level burdens and vulnerabilities. It may also be useful to analyze CalEnviroScreen data at a regional level to provide more local context to the issues faced by specific communities in the Bay Area.

At its core, CalEnviroScreen remains an environmental justice tool designed to identify communities experiencing the highest cumulative pollution burdens and population vulnerabilities across California. One of the tool's primary strengths is its ability to consistently identify communities with the greatest relative burdens statewide, including those ranking among the highest percentiles of cumulative impact. This statewide focus helps direct attention to communities facing the most severe combinations of pollution exposure, environmental hazards, health vulnerabilities, and socioeconomic challenges. At the same time, OEHHA recognizes that environmental justice concerns exist across California, including in communities that may not rank among the highest statewide scores, such as communities within the Bay Area region.

The Bay Area as a region also sees declining Population Characteristic scores. It is possible that decreasing Population Characteristics scores could be due to wealthier and less socioeconomically vulnerable residents moving into historically-burdened and formerly redlined communities. We acknowledge that these types of potential gentrification and displacement patterns can mask highly localized, census tract-level vulnerabilities in population datasets used in screening tools such as CalEnviroScreen.

As mentioned earlier (see response to Refining Data Sources, Weighting, and Model Assumptions), major structural changes to CalEnviroScreen requested by some Bay Area commenters, such as altering indicator weighting, modifying model components, or adding new factors outside the current cumulative impacts framework, are not feasible for 5.0. We have committed to evaluating how climate change data can fit into the tool for version 6.0, and we see this as an opportunity to re-engage in discussions on the CalEnviroScreen model. Environmental health concerns raised by Bay Area communities,

such as housing displacement, neighborhood change, and climate change impacts, are important conditions that need deeper, careful exploration for future versions.

Bayview-Hunters Point Community Concerns About Score Declines

Summary. Commenters representing the Bayview Hunters Point (BVHP) area of San Francisco, including BVHP Assembly Bill (AB) 617 Community Steering Committee members, shared public comment on methodological and data concerns for the area. They expressed concern about large score drops between version 4.0 and draft 5.0, in particular for a local census tract (6075980600). They noted that these declines do not reflect ongoing pollution burden in the area. Commenters pointed to unexpectedly low Diesel Particulate Matter and Hazardous Waste values and highlighted data volatility, such as swings in unemployment and unreliability of small-scale diabetes estimates. Commenters noted that this may underestimate conditions in small, rapidly changing, and/or historically under-regulated communities. Commenters requested that OEHHA review the underlying 5.0 data and methods for discrepancies, provide explanations for major score changes, and ensure that previously identified disadvantaged communities are not excluded from investment based on sharp score changes between versions of the tool.[4, 6, 10, 14, 16]

OEHHA Response. Because of the large number of comments directly related to the BVHP community, the historic environmental justice concerns of the area, and BVHP's status as an AB 617 community, OEHHA is responding to this local concern directly. OEHHA acknowledges that the BVHP community has long carried a disproportionate environmental burden and experienced decades of industrial activity and systemic neglect. The area has a history of heavy contamination from radioactive materials, toxic chemicals, and ship repair waste from the former Hunters Point Naval Shipyard. The former Hunters Point Naval Shipyard was classified as a federal Superfund site and cleanup efforts have been slow and inconsistent. At the same time, the predominantly community of color has faced chronic underinvestment and inadequate public services. We appreciate the feedback provided on CalEnviroScreen by representatives from this community and are committed to addressing any issues within our ability to do so both in the short term and as we develop future versions of CalEnviroScreen.

Data Evaluation for BVHP Concerns

The OEHHA team conducted a thorough evaluation of the indicator data and scores in the Hunters Point area, specifically focusing on the Hunters Point tract (6075980600) with the largest reduction in overall CalEnviroScreen score between version 4.0 and draft 5.0.

As discussed in the Score Changes and Disadvantaged Communities (DAC) Eligibility

section, the large score change observed in the Hunters Point census tract is unusual. As with other tracts with similar scoring volatility, we have added a flag in the data popup on the CalEnviroScreen 5.0 map. This flag recognizes the large reduction in scores between versions and notes that more local knowledge and data may need to be examined when considering the burdens and vulnerabilities within census tracts like BVHP.

Corrections were made to the data layers for the Diesel Particulate Matter and Hazardous Waste indicators as a direct result of the evaluations that the OEHHA team conducted. It was discovered that a portion of the diesel area sources sector was inadvertently excluded from draft CalEnviroScreen 5.0. For the BVHP census tract, the off-road equipment sector, and more specifically, the construction and mining equipment portion, was the dominant source of diesel emissions in CalEnviroScreen 4.0. These diesel emissions have been corrected for the final CalEnviroScreen 5.0. We also determined that a hazardous waste large quantity generator was excluded from the Hunter's Point tract in the 5.0 draft due to incorrect address and location information. The site was edited manually and included for the final 5.0 data. Additional corrections were made to the PM2.5 and Cleanup Sites indicator layers based on other comments we received as part of the public process. The CalEnviroScreen draft period is a vital part of the quality control process as well as an opportunity to ground truth data and provide direction for future development of the tool.

Other issues raised, include the volatility concerns of the U.S. American Community Survey data, specifically unemployment, are discussed in the section Refining Data Sources, Weighting, and Model Assumptions. Concerns over the reliability of small-scale health estimates for the Diabetes indicator and CDC PLACES are discussed in the Feedback on New CalEnviroScreen 5.0 Indicators section.

One important factor in the Hunters Point census tract (6075980600) is a change in the population. The population number for this tract has doubled since version 4.0, even though there was not a shift in the census tract geographical boundary in 2020. It is likely that decreasing Population Characteristics scores are due to wealthier and less socioeconomically vulnerable residents having moved into newly built housing units in the tract. We acknowledge that gentrification of the area does not mean that longer-term residents of the community have seen improvements in their daily environment. We acknowledge that CalEnviroScreen does not account for highly localized changes and that additional analyses on inequality within neighborhoods would be appropriate to assess to better understand the true burdens within the community.

Recommended revisions such as altering indicator weighting, modifying model components, or adding new factors outside the current cumulative impacts framework were not feasible for CalEnviroScreen 5.0 (see Refining Data Sources, Weighting, and Model Assumptions). However, the issues raised by BVHP and other Bay Area communities, including housing displacement, climate-driven vulnerabilities, and neighborhood change, are critically important. These concerns warrant deeper exploration

and could be thoughtfully considered for version 6.0 and beyond of the tool. We would welcome the opportunity to partner with community groups, regional government entities, and other local experts in this region on further developing the CalEnviroScreen model to be representative of the evolving scale of cumulative impacts in California.

Feedback on New CalEnviroScreen 5.0 Indicators

Summary. Several comments expressed support for the two new CalEnviroScreen indicators introduced in 5.0—Small Air Toxic Sites and Diabetes Prevalence. Some commenters expressed concern that the Small Air Toxic Sites indicator focuses more heavily on oil and gas well sites than other small stationary emissions sources. We also received comments requesting clearer explanations of which facilities are included in Small Air Toxic Sites more broadly, the ability to distinguish between active and idle oil and gas wells on the CalEnviroScreen map, and the inclusion of abandoned wells. Regarding Diabetes Prevalence, some comments questioned the use of a federal dataset that may not be updated regularly and does not include children's data or distinguish between Type I and II diabetes.[7, 24]

OEHHA Response

Small Air Toxic Sites

The new Small Air Toxic Sites indicator estimates the burden of communities living near small air toxic sites, including but not limited to oil and natural gas (ONG) wells. The indicator data is sourced from the California Emissions Inventory Development and Reporting System (CEIDARS) and the Well Statewide Tracking and Reporting System (WellSTAR) databases maintained by the California Air Resources Board (CARB) and the California Geologic Energy Management Division (CalGEM), respectively. We have updated the chapter about the Small Air Toxic Sites indicator in the CalEnviroScreen 5.0 Technical Report to provide additional detail on the burden to communities living near facilities included in the CEIDARS database and what types of facilities are represented (e.g., gas stations, autobody shops, ONG wells, food processing plants). Additionally, the Small Air Toxic Sites indicator map has been updated to visually distinguish between active and idle ONG wells.

Regarding the inclusion of abandoned ONG wells, OEHHA evaluated the available scientific literature on the health and exposure risks associated with ONG wells that have been permanently sealed and closed. While the WellSTAR database does contain records for plugged and abandoned wells, our review did not identify sufficient evidence linking abandoned ONG wells to measurable community-level risks. There is substantially stronger evidence demonstrating health risks for populations living near active and idle

ONG wells, including exposure to toxic air contaminants, volatile organic compounds, and other stressors documented in peer-reviewed studies. In response to the comment that the indicator is more focused on oil and gas wells, we have provided some additional context in the CalEnviroScreen 5.0 Technical Report on the number of oil and gas wells that contribute to the indicator score, or wells within one kilometer of populated areas. For more information, see the chapter on the Small Air Toxic Sites indicator in the CalEnviroScreen 5.0 Technical Report.

Diabetes Prevalence

The new Diabetes Prevalence indicator in CalEnviroScreen 5.0 estimates the percentage of adults age 18 and older with diagnosed diabetes in each census tract. These estimates come from the Centers for Disease Control and Prevention's (CDC) PLACES data initiative. PLACES uses individual survey responses from the 2021 Behavioral Risk Factor Surveillance System (BRFSS) to estimate diabetes prevalence for small geographic areas like census tracts. Because BRFSS only surveys adults, the estimates apply only to people 18 years and older. We recognize that this database has limitations, including the lack of estimates for children and no differentiation between Type I and Type II diabetes.

After extensive research, we found that this is the best available data for diabetes prevalence. No other surveys exist that reliably estimate census tract-level prevalence of diabetes statewide better than PLACES does, as such a survey would require extensive resources to survey the California population in every tract. During the co-design process for CalEnviroScreen, OEHHA also considered using data from the California Health Interview Survey (CHIS) but chose not to use it because its raw values cannot be publicly displayed. As discussed with co-design partners, this would limit transparency and make it harder for the public to replicate our results.

Some comments also expressed concerns about the reliability of small-scale health estimates for the diabetes indicator. PLACES data are generally considered reliable for small area estimation of prevalence of health conditions. Both internal and external validation studies showed moderate to strong correlations between model-based estimates and direct survey estimates at state, county, and place levels for diabetes and other chronic health conditions. For more details on the robust methods used to produce the diabetes prevalence data included in this indicator, please refer to the CalEnviroScreen 5.0 Technical Report. We will continue to monitor the CDC PLACES database and will consider making updates to this indicator in future versions as needed.

Recommended New Pollution Burden Indicators

Summary. Commenters suggested adding new indicators for pollution sources into CalEnviroScreen, such as warehouses, radioactive contamination, microplastics, and environmental impacts from new industries like data centers or hydrogen facilities. They also highlighted local pollution pathways that may be absent from the tool, including aerosolized contaminants from polluted rivers and odors and emissions from large animal operations.[8, 15, 16, 22]

OEHHA Response. OEHHA appreciates the suggestions for new Pollution Burden indicators and the opportunity to learn more about the environmental challenges affecting communities across the state. CalEnviroScreen is designed to identify communities affected by multiple pollutants. OEHHA works to ensure that the pollutants included in the tool reflect evolving community needs and the latest scientific information. OEHHA will review the ideas provided carefully and in partnership with environmental justice communities and other stakeholders, keeping in mind the seven selection criteria for new CalEnviroScreen indicators:

- Reflects a component of cumulative impacts with scientific rationale;
- Reflects environmental justice principles;
- Data available for the entire state at the census tract level;
- Represents a statewide, not just a regional, concern;
- Has variation across the state;
- Informed by comments and feedback on CalEnviroScreen; and
- Not currently reflected in CalEnviroScreen.

We always welcome additional ideas for topics or datasets that could help improve CalEnviroScreen and make sure it reflects community experiences at CalEnviroScreen@oehha.ca.gov.

Recommended New Population Characteristics Indicators

Summary. Commenters recommended adding new Population Characteristics indicators that reflect social vulnerabilities disproportionately affecting certain communities, including housing-related topics like homelessness, overcrowding, displacement risk, unsafe housing conditions (e.g., pests, structural integrity), and household energy burden. Transportation access, social isolation, and food insecurity were also raised for consideration. Many also suggested including new health-related indicators as data becomes available, such as cancer, chronic obstructive pulmonary disease (COPD), learning disabilities, life expectancy, and Parkinson's disease.[6, 9, 10, 11, 15, 23]

OEHHA Response. OEHHA has noted the various helpful suggestions for new Population Characteristics indicators and appreciates the opportunity to better understand the social and health challenges that are impacting environmental justice communities statewide. OEHHA will carefully assess whether and how to include these ideas into CalEnviroScreen in partnership with community and other stakeholders, keeping in mind the seven selection criteria for CalEnviroScreen indicators (see response to Recommended New Pollution Burden Indicators). Below is more information on some of the suggestions we have already started to explore. We always welcome additional ideas for topics or datasets that could help improve CalEnviroScreen and make sure it reflects community experiences at CalEnviroScreen@oehha.ca.gov.

Housing-Related Topics

Several of our current indicators, such as Poverty, Housing Burden, and Children's Lead Risk from Housing, contain aspects linked to poor housing quality and high household energy costs. As part of our ongoing review of population characteristics for CalEnviroScreen, we will take a careful look at displacement risk and overcrowding to see how they can help explain a community's vulnerability to pollution. We recognize that displacement is a major concern for many environmental justice communities across the state, and that there is opportunity to explore how CalEnviroScreen can better reflect how changing housing conditions and broader socioeconomic trends are affecting these communities. For housing-related suggestions, including a possible homelessness indicator, we will review whether reliable, statewide datasets exist that can accurately describe these challenges.

Cancer

Cancer was one of the main health concerns raised by CBOs during the CalEnviroScreen 5.0 co-design process. OEHHA and our partners discussed the difficulties in finding reliable local cancer data, mainly because of privacy protections and the small number of cases in some areas. OEHHA shared census tract-level cancer data from the CDC PLACES database for consideration, but OEHHA and our partners agreed that this dataset does not fully reflect the specific cancer risks faced by disadvantaged communities. OEHHA will continue researching available data to decide whether cancer meets the criteria to be included as a Sensitive Population indicator in CalEnviroScreen and to identify the most suitable dataset.

Feedback on Existing Pollution Burden Indicators

Summary. Commenters raised questions about a few existing Pollution Burden indicators. For example, one comment asked about the scientific basis for expanding the Hazardous Waste indicator's facility buffer distance from 1 to 4 kilometers and whether it may overstate risk in highly regulated areas. Some comments also urged OEHHA to improve data sources for certain Exposures indicators, such as expanding the list of pesticides included within the Pesticide Use indicator to include non-agricultural and other pesticides. OEHHA also received a recommendation to consider using community-collected air data as a source for air quality indicator scoring.[7, 9]

OEHHA Response

Hazardous Waste

OEHHA carefully evaluated scientific rationale before proposing an increased buffer distance for select facilities within the Hazardous Waste indicator. It should be noted that the expanded buffer from 1 to 4 kilometers only applies to the largest hazardous waste sites – the permitted transfer, storage, and disposal facilities (TSDFs). A distance decay model was also applied so that the weight a facility contributes to the indicator score is reduced the further away the site is from the populated area of the community. The outer buffer ring of the model assigns just 5 percent of the facility weight to the community.

It should be noted that the Hazardous Waste indicator is not intended to assess risk from exposure due to contaminants from a hazardous waste site, but rather, help quantify the general negative impact of living within proximity to these facilities. Further, as outlined in the CalEnviroScreen 5.0 Co-Design and Technical Report, research shows that using larger distances around hazardous waste sites provides a better reflection of communities that may be affected. For example, studies have linked living more than 1 kilometer from these sites with health problems like poor birth outcomes. The decision is also consistent with other screening tools, such as the national EJScreen and tools used in Colorado and Washington, which have also increased their buffer distances.

Pesticide Use

CalEnviroScreen 5.0 includes 124 agricultural pesticides in the Pesticide Use indicator. These pesticides were used in California between 2021 and 2023 and were chosen because they are potentially hazardous according to specific hazard and volatility criteria. The method for selecting these pesticides as part of our evaluation of pollution burden is scientifically sound and follows the process outlined under Senate Bill (SB) 950 (Birth Defect Prevention Act of 1984). A full description of the selection process, along with the complete list of pesticides, is available in the Appendix of the CalEnviroScreen 5.0 Technical Report.

OEHHA agrees that adding non-agricultural pesticides could strengthen this indicator. However, we continue to lack a suitable dataset or method to measure these exposures statewide at the census-tract level. We will continue working with the California Department of Pesticide Regulation on these suggestions and revisit whether county-level data can be adapted for use in future versions of CalEnviroScreen.

Community Air Monitoring Data

For our air quality indicators, we currently use data provided by the California Air Resources Board (CARB). CARB combines monitoring and modeling to develop the best available statewide air quality estimates covering the entire state. Currently, CARB does not include data from community or local air monitors in these statewide layers and instead relies on the State's regulatory monitoring network. However, CARB does also use satellite data to improve estimates in areas that are far from air monitors run by the State of California. We will continue working with CARB to evaluate whether community-collected air monitoring data can be added in the future to complement the state's existing network.

Strengthening Community Engagement and Accessibility

Summary. Commenters expressed support for the community co-design approach to CalEnviroScreen 5.0, while emphasizing the need to continue deepening and widening OEHHA's community engagement efforts. For example, comments noted that OEHHA should include more North State rural, Tribal, and other underrepresented regions in future CalEnviroScreen update processes. Some comments also expressed concern about the co-design process only including representation from CBOs and excluding local government agencies and regulated industrial stakeholders. Commenters also requested more accessible CalEnviroScreen materials to ensure all audiences can understand and use the tool, such as multilingual resources, clearer explanations, videos, interpretation and translation services at public forums, and improved visual displays.[7, 23, 24]

OEHHA Response. OEHHA appreciates the feedback we received on our co-design approach for CalEnviroScreen 5.0. We created this approach after receiving requests to involve communities earlier and more directly in the CalEnviroScreen update process. To learn more about how OEHHA and the community partners listed below worked together to develop the proposed updates, please see our Co-Design Report:

- California Environmental Justice Alliance
- Center on Race, Poverty, and the Environment
- Central California Environmental Justice Network

- Comité Cívico del Valle, Inc.
- Communities for a Better Environment
- Environmental Health Coalition
- Physicians for Social Responsibility – Los Angeles
- UNIDOS Network, Inc.

The co-design process was an important, but preliminary, step in setting the foundation for the draft of CalEnviroScreen 5.0 and its public comment period. We invited CBOs to this process to be responsive to previous feedback, recognize lived experience as an important component in the scientific process, and ensure that localized topics were reflected in the tool. OEHHA served as the lead and ultimate decision-maker throughout this process and ensured that any CBO proposals were supported by scientific rationale and technical feasibility before they were built out in the CalEnviroScreen 5.0 draft.

The public comment period, including the seven public workshops OEHHA organized statewide, was an opportunity to broaden our perspectives on the proposed updates. We appreciated the opportunity to engage in conversation with a more diverse set of stakeholders during the workshops and other meetings during the public comment period, including local agencies and regulated industries. We considered the full breadth of input as we finalized CalEnviroScreen 5.0.

OEHHA is committed to continuing to strengthen how CalEnviroScreen engages with communities, including those in rural, Tribal, and other disproportionately burdened areas. We look forward to connecting with many of the organizations and communities who submitted comments so we can better understand how to strengthen CalEnviroScreen and build sustainable partnerships with environmental justice communities across the state.

As part of this effort, OEHHA will continue creating new CalEnviroScreen 5.0 resources to help all users better understand and use the map and data, regardless of technical expertise. These resources will include tutorial videos, summary pages, a data dashboard, and guided one-on-one walkthroughs for interested stakeholders. We will also continue to focus on language access in our work, whether it is providing our digital materials in multiple languages or providing interpretation services at our public forums. Our co-design process is meant to be iterative and ongoing, and we look forward to continuing our current partnerships while also connecting with new communities.

COMMENT LETTERS

Below is a select set of written comment letters received during the CalEnviroScreen 5.0 draft public comment period. The full archive of written comment letters received can be found on the OEHHA website. The suggestions, concerns, and general feedback described in these letters—along with workshop comments and text submissions—were summarized in the 12 categories OEHHA responded to throughout this document. While we worked to reflect the full range of input received, not every comment or suggestion received is addressed in detail in this document. However, all comments, including but not limited to the letters cited below, were reviewed by OEHHA and informed our short- and long-term planning for CalEnviroScreen. We sincerely appreciate the time and effort all commenters took to provide OEHHA with feedback and the willingness to support us as we continue to improve CalEnviroScreen. Organizations and individual commenters below are listed in alphabetical order.

1. API Council of San Francisco
2. Bay Area Air Quality Management District
3. Bay Area Legislative Caucus
4. Bayview Hunters Point/Southeast San Francisco AB (Assembly Bill) 617 Community Steering Committee
5. Brightline Defense, Bay Area regional coalition
6. Brightline Defense, San Francisco coalition
7. California Council for Environmental and Economic Balance
8. California Rural Legal Assistance, Inc.
9. Californians for Pesticide Reform
10. City and County of San Francisco, Environment and Planning Departments
11. City of San Rafael
12. Contra Costa County Board of Supervisors
13. FairTrees.org
14. Greenaction for Health and Environmental Justice
15. Leadership Counsel for Justice and Accountability
16. Malik Washington, Bayview-Hunters Point
17. Metropolitan Transportation Commission
18. Peninsula Accountability for Contamination Team
19. San Diego Association of Governments
20. San Francisco Bay Shoreline Contamination Cleanup Coalition
21. San Mateo County Board of Supervisors
22. Santa Clara University School of Law, International Human Rights Clinic
23. Sierra Business Council

24. Western States Petroleum Association