



CalEnviroScreen Training Materials

Environmental Justice Grant Tools for Community Action: Using EJScreen and CalEnviroScreen

August 2023



Office of Environmental Health
Hazard Assessment, CalEPA

CalEnviroScreen Training Materials

Environmental Justice Grant Tools for Community Action: Using EJScreen & CalEnviroScreen

OUTLINE

- A. Overview and purpose of this training document
- B. Orientation to the CalEnviroScreen 4.0 Data Dashboard
- C. Using the Data Dashboard to explore CalEnviroScreen data
 - a. Exploring impacted communities
 - b. Identifying burdens by filtering data on specific communities

A: Overview and purpose of this training document

WHAT ARE WE DOING

The United States Environmental Protection Agency (Region 9) and CalEPA's Office of Environmental Health Hazard Assessment (OEHHA) joined efforts to lead a training on how communities can use mapping and screening tools to plan and develop environmental justice grants. The goals of the training are to:

- Build communities' capacity to understand how to use and leverage EJScreen and CalEnviroScreen
- Assist communities in using the tools to identify potential vulnerabilities and pollution burden across California.
- Support communities in the process of developing a grant proposal informed by screening tools data (EJScreen and CalEnviroScreen).

WHEN

Monday, August 21, 2023, 10:00 am – 12:00 pm Pacific

Tuesday, August 22, 2023, 5:00 pm – 7:00 pm Pacific

WHERE

Online via Zoom

- August 21st: <https://www.zoomgov.com/j/1618504505>
- August 22nd: <https://www.zoomgov.com/j/1613016767>

WHY IS THIS TRAINING IMPORTANT

Community organizations often rely on tools such as US EPA's EJScreen and CalEPA's CalEnviroScreen to identify overburdened and vulnerable communities to inform the development of educational programs, grant applications, and community awareness efforts.

Both tools have a similar purpose, but take different approaches, which allows the community to compare both individual burdens and cumulative impacts.

CalEnviroScreen generates a single cumulative impact score by combining 21 different indicators including California specific data. EJScreen produces separate "EJ indexes" for each environmental indicator by combining nationally available data on an environmental condition with demographic information.

HOW WILL WE DO IT

Both CalEPA and OEHHA staff will introduce the tools through a demonstration of each tool, interactive breakout sessions, and office hours.

THE TRAINING GUIDE

This document serves as a training guide and provides information on CalEnviroScreen

- Dashboard navigation
- Geographic locations selection
- Data interpretation
- Sample grant language
- Example of a community summary for a grant application

WHAT IS CALENVIROSCREEN?

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected and vulnerable to the effects of many sources of pollution. Key features of CalEnviroScreen use environmental, health, and socioeconomic information to produce scores for every census tract in the state. The scores are mapped on a relative scale, so that different communities can be compared. For example, an area with a high score is one that experiences a much higher pollution burden than areas with low scores. The scores help rank how burden communities are based on available data from state and federal government sources.

TO KEEP IN MIND

- This guide was based on CalEnviroScreen 4.0 which was last updated in October 2021.
- California Environmental Protection Agency (CalEPA) uses the 25% highest scoring census tracts in CalEnviroScreen to identify Senate Bill 535 disadvantaged communities (DACs) which are prioritized for the California Climate Investments program, among others.
- CalEnviroScreen 4.0 Data Dashboard is an interactive online tool used for filtering and visualizing CalEnviroScreen 4.0 data and will be showcased in this training.

USING CALENVIROSCREEN IN A GRANT APPLICATION

CalEnviroScreen and other screening tools such as US EPA's EJScreen can help describe a snapshot of communities' conditions for a grant application, support on the ground community-driven efforts, and complement local data and community knowledge. CalEnviroScreen could also be a useful resource for other

grants that use these terms: underserved or disadvantaged community, vulnerable community, or EJ Index.

Recently, CalEPA announced the establishment of the new CalEPA Environmental Justice Action Grants Program. These grants will open for solicitation August 29th – October 13th, 2023. Please check the [CalEPA EJ Action Grants](#) website for the latest information. This is an opportunity for community groups to develop community descriptions for a grant application using our CalEnviroScreen tool.

Below is an excerpt from the new [CalEPA Environmental Justice Action Grants Guidelines](#) showing how data from CalEnviroScreen can be used to support an EJ grant application. This training guide includes an example of a community grant summary for a grant application. For more information, visit the [CalEPA EJ Action Grants website](#).

EXAMPLE GRANT APPLICATION LANGUAGE

Bolded words are examples of information that might prompt the use of CalEnviroScreen, EJScreen, or other data tools.

CalEPA EJ Action Grant Program Guidelines Excerpts¹:

Section 2.2 Funding Priorities
 CalEPA will consider funding any project that does both of the following:

1. Supports community-based organizations and/or residents to engage in at least one of the following four legislatively approved project categories:
 - a. emergency preparedness;
 - b. public health protection;
 - c. environmental and climate decision-making; and
 - d. coordinated enforcement efforts.
2. Serves an environmental justice purpose, as defined in Section 1.3 of these Guidelines, in California. Section 1.3 recognizes environmental justice to include, but not be limited to:
 - a) the availability of a healthy environment for all people;
 - b) the deterrence, reduction, and elimination of **pollution burdens for populations and communities experiencing the adverse effects of that pollution, so that the effects of the pollution are not disproportionately borne by those populations and communities;**
 - c) governmental entities engaging and providing technical assistance to **populations and communities most impacted by pollution** to

¹ Excerpts from https://calepa.ca.gov/wp-content/uploads/sites/6/2023/06/CalEPA_EJ-Action-Grant-Guidelines_DRAFT_6.6.23.pdf

promote their meaningful participation in all phases of the environmental and land use decision-making process; and d) the meaningful consideration of recommendations from populations and communities most impacted by pollution into environmental and land use decisions.

One useful tool for identifying populations and communities most impacted by pollution is the California Communities Environmental Health Screening Tool (CalEnviroScreen), however CalEPA will also use other criteria and methods for identifying impacted populations and communities.”

B: Orientation to the CalEnviroScreen 4.0 Data Dashboard

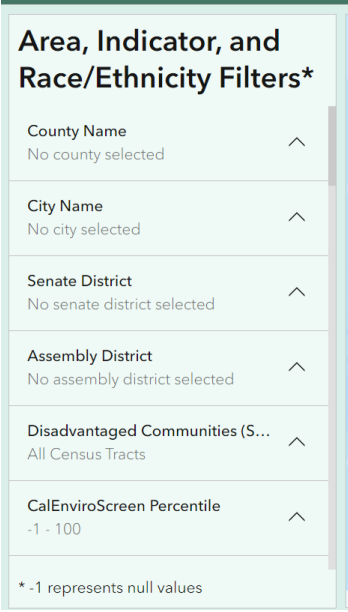

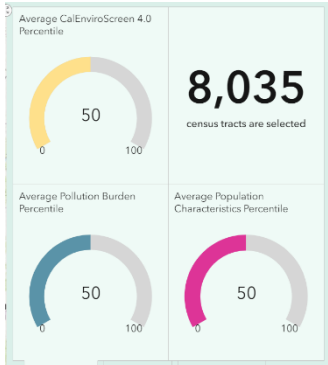
DASHBOARD NAVIGATION

Below are general instructions to navigate the Data Dashboard and get familiar with the tool's features. The locations in the screenshots below were arbitrarily chosen.

Step 1: Open Data Dashboard

	<p>For this tutorial, we will be using the CalEnviroScreen 4.0 Data Dashboard to aid a theoretical grant application. Please see our user guide for additional guidance in navigating around the Data Dashboard that can be referenced and accessed through the links table on page 8.</p>
	<p><i>Other resources</i></p> <p>Click the top right “three-lines” option button to access other resources including:</p> <ul style="list-style-type: none"> • individual indicator maps, • the CalEnviroScreen website, and • further tutorials on how to use the Data Dashboard tool.

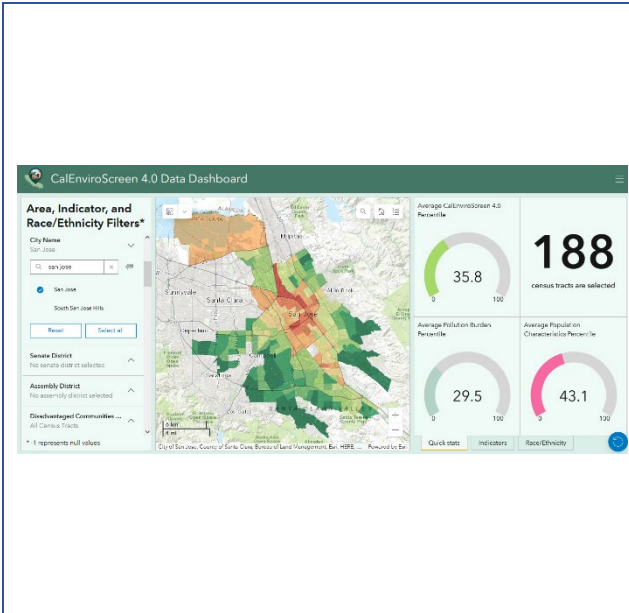
Step 2: Dashboard main panels

	<p>Dashboard Panels</p> <p>Left Panel: This panel has the filters to make selections by area, pollution and population indicators, or race and ethnicity.</p> <p>The size of these panels can be changed by hovering in between panels and dragging left or right. Additionally, the middle and right panels can be expanded to two-thirds of the screen with a button in the top right of the middle and right panels.</p>
	<p>Middle Panel: This panel has the map with area selection tools, a search bar, legend, scale bar, and map source information</p>
	<p>Right Panel: This panel has the summarized data for the area selected. More details are under the “Data” section of this guide.</p>

Step 4: Using the location tool

	<p>Location: The Data Dashboard has a few different types of areas that can be used to define location.</p> <p>In the left panel, you can filter by large areas like senate and assembly districts, down to more localized areas such as cities.</p>
	<p>Using the map in the middle panel, you have a few options:</p> <p>You can search by a specific place or address with the magnifying glass search bar at the top of the map.</p>
	<p>You can also select an area using the Lasso tool. Lasso can be used to make any type of shape and selects all census tracts that overlap with the lasso shape.</p>

Step 5: Filter by area and data



If you do not have a specific area in mind or are flexible with defining your location, you can also find localized data using the **left panel**.

By using that to **select a few counties**, for example, you can then see which census tracts have percentiles within the range you select for an indicator. If you select multiple indicators, it will only show census tracts that meet both ranges you've selected.

Step 6: Statistics panel

Note: changing the selected area by adding or removing tracts can change the percentile scores and your analysis. Clicking on a single census tract will give you the same information as the right panel with a pop-up box.

Data: With an area selected, the **right panel** will show:

- Quick Stats: the number of census tracts selected and CalEnviroScreen, Pollution Burden, and Population Burden average percentiles.
- Indicators: the average indicator percentile values for selection.
- Race/ethnicity: the average percent of race/ethnicity.

You can download the indicators and race/ethnicity data using the **download arrow icon** on the bottom left of the right panel.

C: Using the Data Dashboard to describe our communities

USING THE DATA DASHBOARD TO EXPLORE IMPACTED COMMUNITIES

Environmental justice communities can be of various sizes and scales. If you're interested in exploring a larger area like a city or county, the Data Dashboard can be a good starting place to find Disadvantaged Communities or concentrated areas of high-scoring census tracts.

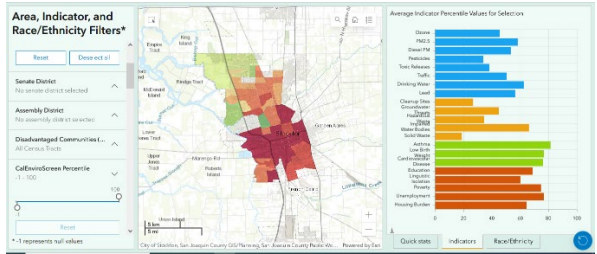
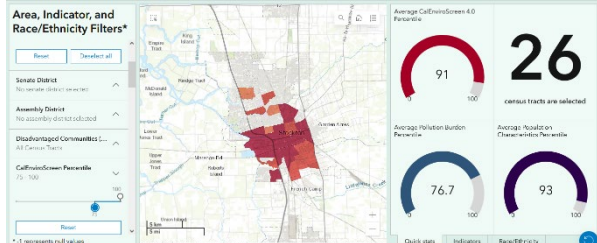
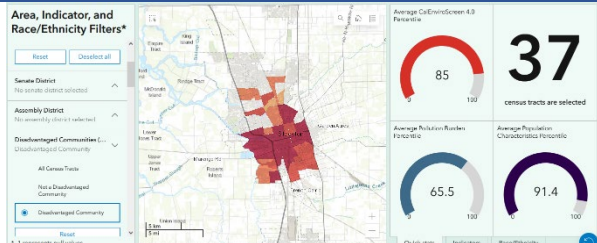
Next is an example to demonstrate how the data from the Dashboard can be translated to a writing example. To reiterate, the tool displays data that can be useful in supporting a grant application as well as various other scenarios but does not serve as an exhaustive description of communities.

EXAMPLE: Stockton, CA

“The city of Stockton contains urban and suburban communities in the San Joaquin Valley. 26 of the 59 census tracts in Stockton are in the top 25th percentile of CalEnviroScreen scores and 37 census tracts are identified as disadvantaged communities. Within the 26 census tracts scoring in the top 25th percentile of CalEnviroScreen, the children’s lead risk from housing is relatively high (77.7th percentile) and a high level of exposure to diesel PM (70.7th percentile). All of the population characteristics are high scoring, all above the 70th percentile with asthma rates at the top (92.1st percentile). These statistics indicate that these census tracts are vulnerable to environmental pollution.

To combat and mitigate these environmental and social conditions, our project will aim to...”

To find the data to create this paragraph, we did the following:

 <p>Area, Indicator, and Race/Ethnicity Filters*</p> <p>Reset Deselect all</p> <p>Service District No service district selected</p> <p>Assembly District No assembly district selected</p> <p>Disadvantaged Communities All Census Tracts</p> <p>CalEnviroScreen Percentile 1 - 100</p> <p>0 100</p> <p>* Represents null values</p> <p>City of Stockton, San Joaquin County GIS Planning, San Joaquin County Public Works, Powered by Sun</p> <p>Quick stats Indicators Race/Ethnicity</p> <p>Average Indicator Percentile Values for Selection</p> <table border="1"> <tr><td>Stroke</td><td>81.2</td></tr> <tr><td>PM2.5</td><td>78.5</td></tr> <tr><td>PM10</td><td>75.3</td></tr> <tr><td>Particulate</td><td>72.1</td></tr> <tr><td>Toxic Metals</td><td>68.9</td></tr> <tr><td>Soil</td><td>65.7</td></tr> <tr><td>Drinking Water</td><td>62.4</td></tr> <tr><td>Lead</td><td>59.2</td></tr> <tr><td>Climate Resilience</td><td>56.0</td></tr> <tr><td>Population</td><td>52.8</td></tr> <tr><td>Population Change</td><td>49.6</td></tr> <tr><td>Population Density</td><td>46.4</td></tr> <tr><td>Population Growth</td><td>43.2</td></tr> <tr><td>Use of Land</td><td>40.0</td></tr> <tr><td>Land Use Change</td><td>36.8</td></tr> <tr><td>Urban Sprawl</td><td>33.6</td></tr> <tr><td>Urban Density</td><td>30.4</td></tr> <tr><td>Urban Sprawl</td><td>27.2</td></tr> <tr><td>Urban Density</td><td>24.0</td></tr> <tr><td>Urban Sprawl</td><td>20.8</td></tr> <tr><td>Urban Density</td><td>17.6</td></tr> <tr><td>Urban Sprawl</td><td>14.4</td></tr> <tr><td>Urban Density</td><td>11.2</td></tr> <tr><td>Urban Sprawl</td><td>8.0</td></tr> <tr><td>Urban Density</td><td>4.8</td></tr> <tr><td>Urban Sprawl</td><td>1.6</td></tr> </table>	Stroke	81.2	PM2.5	78.5	PM10	75.3	Particulate	72.1	Toxic Metals	68.9	Soil	65.7	Drinking Water	62.4	Lead	59.2	Climate Resilience	56.0	Population	52.8	Population Change	49.6	Population Density	46.4	Population Growth	43.2	Use of Land	40.0	Land Use Change	36.8	Urban Sprawl	33.6	Urban Density	30.4	Urban Sprawl	27.2	Urban Density	24.0	Urban Sprawl	20.8	Urban Density	17.6	Urban Sprawl	14.4	Urban Density	11.2	Urban Sprawl	8.0	Urban Density	4.8	Urban Sprawl	1.6	<p>Step 1: Narrow down a specific location</p> <p>Using the left panel under City Name, we searched for Stockton. We clicked the indicators tab on the right side. We see that asthma is the highest average indicator percentile for the selection at the 81.2 percentile. We can find EJ communities within the county a few different ways: using the Disadvantaged Communities indicator, using the CalEnviroScreen percentile indicator, or by choosing communities with other indicators or manually selecting ones you're interested in.</p>
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USING THE DATA DASHBOARD FOR A SPECIFIC LOCATION

If you already have a specific neighborhood or address in mind, you can use the tools described in Section B to navigate to the area. You can find data on that community and use the template paragraph in the box below as a starting point in describing the community for a grant. Otherwise, we have selected an area in Stockton, CA as an example.

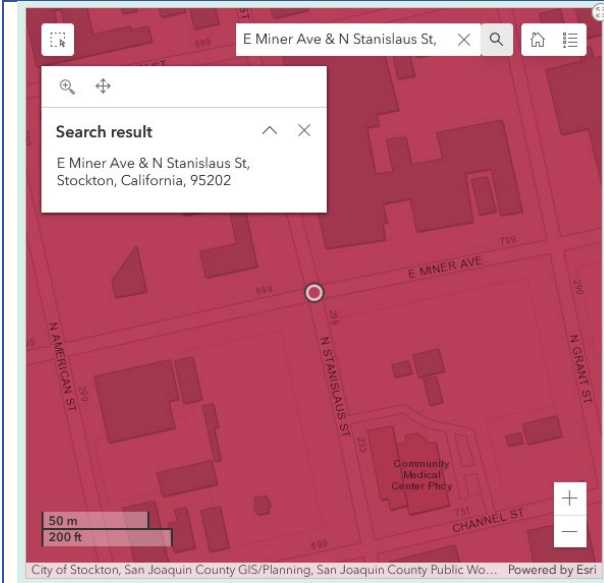
Fill out your own paragraph with community-specific information:

“The community of community name contains description. # A of the # census tracts in community are in the top 25th percentile of CalEnviroScreen scores and # census tracts are identified as disadvantaged communities. Within the # A census tracts scoring in the top 25th percentile of CalEnviroScreen, there is poor environmental issue with high potential exposure to exposure indicator (#th percentile), and exposure indicator in (#th percentile). These # A census tracts have high sensitive population indicator rates (#th percentile) and lower socioeconomic factors, with socioeconomic indicator (#th percentile), high socioeconomic indicator rates (#th percentile), and high socioeconomic indicator (#th percentile), indicating that these census tracts face a disproportionate burden of environmental pollution and are uniquely vulnerable.

To combat and mitigate these environmental and social conditions, our project will aim to...”

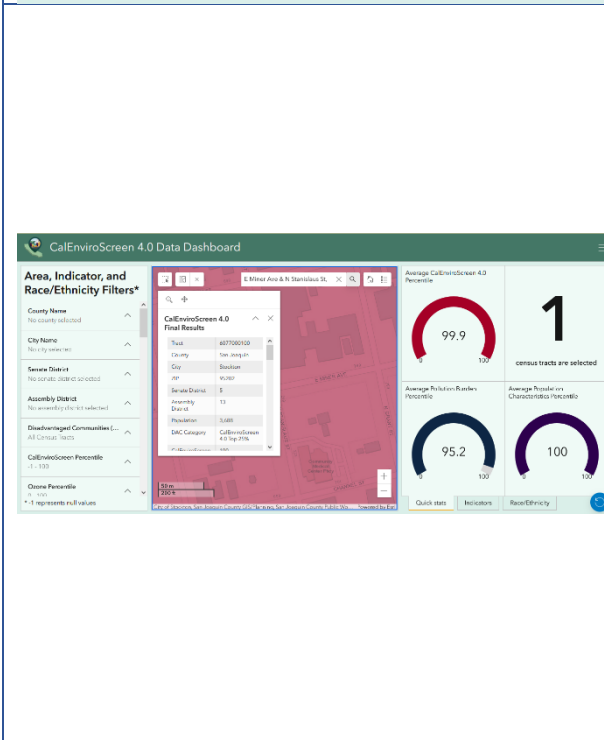
Stockton Rising example

Stockton is a recent Transformative Climate Communities (TCC) fund recipient and the money will help financially support a project in Downtown and South Stockton, called Stockton Rising. This community-led program creates infrastructure and development to provide health, economic, and environmental benefits to communities. The intersection of **E Miner Avenue and N Stanislaus Street, Stockton, CA 95202** is an address based on the Complete Streets project and is a point location in the Stockton Rising TCC Project Area Map.



Step 4: Search by address

In the middle panel, type “E Miner Avenue and N Stanislaus Street, Stockton, CA 95202” and hit ‘enter’. This navigates the map to our area.



Step 5: Data by census tract

For the right panel to show information relevant to this area, we need to click on the map while it’s at the address’ extent. After clicking, the right panel should update with the singular census tract selected and its corresponding data.

The pop-up will also show data from the left panel, such as the census tract number, assembly district, and its Disadvantaged Community status.

Step 6: Finding indicator data and race/ethnicity breakdown

We can then click through the 'Indicators' and 'Race/Ethnicity' tabs. From here, we can incorporate some of this data into our grant application write-up.

“The community around E Miner Avenue and N Stanislaus Street is an urbanized area located in Downtown and South Stockton near Highway 4. It is within census tract 6077000100, a tract in the top 25th percentile of CalEnviroScreen scores and is identified as a Disadvantaged Community. The area is in close proximity to a number of environmentally burdened sites (Cleanup Sites, Groundwater Threats, Hazardous Waste, and Solid Waste indicators are all above the 87th percentile) and indicators of Diesel PM and Lead score very highly (90.6th and 88.7th percentiles, respectively). The area has high rates of health status issues that increase sensitivity to pollution exposure (100th percentile for Asthma, 99.4th percentile for Low Birth Weight, and 89.1st percentile for Cardiovascular Disease). All the socioeconomic indicators are above the 90th percentile meaning they are among the highest in the state. The data indicate that these census tracts face a disproportionate burden of environmental pollution and are uniquely vulnerable.

To combat and mitigate these environmental and social conditions, our project will aim to...”

Data Dashboard Links

Resource	Link	Uses
CalEnviroScreen 4.0 Data Dashboard	https://experience.arcgis.com/experience/6b863505f9454cea802f4be0b4b49d62	Used in the community description grant application example.
CalEnviroScreen 4.0 Data Dashboard User Guide	https://storymaps.arcgis.com/stories/92100e3cfd4a4b0697db157ed507ab68	Provides additional navigation guidance for the dashboard.
Download CalEnviroScreen 4.0 Data	https://oehha.ca.gov/calenviroscreen/maps-data/download-data	This has raw data in an Excel spreadsheet with Data Dictionary, as well as geodatabase and shapefile files for mapping programs available for download.
CalEnviroScreen Homepage	https://oehha.ca.gov/calenviroscreen	Homepage for additional information on the CalEnviroScreen tool