



## STAFF REPORT TO THE PLANNING COMMISSION

**DATE:** Regular Meeting of December 15, 2021

**SUBMITTED BY:** Zoe Merideth, Senior Planner *ZM*

**APPROVED BY:** Forrest Ebbs, Community Development Director *FE*

**SUBJECT:** Updated Presentation Data

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### **RECOMMENDED ACTION**

It is recommended that the Planning Commission receive the updated information regarding the maps presented at the November 17, 2021 Planning Commission meeting.

### **DISCUSSION**

At the November 17, 2021 Planning Commission meeting, the Planning Commission heard a presentation regarding the Environmental Justice requirements in the Housing Element Update. After the meeting, the City's consultant discovered that maps that they based their findings on had been updated after they had prepared the presentation. This led to the presentation including inaccurate information regarding the number of census tracts that meet the "Environmental Justice Neighborhoods" standards. To provide the Planning Commission and public the correct information, an explanatory memo and updated presentation are attached to this report.

As described in the attached memo, the most up to date map is the CalEnviroScreen 4.0, which was updated in late October 2021. It is available at the following link: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

Moving forward, the City and consultant team will monitor data sources to ensure that any new census tracts are included in the analysis.

### **ATTACHMENTS**

- A. Explanatory Memo
- B. Updated Presentation originally presented on November 17, 2021

# **ATTACHMENT A**

## **Explanatory Memo**

## Memorandum

DATE	December 8, 2021		
TO	City of Antioch Planning Commission	FROM	<p>Mona Al-Abadi, Associate Planner, Urban Planning Partners</p> <p>Carla Violet, Planning Manager, Urban Planning Partners</p> <p>Curtis Banks, Principal Planner, Urban Planning Partners</p>

### **RE: City of Antioch Environmental Justice Neighborhood Data Discrepancies**

This technical memo provides an explanation of the data presented to the Planning Commission on November 17, 2021, that relied on data from the Bay Area Air Quality Management District’s (BAAQMD) Senate Bill (SB) 1000 map.<sup>1</sup> The BAAQMD SB 1000 map utilized data from CalEnviroScreen 3.0. After we prepared our presentation to the Planning Commission, CalEnviroScreen 4.0 was released but the BAAQMD SB 1000 was not updated to reflect these changes. This resulted in an inaccurate representation of the number of census tracts in Antioch deemed as “Environmental Justice Neighborhoods.” Urban Planning Partners has since updated the Environmental Justice Policies Update PowerPoint presentation to reflect the updated data which will be utilized moving forward.

The BAAQMD created a SB 1000 map that identifies Environmental Justice areas across California based on the following criteria:

1. Census tracts that have a composite score of 75 percent or more on CalEnviroScreen
2. Census tracts that are considered low-income based on the following criteria:
  - a. Census tracts that are at or below the statewide median income
  - b. Census tracts that are at or below the Department of Housing and Community Development’s (HCD) statewide income limits

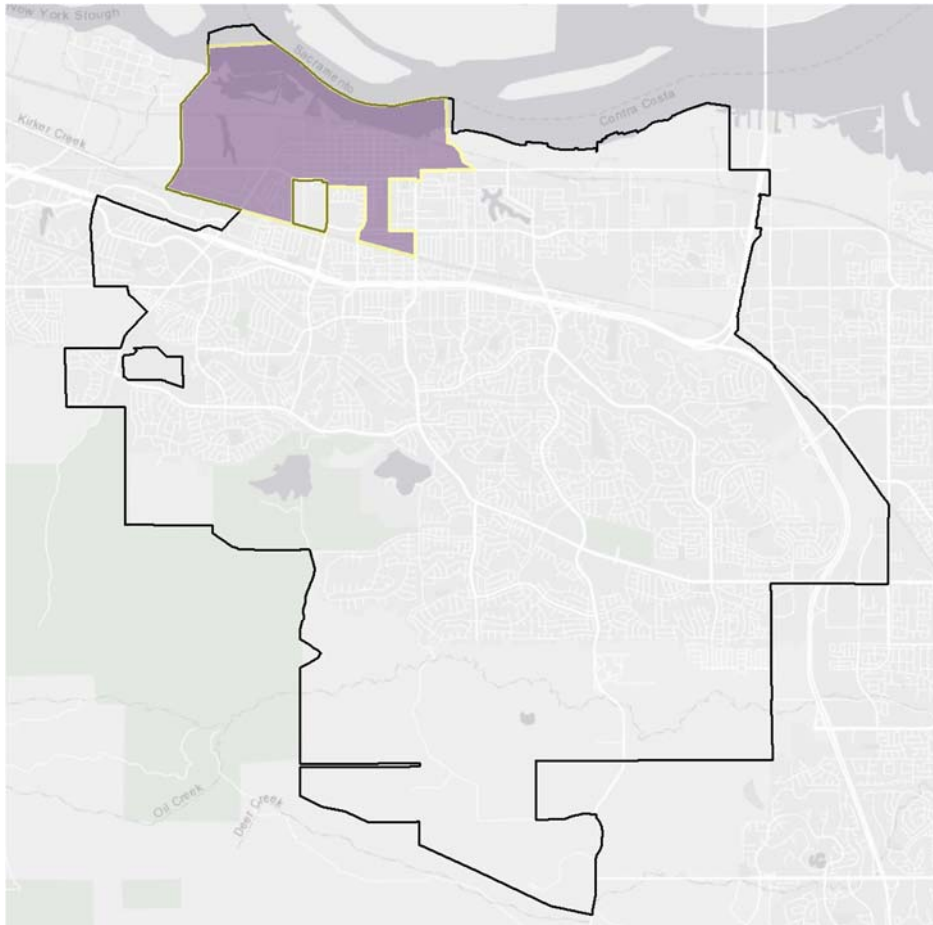
Urban Planning Partners referenced the BAAQMD SB 1000 map when initiating the Environmental Justice analysis in September 2021. After the November 17, 2021, meeting, we discovered this map

<sup>1</sup> Screening for Potential SB1000 Communities – Interactive Bay Area Maps. Available at: <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=79e6ab3c6406457182a1d1746862e09a>

was based on outdated information that included the CalEnviroScreen **3.0 map** and not the latest version of CalEnviroScreen **4.0 map** (released in late October 2021).

Figure 1 shows the BAAQMD's SB 1000 map designating only one census tract (in purple) in Antioch as meeting the Environmental Justice criteria.

**Figure 1. SB 1000 Map of Antioch's Environmental Justice Community (presented on November 17, 2021)**



Based on CalEnviroScreen 4.0, four additional census tracts scored 75% or more and are also considered low-income as shown in Figure 2.

**Figure 2. Updated Environmental Justice Neighborhoods in Antioch, CA**

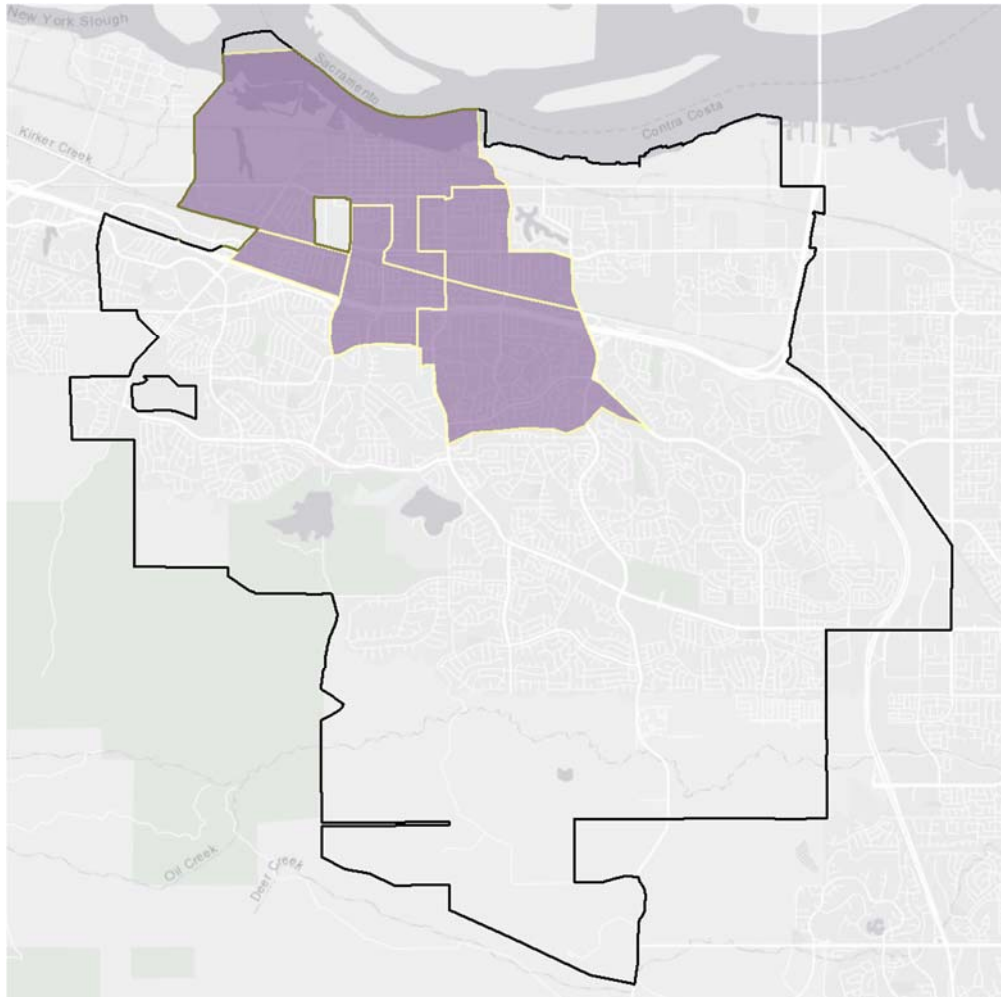


Table 1 below identifies all census tracts in Antioch. The five census tracts highlighted in **yellow** meet all the criteria for an Environmental Justice Neighborhood.

We will continue to monitor data sources in the event new census tracts are identified that meet the Environmental Justice Neighborhood criteria in the City of Antioch.

**Table 1. Environmental Justice Neighborhoods in Antioch, CA**

Census Tracts in Antioch, CA	2019 State Limits Criteria-Qualifies as Low-Income Census Tract	2019 HCD Limits Criteria-Qualifies as Low-Income Census Tract	2021 HCD Limits Criteria-Qualifies as Low-Income Census Tract	CalEnviroScreen 4.0 Composite Score
Census Tract 3020.09, Contra Costa, CA	No	No	No	52
Census Tract 3032.01, Contra Costa, CA	No	No	No	45
Census Tract 3050, Contra Costa, CA	Yes	Yes	Yes	93
Census Tract 3060.02, Contra Costa, CA	No	Yes	Yes	72
Census Tract 3060.03, Contra Costa, CA	No	Yes	Yes	77
Census Tract 3060.04, Contra Costa, CA	No	Yes	Yes	67
Census Tract 3071.01, Contra Costa, CA	No	Yes	Yes	25
Census Tract 3071.02, Contra Costa, CA	No	Yes	Yes	79
Census Tract 3072.01, Contra Costa, CA	No	Yes	Yes	72
Census Tract 3072.02, Contra Costa, CA	Yes	Yes	Yes	78
Census Tract 3072.04, Contra Costa, CA	No	Yes	Yes	49
Census Tract 3072.05, Contra Costa, CA	No	Yes	Yes	73
Census Tract 3080.01, Contra Costa, CA	No	Yes	Yes	75
Census Tract 3080.02, Contra Costa, CA	No	No	Yes	61
Census Tract 3131.03, Contra Costa, CA	No	No	Yes	56
Census Tract 3551.07, Contra Costa, CA	No	No	Yes	51
Census Tract 3551.08, Contra Costa, CA	No	No	Yes	40
Census Tract 3551.09, Contra Costa, CA	No	No	Yes	35
Census Tract 3551.10, Contra Costa, CA	No	Yes	Yes	25
Census Tract 3551.11, Contra Costa, CA	No	No	No	24

## **ATTACHMENT 1**

Attached is a summary prepared by the Office of Environmental Health Hazard Assessment that identifies the changes between CalEnviroScreen 3.0 and 4.0.

# SUMMARY OF CHANGES IN CALENVIROSCREEN VERSION 4.0



CalEnviroScreen version 4.0 updates version 3.0 in a variety of ways. It incorporates:

- The most recent data available for all indicators.
- Improved calculations of some indicators, incorporating new data to better reflect environmental conditions and population vulnerability to pollution. These include:
  - Improved methods to select contaminants evaluated from data on water quality and improvements to water system service areas used in calculating the Drinking Water Contaminants indicator.
  - The incorporation of data on additional pesticides to the Pesticide Use indicator.
  - The addition of data on dairies and feedlots to the Groundwater Threats indicator.
  - The addition of data on chrome metal plating facilities to the Hazardous Waste indicator.
  - Improvements in the methodology used to create the Particulate Matter (PM) 2.5 and Diesel PM air quality indicators.
- One new indicator to reflect children’s risk of lead exposure to lead-based paint in low-income communities with older housing stock.



With these changes, CalEnviroScreen 4.0 uses 21 indicators covering pollution sources and drivers of vulnerability within California’s approximately 8,000 census tracts, to measure overall cumulative burdens affecting California communities.

The model and method used to calculate CalEnviroScreen scores remain the same as those used in the previous version, and are described in the report, *CalEnviroScreen 4.0: Update to the California Communities Environmental Health Screening Tool*.

The pages below summarize changes between the tool’s 4.0 and prior 3.0 version. More detailed information and a full description of each indicator are provided in the report.



## Exposure Indicators

### Indicator

### Improvements

***Air Quality: Ozone*** The air monitoring data used in this indicator have been updated to reflect ozone measurements for the years 2017–2019. The measure for CalEnviroScreen 4.0 is the average daily maximum ozone concentration. This is the same method used for version 3.0. Ozone concentrations for census tracts with centers more than 50 kilometers from an air monitor were assigned the value of the nearest air monitor.

***Air Quality: PM2.5*** The air monitoring data used in this indicator have been updated to reflect PM2.5 measurements for the years 2015–2017. For the monitoring site near San Ysidro, data were available only for 2015 and part of 2016. Data from nearby sites were used to estimate missing values.

Satellite data were used in combination with land use, meteorology data, and ground-level-monitor data to generate data about PM2.5 concentrations. Previously, satellite data at a 10-km square grid resolution were used to estimate PM2.5 concentrations for census tracts with centers more than 50 kilometers from the nearest PM2.5 air monitor. The PM2.5 estimates for CalEnviroScreen 4.0 were generated from a 1-km square grid layer, blending measured monitor concentration data with 1-km square satellite grid cell data. Grid cells closer to monitors received a higher weight from measured monitor concentrations, while grid cells further away received higher weight from satellite estimates. PM2.5 concentration data for census tract centers more than 50 kilometers from the nearest PM2.5 monitor were based solely on satellite data.

***Diesel Particulate Matter*** Diesel PM emissions data were updated to reflect measurements for the year 2016. Emissions data from sources of diesel PM in Mexico near the US are also included in this update.

Diesel PM emissions estimates are for 1-km square grid cells that account for most of the state. In the previous version of CalEnviroScreen, these grid estimates were for 4-km square grid cells. As was done in Version 3.0, CalEnviroScreen 4.0 grid estimates were calculated using only the populated areas of each census tract (populated census blocks).

While CalEnviroScreen 3.0 represented diesel PM emissions in kilograms per day for a 2012 summer day in July, CalEnviroScreen 4.0 estimates emissions for the entirety of 2016. Estimates are modeled from on-road emissions for a typical summer week in July, and from non-road emissions modeled for the year 2016. Results are reported in US tons per year.

To account for additional diesel PM emissions from sources on the Mexico side of the US-Mexico border, in San Diego and Imperial Counties, modeled diesel PM emissions data were compared with data from air monitoring of nitrogen oxides (NO<sub>x</sub>), a proxy for diesel PM. Based on a comparison of data for modeled diesel PM emissions to measured concentrations of NO<sub>x</sub>, modeled diesel PM data were adjusted upward at the border area near Calexico. Data for modeled diesel PM in San Diego County did not need to be adjusted.

Statewide, there have been decreases in diesel PM emissions from both on-road and area-based sources between 2012 (the base year for CalEnviroScreen 3.0) and 2016. In addition to decreases in actual emissions, there have been improvements in California Air Resources Board's (CARB) modeling approach, which include changes in certain spatial surrogates used to allocate area-based sources. Statewide, estimates of area-based emissions have decreased by approximately 50%, with sources from certain vehicle types undergoing even greater reductions.

### ***Drinking Water Contaminants***

The Drinking Water Contaminants indicator uses information on the quality of drinking water that is delivered by community water systems, as well as the boundaries of the geographic areas served by the systems. Along with community water systems and state small water systems, CalEnviroScreen 4.0 now incorporates data about water quality for 12 tribal areas.

Of the approximately 2,945 community and state small water systems, 2,933 had service area boundaries. This area represents all community water systems statewide and includes about 90 state small water systems reported in the California Safe Drinking Water Information Systems database. The drinking water indicator for CalEnviroScreen 4.0 incorporates 438 additional community water system service area boundaries compared to CalEnviroScreen 3.0. These boundaries were downloaded from the Water Boundary Tool from Tracking California (formerly the California Environmental Health Tracking Program). The boundaries in the tool were either obtained from water providers, or researched and drawn by OEHHA or Tracking California staff, using maps or other information about the people served by the system.

The methodology used to reflect the quality of delivered water was also improved for CalEnviroScreen 4.0 by selecting sample locations to represent delivered water and collecting updated information on how much water wholesale water suppliers provide to their customers.

Water contaminant data from 2011–2019 were collected, representing the most recent compliance period (3 years of monitoring) and cycle (9 years of monitoring). A systematic approach was used to select regulated contaminants based on detections in drinking water, toxicity

concerns and frequency of systems with tests for the contaminants, with the result that data for haloacetic acids and ethylene dibromide were added to the indicator. Independent uranium and radium 226/228 measures were replaced with measures of gross alpha particle activity, which indicate total radioactivity in water (from uranium, radium 226, and other alpha-emitting radionuclides), for better data coverage across the state. Lead concentration data from monitoring were replaced with the 90<sup>th</sup> percentile lead concentration data submitted to the State Water Resources Control Board (SWRCB) under the Lead and Copper Rule for Drinking Water. Values below detection limits for all contaminants were treated as zero results.

Lastly, in this version of CalEnviroScreen, the drinking water indicator includes more data on the ambient groundwater layer from the [Groundwater Ambient Monitoring and Assessment \(GAMA\) Program](#). The chart below indicates the GAMA projects used in CalEnviroScreen 3.0 and those used in version 4.0.

<b>GAMA Program</b>	<b>CalEnviroScreen 3.0</b>	<b>CalEnviroScreen 4.0</b>
Monitoring Wells (Water Board Regulated Sites)	No	Yes
Local Groundwater Projects	No	Yes
Public Water System Wells	Yes	Yes
California Department of Water Resources	No	Yes
GAMA - Domestic Wells	Yes	Yes
National Water Information System (NWIS)	No	Yes
GAMA - Priority Basin Project	Yes	Yes

The methodology for assessing water quality in the ambient groundwater layer (for areas outside of community water system service areas) was adapted from the [SWRCB's 2021 Aquifer Risk Map](#), a new tool developed to identify areas where domestic wells or state small water systems may be at high risk of accessing water that does not meet primary drinking water standards. Here Public Land Survey System sections (the unit of analysis in the ambient groundwater layer) are assigned the average groundwater quality data from the wells within each section. If a section had no ambient groundwater quality data, it was assigned the average of all neighboring section data. In cases

where all neighboring sections have no data, the section is assigned the average ambient groundwater quality data from the whole township. Additionally, non-domestic wells from these sections were filtered based on their well depth in relation to known domestic well depths in the area.

***Children’s Lead Risk from Housing***

For CalEnviroScreen 4.0, OEHHA has added an indicator to identify areas where children may be exposed to lead through lead-based paint used in older homes. The indicator of children’s lead risk from housing was calculated using the percentage of households within a census tract with a likelihood of lead-based paint (LBP) hazards due to housing age, combined with the percentage of low-income households with children.

To determine whether households have a likelihood of containing LBP, weighted age categories were developed using the construction period for each housing unit (HU) in the census tract (see table below). Parcel data from Digital Map Product’s SmartParcels were used to determine the age of construction of HUs, and American Community Survey (2015-2019 ACS) data for census tract estimates were used when parcel data were unavailable.

<b>Age of HUs, using parcel data (year built)</b>	<b>Age of HUs, using ACS data** (year built)</b>	<b>HUs with LBP hazards *(%)</b>
after 1998	after 1999	0
1978-1998	1980-1999	4
1960-1977	1960-1979	22
1940-1959	1940-1959	69
before 1940	before 1940	71

\*The age of housing categories and LBP hazard weights come from the HUD 2001 and Jacobs et al., 2002 studies.

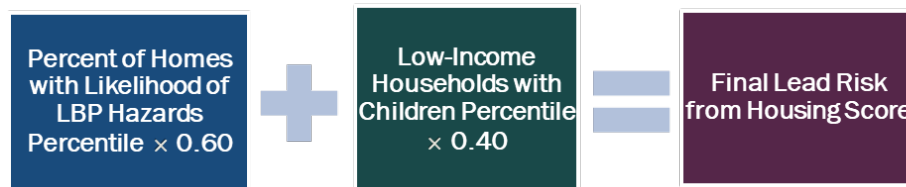
\*\*ACS estimates were matched as closely as possible to the parcel data categories.

The indicator of children’s lead risk from housing is similar to the indicator used by the Washington Tracking Network’s Lead Exposure Risk map, which factors in age of housing and poverty level to estimate lead exposure. Poverty is a known modifier of old housing-related lead exposure risk; it is also reasonable to assume that HUs in lower-income neighborhoods are less likely to have undergone renovations and abatements to reduce LBP than those in higher-income neighborhoods. OEHHA used the prevalence of low-income households in the indicator instead of a direct measure of poverty to account for some of the

geographical differences in living costs in California. This was further restricted to include only low-income households with children to examine the most vulnerable communities to lead exposure across California.

The low-income estimates for the children’s lead exposure risk indicator are from the 2013–2017 Comprehensive Housing Affordability Strategy (CHAS) data available from the U.S. Department of Housing and Urban Development (HUD). This dataset contains information at the census tract scale that enables the calculation of the percentage of low-income households (those with household income lower than 80% of the county median household income) with one or more children under 6 years of age.

The percentage of HUs with a likelihood of LBP hazards and the percentage of low-income households with children were individually ranked and assigned percentile scores. The two measures were then combined as a weighted sum, with a weight of 0.6 assigned to old homes and 0.4 assigned to low income households with children. The sum is the final score for lead risk from housing.

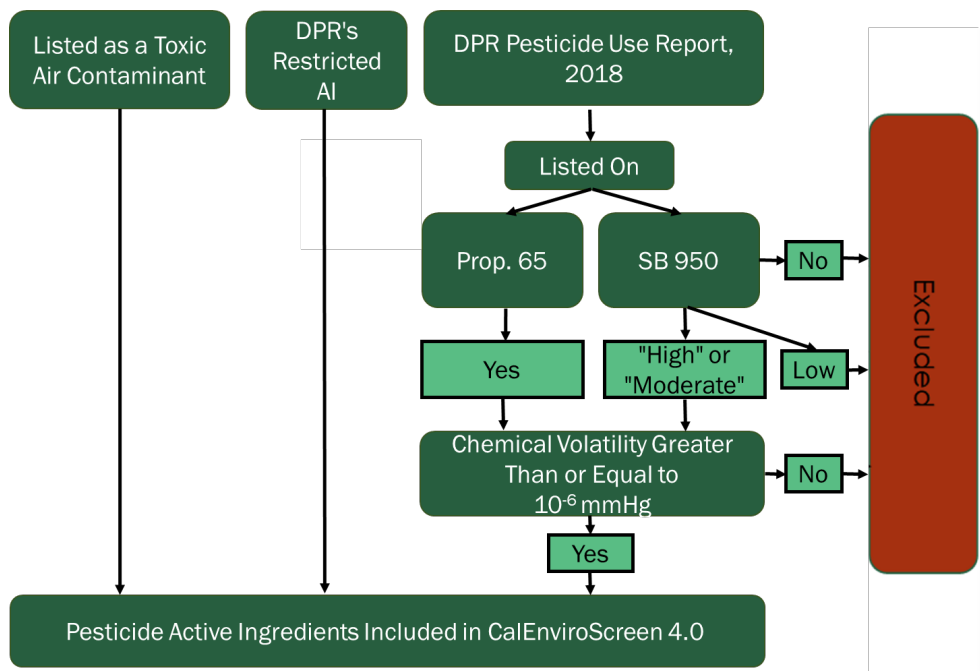


Certain assumptions, data gaps, and limitations within the data sets and indicator scoring methodology may affect the calculation of scores. For example, renovating an older home can abate lead exposure, but can also cause lead compounds to be dispersed into the air and soil around the home, potentially increasing lead exposure. Data on the effective year built, which is the building’s age adjusted for significant renovations or neglect, were missing for most residential parcels statewide, and were not used in the analysis.

The focus for this particular indicator is exposure through lead paint used in the construction of older homes, and it does not attempt to capture other sources of lead exposure. Results of blood lead level testing released by California Department of Public Health (CDPH) in 2012 indicate that children have concerning levels of lead exposure across California. Data on children with elevated blood lead levels (EBLLs) are limited because universal testing of children for lead is not required in California and reporting of test results is constrained by health privacy laws. EBLLs have been found to be significantly associated with age of housing, income, race, and enrollment in public assistance programs. These factors have been used to screen for places that may be associated with children at high risk for significant lead exposure. Other indicators in CalEnviroScreen account for other

possible sources of potential lead exposure such as the indicators for drinking water contaminants, toxic releases from facilities, and hazardous waste.

**Pesticide Use** The Pesticide Use indicator was updated with reported pesticide use data for the years 2017–2019. OEHHA revisited the hazard and volatility-based pesticide selection criteria from CalEnviroScreen 3.0 to account for more recent data and updated information around hazard and volatility (see figure below). This indicator in CalEnviroScreen 3.0 and earlier CalEnviroScreen versions was based on the top 100 most used pesticide active ingredients (measured in pounds). For CalEnviroScreen 4.0, OEHHA evaluated the California Department of Pesticide Regulation’s (DPR) list containing the pounds used in 2018 for each active pesticide ingredient. The same hazard criteria from DPR’s California Senate Bill (SB) 950 risk assessment prioritization of pesticides from 2011 were applied, along with an evaluation of pesticides on the Proposition 65 list as of March 2020. Pesticides meeting these hazard criteria were then evaluated based on their volatility. When available, data from DPR on volatility for each chemical were evaluated, along with data from PubChem and other scientific literature, when DPR data were not available. In addition, pesticides listed as Toxic Air Contaminants (TACs) or restricted active ingredients (AI) on DPR’s TAC or restricted use lists were included. See the flowchart below for how pesticides were selected for inclusion.



CalEnviroScreen 4.0 includes 132 pesticide AIs, compared to 70 pesticide chemicals in CalEnviroScreen 3.0. Of the 132 pesticide AIs

currently included in the analysis, 47 were included in the previous version and 85 are new. The data show increases in the total pounds used for 17 of the 47 pesticide AIs previously included, and 30 of the previously included AIs saw a decrease in total pounds used. The top three pesticide AIs used in production agriculture accounted for in both CalEnviroScreen 3.0 and CalEnviroScreen 4.0 remain the same: 1,3-dichloropropene (“Telone”), chloropicrin, and metam potassium made up over 65% of the pounds used in both versions.

OEHHA has explored the possibility of including data about non-agricultural pesticide use in CalEnviroScreen, where it has so far not been addressed. OEHHA evaluated the DPR database on Pesticide Use Reporting (PUR) and examined the data on non-agricultural pesticide use (e.g., structural, applied by professional services, and used for vector control) as well as non-production agricultural use (e.g., on parks and recreational lands, rights-of-way, golf courses, water bodies, and cemeteries). Unlike production agricultural use data, which is available at the section (one -square mile) scale across California, data for these two categories (non-agricultural pesticide use, and non-production agricultural use) are only available at the county scale. Applying countywide data to census tracts is problematic, especially in larger counties or counties with both urban and rural areas and varied land uses. OEHHA investigated methods of using parcel data to assign application types to different census tracts (e.g., landscape maintenance, or structural pest control), but found data quality issues with both the PUR and parcel datasets. These factors prevented the inclusion of data on non-agricultural and non-production agricultural pesticide use in the indicator at this time. OEHHA will continue to explore additional methods for including data on non-agricultural pesticide use in CalEnviroScreen.

OEHHA also investigated data from DPR on pesticide use at schools. This database had inconsistent reporting of pesticide volumes, as well as only partial coverage of data across public schools, and no coverage at private schools. For these reasons, OEHHA did not incorporate the schools data into the indicator at this time, although OEHHA will continue to work with DPR and local and county partners to better capture pesticide use near all sensitive receptors, including schools.

***Toxic Releases  
from Facilities***

Data from the Risk Screening Environmental Indicators (RSEI) of the U.S. Environmental Protection Agency (U.S. EPA) on toxicity-weighted concentrations of modeled chemicals that are released into the air were updated to incorporate an average of the emission data for the years 2017–2019.

As with CalEnviroScreen 3.0, data on toxic release emissions from Mexico were incorporated to address the data gap for cross-border pollution. Data from Mexico’s Registry of Emissions and Pollutant Transfer (RETC, for its initials in Spanish) from the years 2014–2016

were incorporated into the RSEI model by Abt Associates, U.S. EPA contractors for the RSEI program. The locations of facilities reporting emissions to RETC were independently validated by San Diego State University researchers as part of a CARB contract to improve the quality of emissions data collected at the California-Mexico border.

**Traffic Impacts** The Traffic Impacts indicator, previously known as the Traffic Density indicator, was updated with traffic volume estimates for 2017, and incorporates data from an updated roadway network. CalEnviroScreen 3.0 used 2013 traffic volume estimates. The traffic volume data for CalEnviroScreen 4.0 were acquired from TrafficMetrix®, a database of traffic volumes that includes estimates for 2017. Data about the updated roadway network was purchased from the location technology company TomTom. Modeling of traffic data on road segments without traffic counts was used to provide statewide coverage, following the same approach used in CalEnviroScreen 3.0.

To account for the impact of traffic at the California-Mexico border, 2017 data on traffic volume for trucks, buses and personal vehicles at six ports of entry were downloaded from the U.S. Customs and Border Protection website. The previous version of CalEnviroScreen used 2013 data. In addition, data about traffic impacts from parallel roads in Mexico that are within 150 meters of the California-Mexico border were included for the two major parallel roads in Tijuana (Via Internacional and Blvd. Aeropuerto), using the same data from the San Diego Association of Governments (SANDAG) that was used for CalEnviroScreen versions 2.0 and 3.0. Updated traffic counts for Mexican roadways within 150 meters of the border have not been identified. Thus, while statewide traffic counts for the indicator are from 2017, the 2013 data were used to assess traffic impacts 150 meters south of the border. Data for traffic volumes on nearby roads in Mexicali were not located.

## Environmental Effect Indicators

### Indicator

### Improvements

**Cleanup Sites** The indicator has been updated with information on the location and status of cleanup sites from the EnviroStor database of the Department of Toxic Substances Control (DTSC), downloaded in July 2021.

US EPA is in the process of updating the Superfund: National Priorities List (NPL) data, including the boundaries of NPL sites in California. OEHHA acquired draft NPL 2021 boundary GIS data from US EPA in July 2021 to incorporate into version 4.0. The 2021 data has updated boundaries for some existing sites that better characterize the site boundary or extent of contamination. One new NPL site not previously



mapped in version 3.0 as well as new boundary data for sites that were previously represented only as point locations are also included.

OEHHA evaluated whether the location of historical or “ghost” lead smelters in California were included in the cleanup sites indicator. Historical lead smelters in California that have been assessed by DTSC’s Lead-Acid Battery Recycling Facility Investigation and Cleanup (LABRIC) Program were evaluated. This program aims to identify, characterize, and clean up lead contamination that is likely to have resulted from the operation of lead-acid battery recycling facilities. Of the 38 potential smelter sites DTSC has screened for the program, eight are already in the EnviroStor database and included in CalEnviroScreen. Four sites have been assigned a Cleanup Sites indicator score greater than 0 (one site a state response site, one a voluntary cleanup, and two under evaluation). Four sites have been evaluated with no further action required by DTSC (indicator score 0).

**Groundwater Threats** Updated information on the location and status of groundwater cleanup sites was downloaded from the State Water Resources Control Board’s (SWRCB) GeoTracker database in July 2021.

Data on one additional type of groundwater threat are included in CalEnviroScreen 4.0. Data on dairies and feedlots classified as confined animal facilities and regulated by SWRCB have been added to the indicator. This is a response to concerns about potential impacts to groundwater and soil from nitrogen and other waste products from animal operations.

Data for dairies and feedlots data were downloaded from the California Integrated Water Quality System Project database in July 2021. Data from sites were weighted based on animal population at the facility as a proxy for magnitude of the operation. Data about sites that were inactive or pasture-based were not included in the analysis, leaving data on approximately 1,500 dairies and feedlots to be included in the indicator. These data were analyzed based on facilities’ distance to populated areas, as was done for data about other types of sites in the indicator. The weighting of the data from these sites in relation to data from the other types of sites in this indicator can be found in in the report, in the appendix of the chapter on Groundwater Threats.

**Hazardous Waste Generators and Facilities** Data from hazardous waste generators were updated for the years 2018–2020 with information provided by DTSC. Updated information on the location and status of permitted hazardous waste facilities was also acquired from DTSC in June 2021. Numerous adjustments to data about permitted facility locations were made in this version, and more information about facility boundaries were also incorporated. Reported locations for the facilities were checked, and the information adjusted, by Dr. James Sadd and his research team at Occidental College, who provided it to OEHHA.

Additionally, OEHHA worked with program staff at DTSC's Hazardous Waste Tracking System to correct a definition and data query for Large Quantity Generators included in this indicator. This ensures that hazardous waste generators active 2018-2020 are included in the Hazardous Waste Generators and Facilities analysis if, during a one month period, they met the following criteria:

- produce greater than 1,000 kg of non-acute RCRA hazardous waste, or
- produce greater than 1 kg of any RCRA acute hazardous waste.

OEHHA also made a minor change to the scoring matrix for hazardous waste facilities by adding compliance history.

One additional type of hazardous waste site has been included in this update. Data from chrome plating facilities were added, as these facilities are generators of hazardous waste, and have discharges of concern due to their impact on both air and water. CARB maintains a list of about 150 chrome plating facilities for monitoring purposes, and OEHHA has used facility-level data on annual permitted amperage-hours as a proxy for size. Facilities were classified as small, medium, or large based on permitted amperage-hours. Data from chrome plating facilities were analyzed based on the facilities' distance from populated areas, as was done for data from other types of sites in this indicator. The new facility scoring weights can be found in the appendix of the Hazardous Waste Generators and Facilities section in the report.

To account for cross-border pollution, OEHHA identified one brick kiln in Mexico within 1 kilometer of a community in California. Due to pollution concerns, but without data on the volume of waste generated, this brick kiln was classified as a large hazardous waste generator. The location of this site was independently validated by San Diego State University researchers as part of a California Air Resources Board contract to improve the quality of emissions data collected for the California-Mexico border area (Contract number 16RD010).

***Impaired Waters*** SWRCB released its Final 2018 California Integrated Report (Clean Water Act Section 303(d) List /305(b) Report) on impaired water bodies in June 2021. This 2018 version updates data from Regions 1 (North Coast), 6 (Lahontan), and 7 (Colorado River); these regions are "on cycle" for the report. In addition, Regions 2 (San Francisco Bay), 4 (Los Angeles), 5 (Central Valley), and 9 (San Diego) Water Boards conducted "off-cycle" assessments for one or more waterbodies within their respective regions. This Impaired Waters indicator update includes new information from the SWRCB 2018 report for these regions. Data for Regions 3 and 8 remain the same as in CalEnviroScreen 3.0.

OEHHA evaluated the indicator scoring, and investigated alternative methods of characterizing data from the SWRCB Integrated Report.

Data on combinations of beneficial-use-impaired per water body and pollutant were researched, but OEHHA found that inconsistent reporting of these data across regions led to unreliable results. For CalEnviroScreen 4.0, OEHHA used the same method for counting unique pollutants per census tract used in CalEnviroScreen Version 3.0.

***Solid Waste Sites and Facilities*** Updated information on (1) active solid waste sites, (2) closed, illegal, or abandoned waste sites, (3) waste tires and (4) violations at solid waste facilities was obtained from California’s Department of Resources Recycling and Recovery (CalRecycle) in July 2021. Data about scrap metal recyclers that were active from 2017–2019 were obtained from DTSC. These data were all incorporated into CalEnviroScreen 4.0.

To account for cross-border pollution, OEHHA identified one closed solid waste site in Mexico within 1 kilometer of a community in California. This site was classified the same way as a closed solid waste site in CalRecycle’s database and was assigned the same weighted score. The location of this site was independently validated by San Diego State University researchers as part of a CARB contract to improve the quality of emissions data collected for the California-Mexico border area (Contract number 16RD010).

In response to California SB 1383, CalRecycle will regulate anaerobic digestion facilities that help to divert food waste from landfills, and reduce emissions from short-lived climate pollutants such as methane. Data from these facilities were scored in CalEnviroScreen 4.0 based on regulatory tier, volume of waste accepted per day, and violation history. The new scoring weights for data from these facilities can be found in the appendix of the Solid Waste Sites and Facilities section in the report.

## Sensitive Population Indicators

### Indicator

### Improvements

***Asthma*** The Asthma indicator has been updated with data for the years 2015–2017, and represents the age-adjusted and spatially modeled rates of emergency department (ED) visits for asthma, as calculated by Tracking California. These rates were modeled using frequencies of ED visits for asthma as identified by International Classification of Diseases (ICD) codes. Since the previous version of CalEnviroScreen was issued, the ICD has been updated from version 9 to 10. Because ICD-10 was fully implemented in 2015, this indicator uses ICD-9 for part of 2015, and ICD-10 for the remainder of 2015, and for the following two years. ICD-

10 is a significant improvement on ICD-9, largely in its greater specificity, expandability, and reflection of current diagnostic practice. It has been suggested that this change could contribute to a disagreement between classifications under ICD-9 and ICD-10, but it does not appear to have affected CalEnviroScreen 4.0 results. Indeed, there is a very strong correlation between CalEnviroScreen 4.0 and 3.0 scores for the asthma indicator..

**Cardiovascular Disease: Heart Attack Rate** The Cardiovascular Disease (CVD) indicator has been updated with data for the years 2015–2017 for rates of ED visits for heart attacks. The Office of Statewide Planning and Research supplied data on the frequency of ED visits for acute myocardial infarction by ZIP code. ZIP codes are the smallest geographic unit available for ED data. Tracking California first calculated rates at the ZIP code scale. These rates were then age-adjusted and spatially modeled to the census tract scale to produce a three-year average.

Because these data were modeled from ED visit frequencies identified from ICD codes for CVD, like asthma ED data, they may have been affected by the 2015 change from ICD version 9 to ICD-10. This indicator uses ICD-9 codes for the beginning of 2015, and ICD-10 codes for the remainder of 2015, as well as 2016 and 2017. This change, while an improvement in methods, could result in less agreement between classifications under ICD-9 and ICD-10. However, the correlation between scores for the CVD indicator for CalEnviroScreen 3.0 and 4.0 is very high.

**Low Birth Weight Infants** The CalEnviroScreen 4.0 indicator for the percentage of low birth weight (LBW) infants uses data from more recent years (2009–2015). As in CalEnviroScreen 3.0, the indicator relies on calculated (not modeled) rates over 7 years of birth data, and excludes tracts with fewer than 50 births over the 7 years. Estimates derived from places with few births are considered unreliable because they often produce extreme values, and can vary greatly by year. The use of 7 years of birth data allows for larger sample sizes per tract, which offer more stable and accurate estimates than if fewer years of data are used.

## Socioeconomic Factor Indicators

### Indicator

### Improvements

**Educational Attainment** The indicator has been updated with 2015–2019 estimates from the American Community Survey (ACS) for the percentage of the population that had not attained a high school degree. The methods for analyzing the data and excluding unreliable estimates are the same as those used for CalEnviroScreen 3.0.

***Linguistic Isolation*** The indicator has been updated with 2015–2019 estimates from the ACS for the percentage of limited English-speaking households. The methods for analyzing the data and excluding census tracts with unreliable estimates are the same as those used for CalEnviroScreen 3.0.

***Poverty*** The indicator has been updated with 2015–2019 estimates from the ACS for the percentage of the population living below half the federal poverty level. The methods for analyzing the data and excluding census tracts with unreliable estimates are the same as those used for CalEnviroScreen 3.0.

***Unemployment*** The indicator has been updated with 2015–2019 estimates from the ACS for the percentage of the population over age 16 that is unemployed and eligible for the labor force. The methods for analyzing the data and excluding census tracts with unreliable estimates are the same as those used for CalEnviroScreen 3.0.

***Housing-Burdened  
Low-Income  
Households*** The indicator has been updated with 2013–2017 estimates from HUD’s CHAS data. The measure is the percentage of households in a census tract that are both low income, and severely burdened by housing costs. The methods for analyzing the data and excluding census tracts with unreliable estimates are the same as those used for CalEnviroScreen 3.0.

# **ATTACHMENT B**

**Updated Presentation  
originally presented on November 17, 2021**

# Environmental Justice Policies Update

City of Antioch | November 17, 2021

(revised December 8, 2021)



# Meeting Purpose and Outcomes

- **Purpose:** Introduce and share background information on the Environmental Justice planning process
- **Outcomes:**
  1. Commissioners and public are familiar with basic Environmental Justice policy requirements and process
  2. City staff and consultant team receive preliminary feedback and reactions



# Meeting Overview



Environmental Justice Policies Background



Antioch's Environmental Justice Neighborhood



Environmental Justice Planning Process



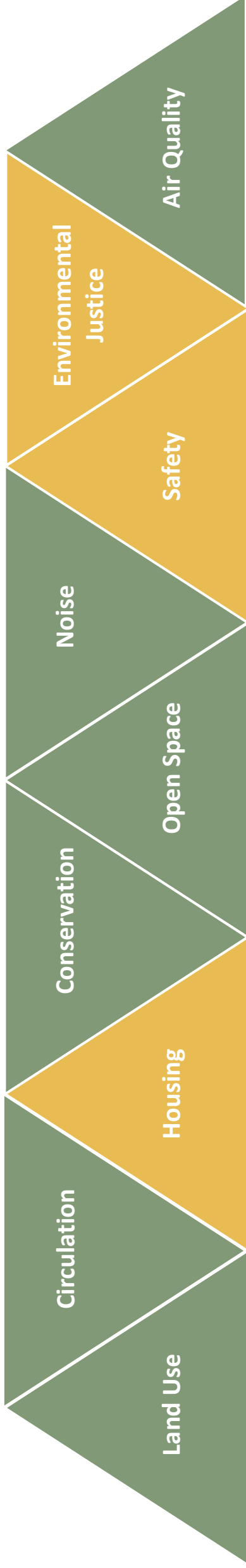
How to Stay Informed and Next Steps

# What is Environmental Justice?

Environmental Justice is defined in California Law as:

“ The **fair treatment** and **meaningful participation** of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. ”

# Why is the City Adopting New Environmental Justice Policies?



Under State law, a jurisdiction must incorporate Environmental Justice policies if:

1. Two or more elements are being revised, and
2. Environmental Justice neighborhoods (also referred to as “disadvantaged communities”) are within that jurisdiction.

# Why is the City Adopting New Environmental Justice Policies?

## Senate Bill 1000 (2016)

This legislation made environmental justice a new mandatory topic in the General Plan. This applies to all cities and counties in California with “disadvantaged communities.”

## What is an Environmental Justice Neighborhood?



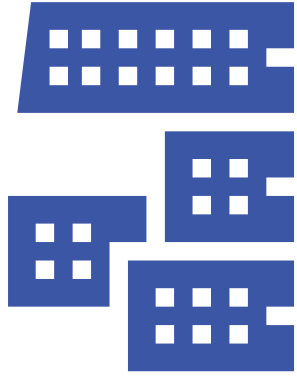
An area identified by the California Environmental Protection Agency (CalEPA) pursuant to Section 39711 of the Health and Safety Code or an area that is a **low-income area that is disproportionately affected by environmental pollution and other hazards** that can lead to negative health effects, exposure, or environmental degradation.



# Why is it Important to Adopt New Environmental Justice Policies?

- 1 Ensures all community members receive the **same degree of protection** from environmental and health hazards.
- 2 Allows all people to have **equal access to the decision-making process** to have a healthy environment in which to live, learn and work.

# Who Else is Updating Their Environmental Justice Policies?

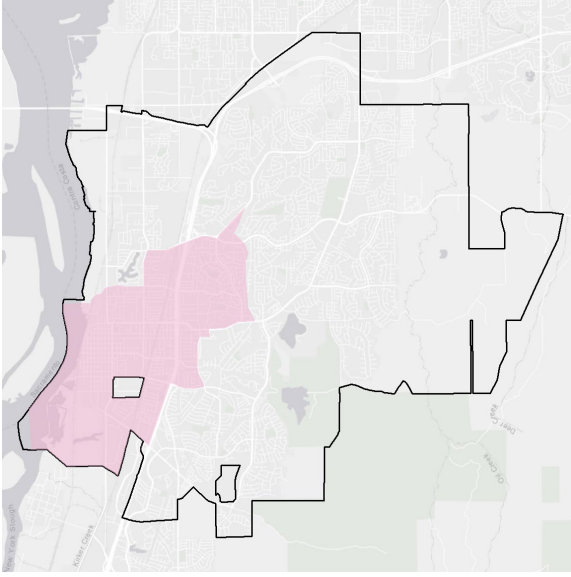


## Cities in Contra Costa County

- City of Brentwood
- City of Martinez
- City of Oakley
- City of Pinole
- City of Richmond

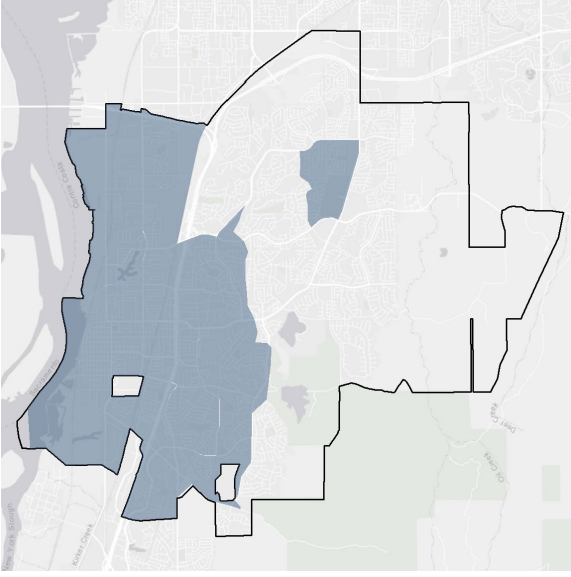
# Antioch's Environmental Justice Neighborhoods

# How are Antioch's Environmental Justice Neighborhoods Identified?



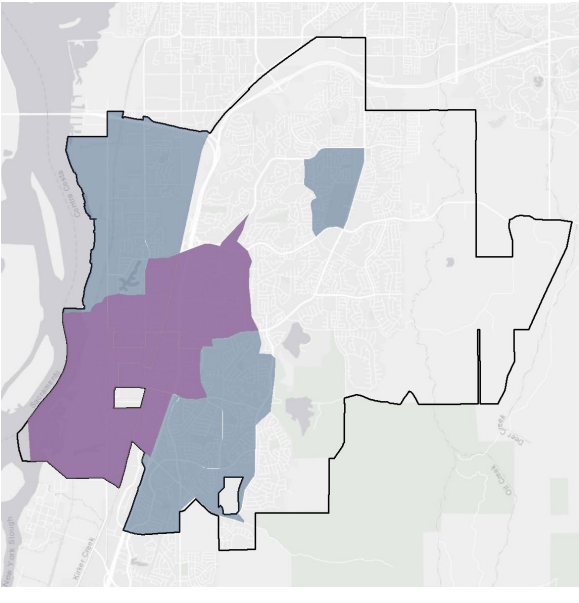
Census tracts that have a composite score of 75% or higher in CalEnviroScreen 4.0.  
*(pink shading)*

+



Census tracts at or below (1) statewide median income, and (2) Department of Housing and Community Development's (HCD) statewide income limits  
*(blue shading)*

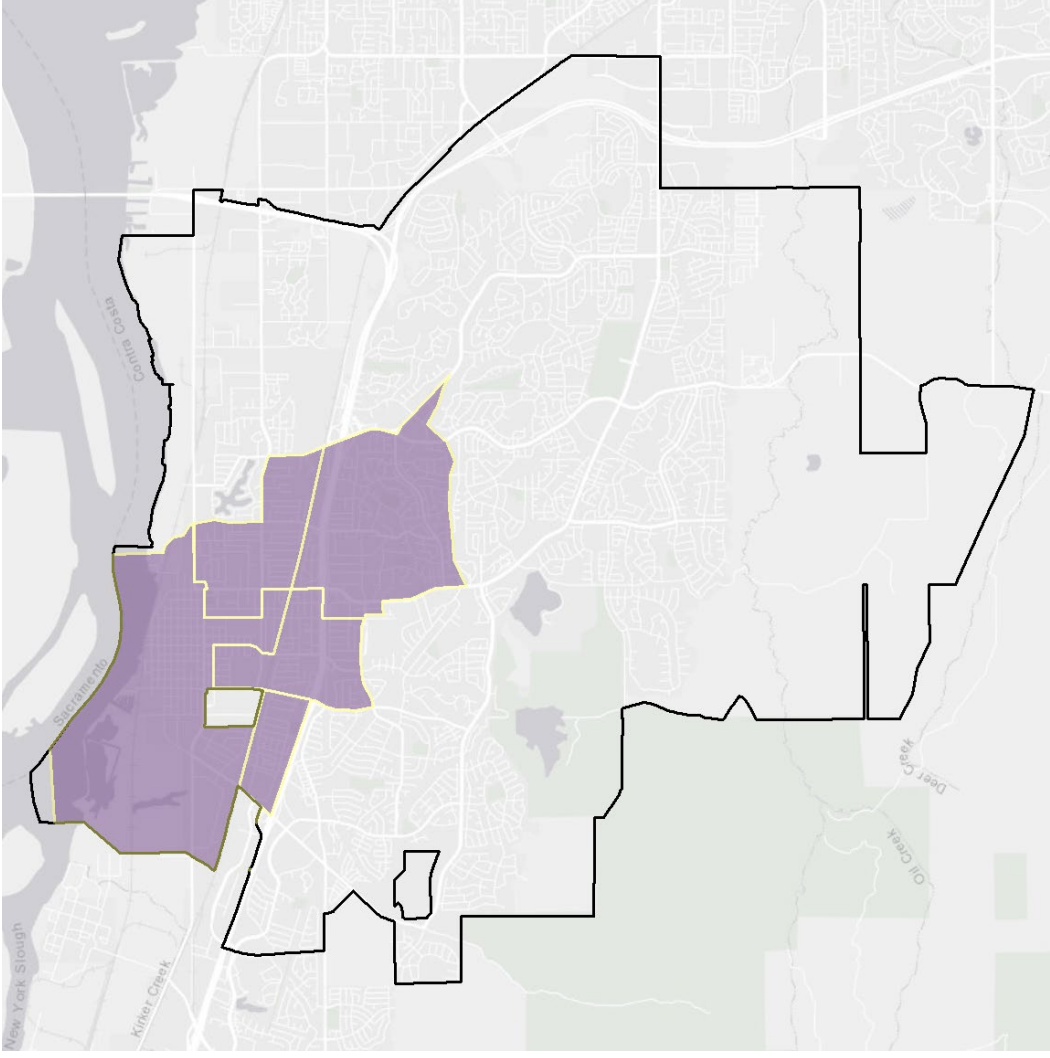
=



Environmental Justice Neighborhoods  
*(purple shading)*



# Antioch's Environmental Justice Neighborhoods

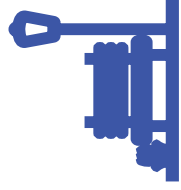


- Antioch has **five census tracts** identified as Environmental Justice neighborhoods.
- These areas are **disproportionately affected** by pollution, health and socioeconomic factors.
- CalEnviroScreen 4.0 scores range from 75 to 93.
- **Additional areas** can be identified through the community engagement process.

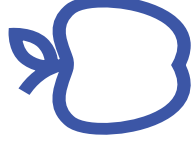
# Existing Conditions Evaluated



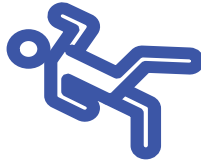
Pollution exposure



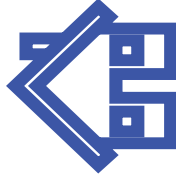
Access to public facilities and services



Access to healthy food



Access to physical activity and recreational opportunities



Access to safe and healthy homes



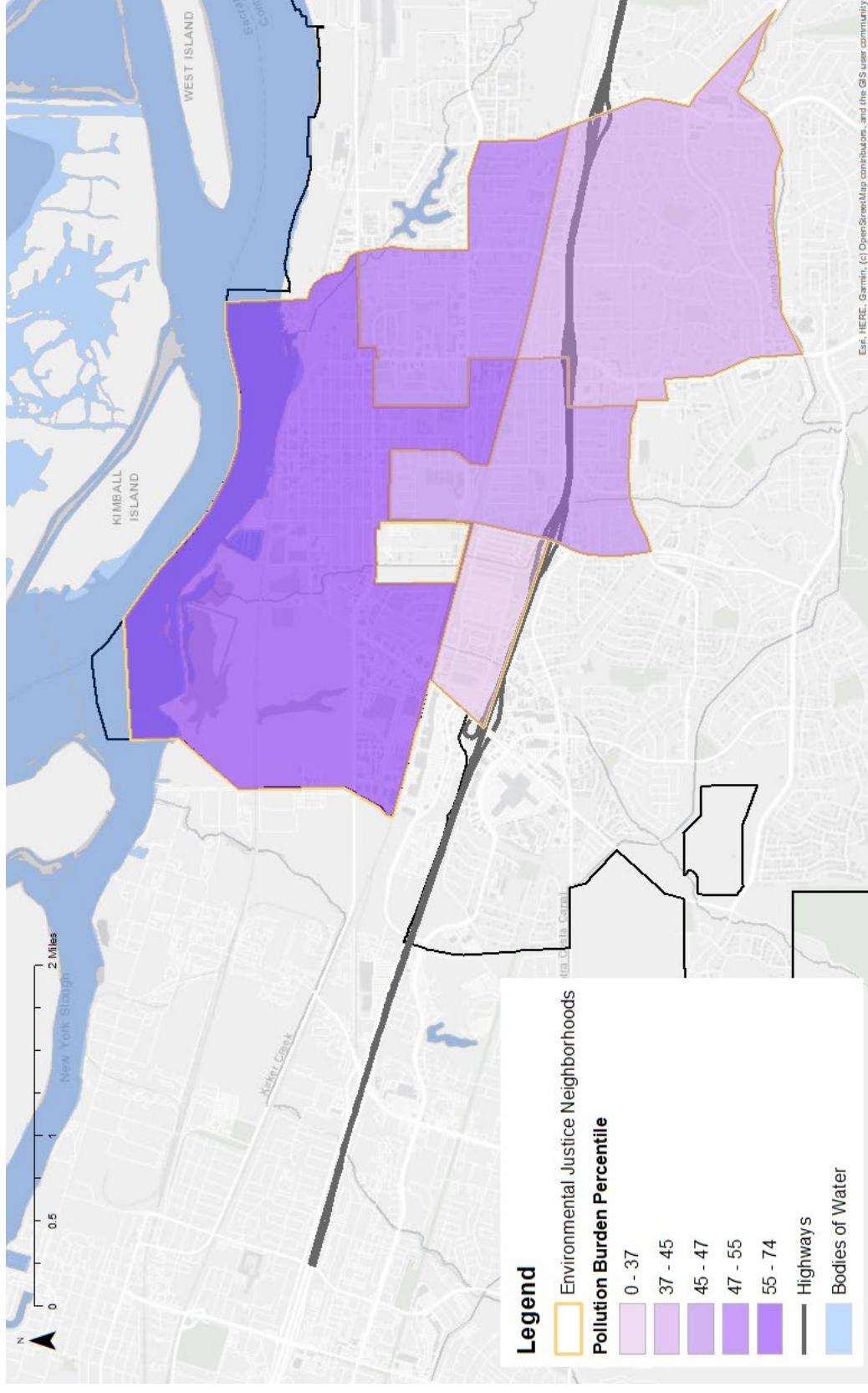
Exposure to unique or compounding health risks (i.e., climate change)

# Pollution Burden

- Represents potential exposure to pollutants (e.g., diesel emissions) and adverse environmental conditions (e.g., hazardous waste).

## Antioch's EJ Neighborhood

- High diesel particulate matter
- High hazardous waste
- High asthma rate
- Older industrial sites in the vicinity have potential for environmental issues

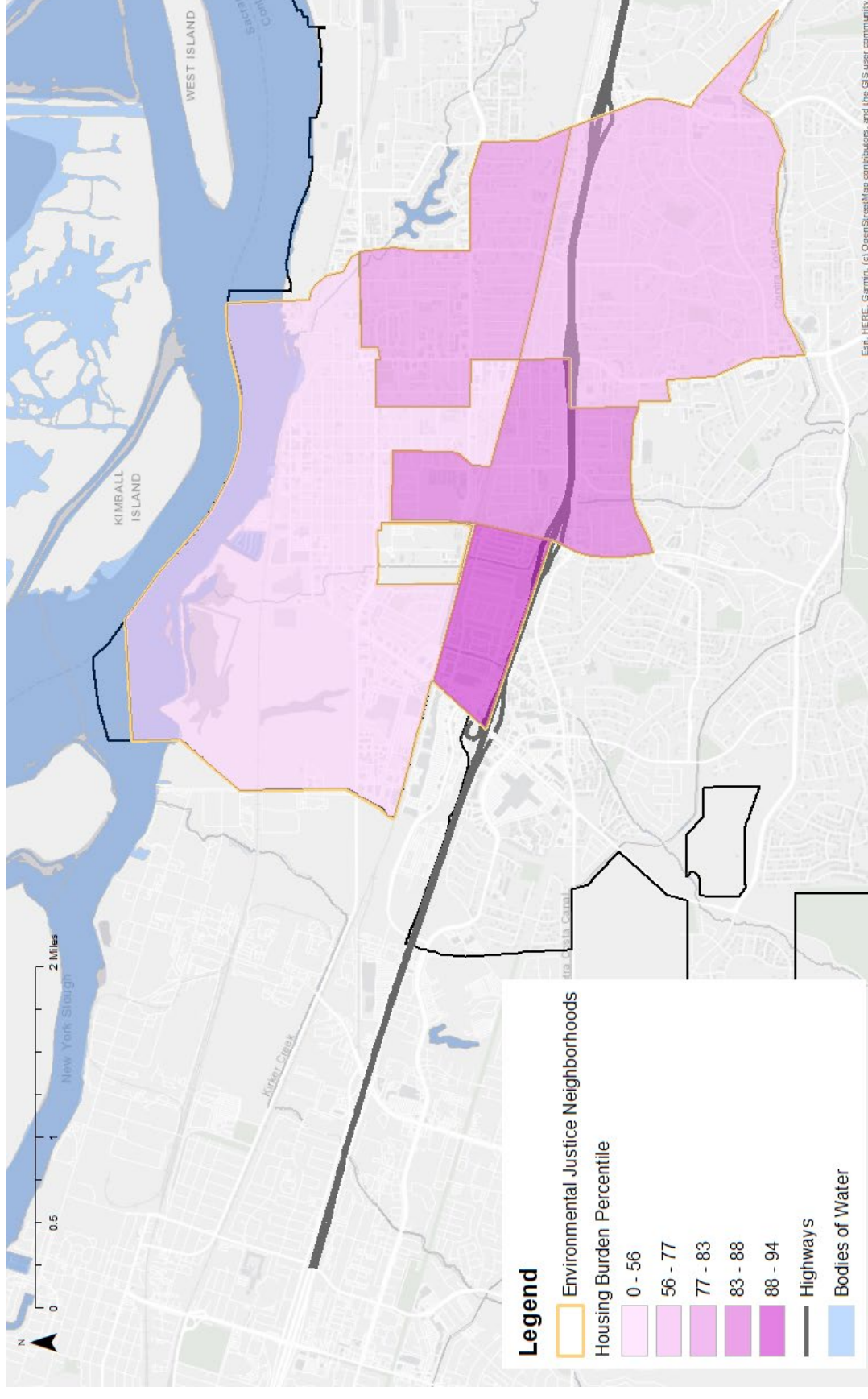


# Housing Burden

- Measures percent of households that are both **low-income** (earning < 80% county median income) and **severely cost-burdened** (paying > 50% of income) by housing costs.

## Antioch's EJ Neighborhood

- 39% of households are housing burdened.
- The percent housing burdened is as high as 94% compared to the rest of the state.

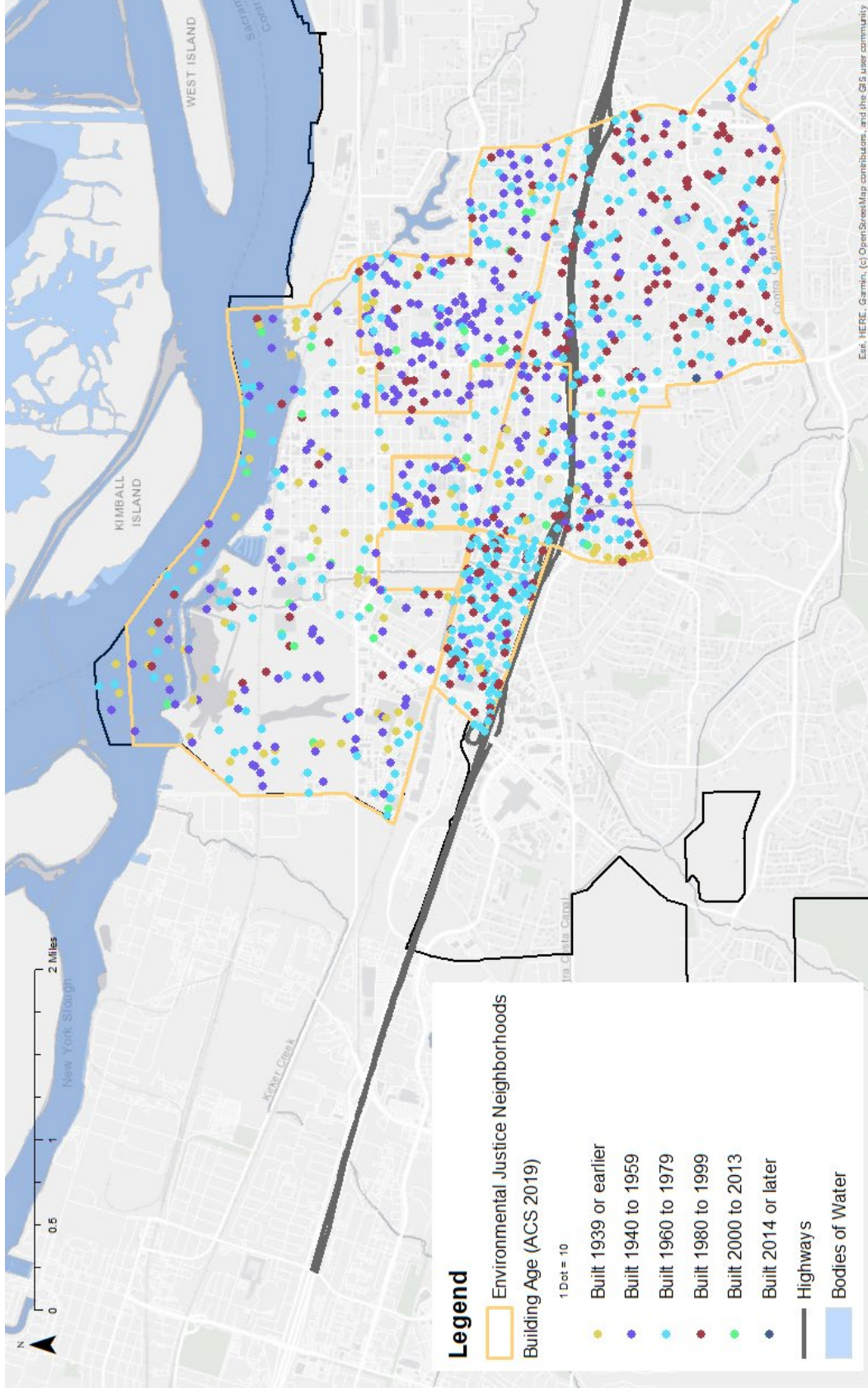


# Access to Safe and Healthy Homes

- Older housing stock (50 years or older) might have poorer ventilation, energy inefficiencies, outdated electrical, old mechanical equipment and may need repairs.

## Antioch's EJ Neighborhood

- Over 35 percent of buildings built before 1959.
- Most buildings built from 1960 to 1979.



# Environmental Justice Planning Process

# Environmental Justice Planning Process



- **Identify** Environmental Justice Neighborhoods
- **Document** Existing Conditions and known EJ Issues
- **Identify Community Members and Stakeholders** for Community Engagement

- **Who:** Community Members & Stakeholders
- **How:** Public Meetings, Tours, Workshops, Focus Group Meetings, etc.
- **What:** Discussion topics include reviewing existing General Plan, identifying EJ issues and developing EJ policies. Community members can also help identify EJ communities.

**Environmental Justice Objectives & Policies**

1. Reduce Pollution Exposure
2. Promote public facilities
3. Promote food access
4. Promote safe and sanitary homes
5. Promote physical activity
6. Reduce unique or compounding health risks
7. Promote civic engagement
8. Prioritize the needs of disadvantaged communities

- Environmental Justice Element, or
- Related Goals, Policies & Objectives Integrated Throughout Other Elements

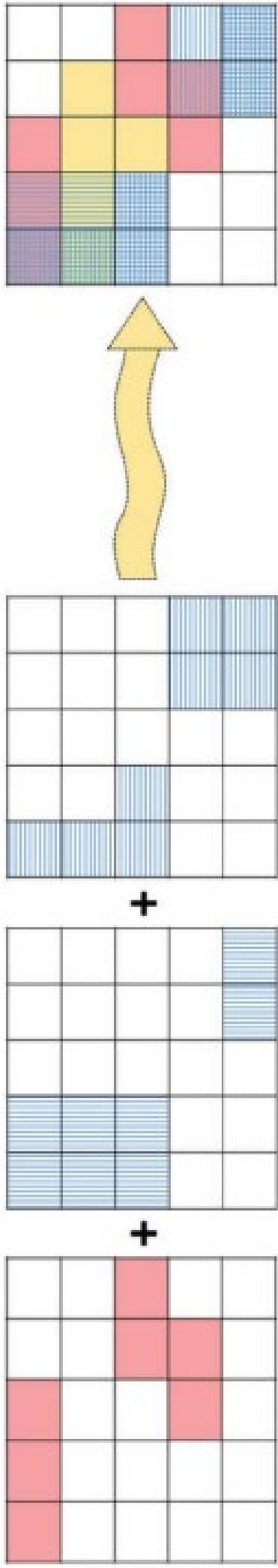


## Ongoing Community Engagement

# What Must Environmental Justice Policies Do?

## STEP 1

### Identify environmental justice neighborhoods



1.

Map the planning area census tracts that have a combined score of 75% or higher in CalEnviroScreen.

2.

Map the planning area census tracts at or below statewide median income.

3.

Map the area at or below the Department of Housing and Community Development's state income limits.

4.

Incorporate community-specific data and examine for additional pollution burden.

**Environmental Justice Screen**



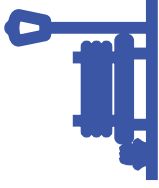
# What Must Environmental Justice Policies Do?

## STEP 2

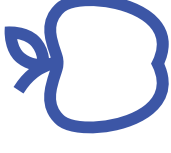
Address and reduce unique or compounding health risks in environmental justice neighborhoods by:



Reducing pollution exposure



Promoting public facilities



Promoting food access



Promoting physical activity

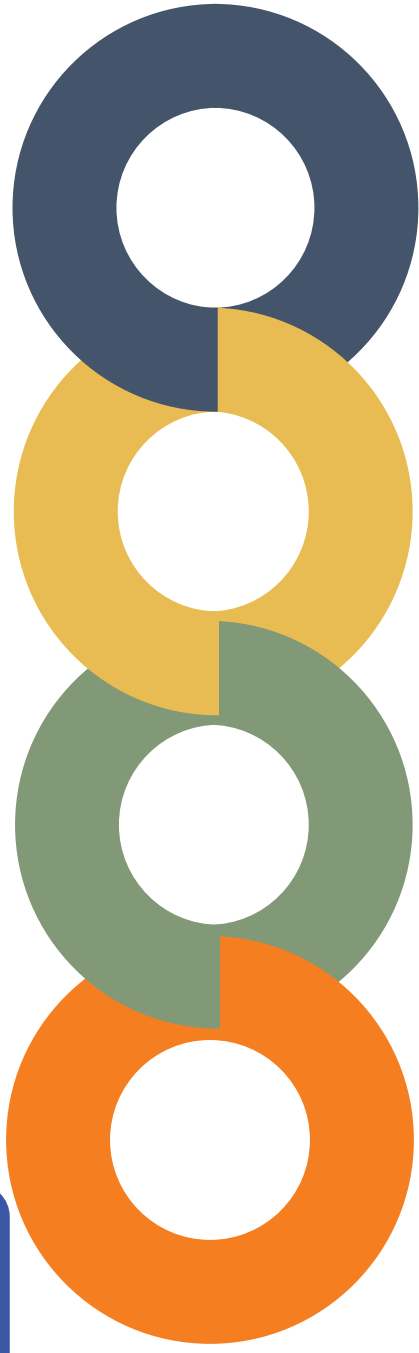


Promoting safe and sanitary homes

# What Must Environmental Justice Policies Do?

## STEP 3

Promote civic engagement in the public decision-making process through:



### Engagement Activities

#### Phase 01

Ongoing  
publicity and  
data analysis

#### Phase 02

Introduce  
project with EJ  
Element Guide  
& PC & CC study  
sessions

#### Phase 03

Understand  
existing conditions  
with two EJ  
stakeholder  
interviews

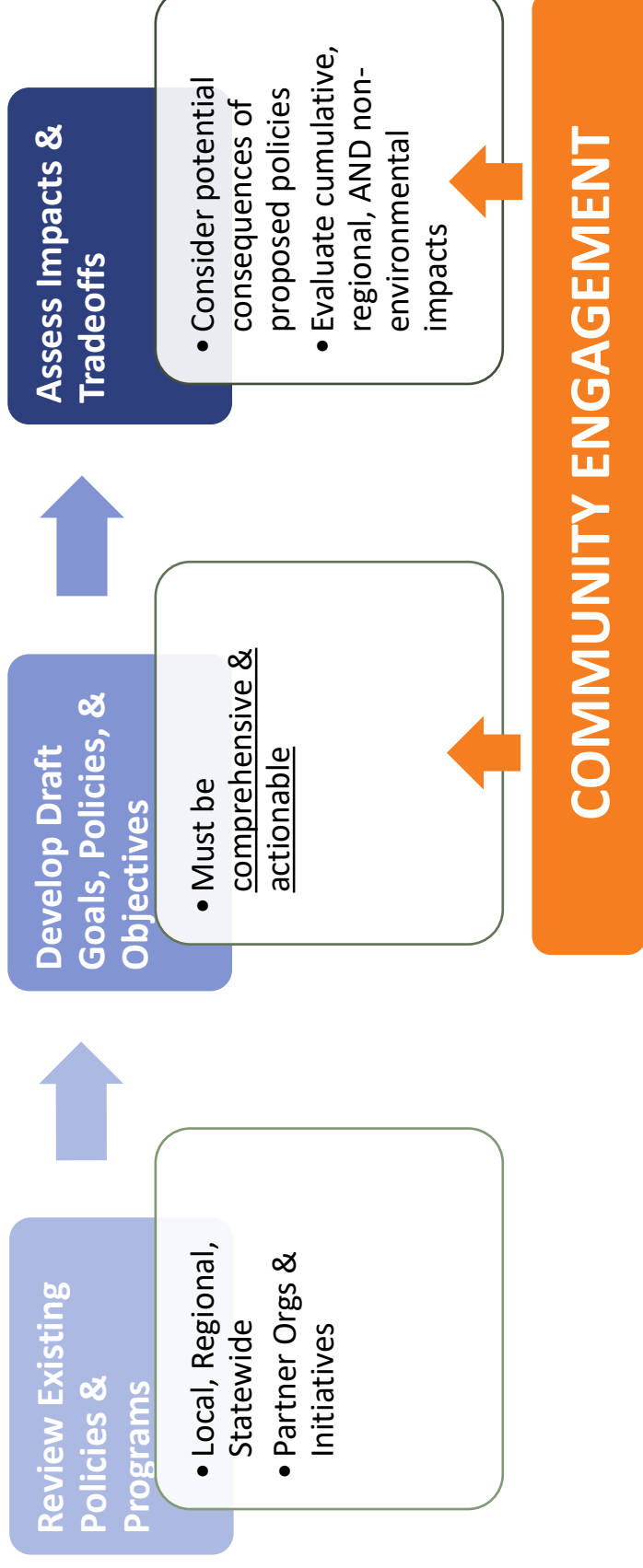
#### Phase 04

Explore and  
refine solutions  
with two  
community  
meetings

# What Must Environmental Justice Policies Do?

## STEP 4

**Prioritize improvements and programs that address the needs of environmental justice neighborhoods**



# What Must Environmental Justice Policies Do?

## STEP 4

**Prioritize improvements and programs that address the needs of environmental justice neighborhoods**

### *For Example...*

“Promote expanded affordable and reliable transportation options for older adults and persons with disabilities, focusing on neighborhoods with high concentrations of the elderly and low walkability.”

- *Santa Clara County Health Element*

“Continue to explore the potential to designate streets around schools, parks and public gathering places as safety zones where the vehicular speed limit may be lowered to 20 miles per hour.

- *City of Richmond Community Health and Wellness Element*

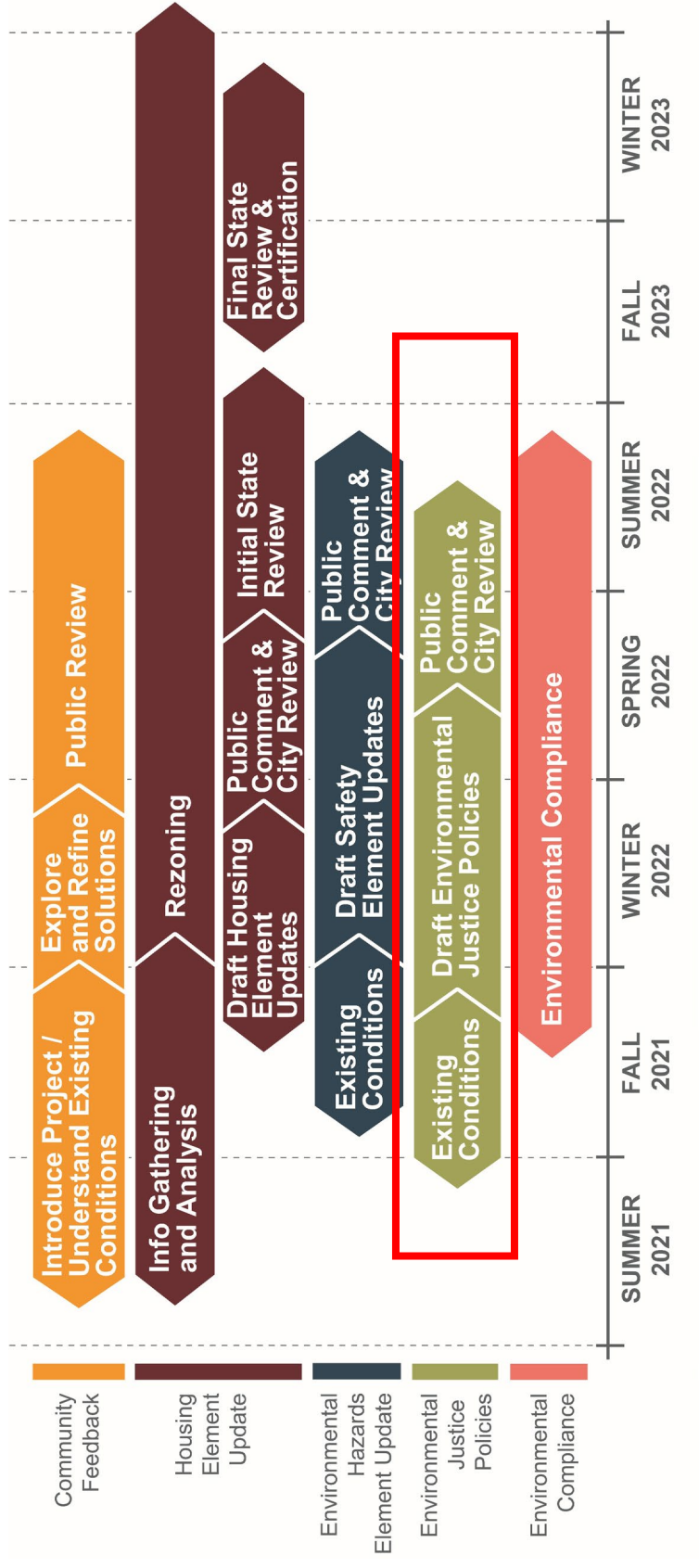
# Stay Informed and Next Steps

# How Can You Participate?

The success of new Environmental Justice policies requires extensive community engagement and input. There will be multiple opportunities to participate throughout the planning process:

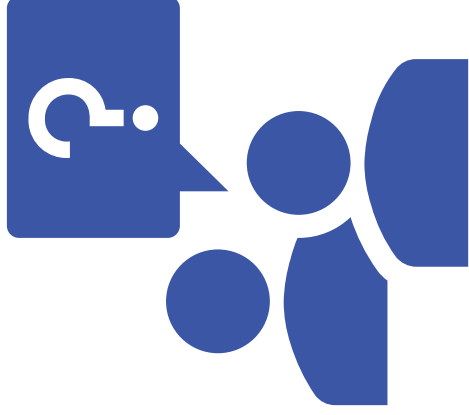
- Join the email list at: [www.antiochca.gov/housingelement](http://www.antiochca.gov/housingelement)
- Share your thoughts at future meetings
- Complete a future community survey

# How Can You Participate?



*To prevent the spread of COVID-19 and stay consistent with the state and county stay-at-home orders, the City is exploring various options for engaging the community safely.*

# Questions? Comments?





# Appendix

## Environmental Justice Data Considerations

Demographics	Pollution Exposure	Public Facilities	Food Access
<ul style="list-style-type: none"> <li>Population</li> <li>Age</li> <li>Race &amp; Ethnicity</li> <li>Languages spoken</li> <li>Income/poverty levels</li> <li>Unemployment</li> <li>Educational attainment</li> <li>Housing burden</li> <li>Sensitive populations</li> </ul>	<ul style="list-style-type: none"> <li>Asthma</li> <li>Air quality</li> <li>Noise</li> <li>Contaminated sites</li> <li>Water quality, accessibility &amp; affordability</li> </ul>	<ul style="list-style-type: none"> <li>Location, distribution &amp; quality parks, trails public transit etc.</li> </ul>	<ul style="list-style-type: none"> <li>Daily consumption of fresh foods</li> <li>Food insecurity</li> <li>Food retail, community garden &amp; farmers' market locations</li> <li>County-level Cal Fresh participation</li> <li>County-level data from Healthy Stores for a Healthy Community</li> </ul>
Safe & Healthy Homes			
Physical Activity			
<ul style="list-style-type: none"> <li>Housing cost burden</li> <li>Homelessness data</li> <li>Household characteristics (housing type, age of housing stock etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Obesity (child &amp; adult)</li> <li>Park &amp; trail locations</li> <li>Secondary disease from obesity (high blood pressure, cholesterol, heart disease, Type 2 diabetes)</li> <li>Unintentional injury and crash data (pedestrians &amp; bicycle accidents)</li> <li>Walk &amp; bike trips per capita</li> <li>% of children who walk, bike, roll to school)</li> <li>% of commuters who use active transportation</li> <li>Walk &amp; bike maps</li> <li>Public transit facilities</li> <li>Neighborhood safety</li> </ul>		<ul style="list-style-type: none"> <li>Temperature/extreme heat data</li> <li>Precipitation changes</li> <li>Tree canopy</li> <li>Sea level rise</li> <li>Wildfire threat, fire hazard severity zones</li> </ul>
Unique Health Risks			