CalEPA
California Environmental Protection Agency

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PRELIMINARY DESIGNATION OF DISADVANTAGED COMMUNITIES PURSUANT TO SENATE BILL 535
October 2021

I. INTRODUCTION

Per Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012), the California Environmental Protection Agency (CalEPA) is responsible for identifying "disadvantaged communities" for the purposes of targeting a portion of investments within the California Climate Investments program, which is funded by Cap-and-Trade auction proceeds. It directs CalEPA to base its designations of disadvantaged communities on "geographic, socioeconomic, public health, and environmental hazard criteria",[1] but it allows CalEPA to exercise its discretion in developing specific criteria and methods for applying them.

Historically, CalEPA has designated disadvantaged communities based on analyses conducted by California Communities Environmental Health Screening Tool (CalEnviroScreen), a mapping tool that incorporates numerous different indicators to identify the physical locations most affected by pollution and the people most vulnerable to its effects. CalEnviroScreen is objective, quantitative, relatively comprehensive, and it has proven highly effective in assisting with SB 535 designations. At the same time, CalEPA recognizes that, in certain instances where requisite data for CalEnviroScreen scoring are not available, it is appropriate to supplement CalEnviroScreen with additional considerations.

In the most recent designation, in 2017, CalEPA identified as disadvantaged communities the top 25% highest scoring census tracts in what was then the most current version of CalEnviroScreen, Version 3.0, along with the census tracts that scored in the highest 5% of CalEnviroScreen's Pollution Burden indicator but did not have an overall CalEnviroScreen score. Out of the state's 8,035 census tracts, 2,005 tracts were designated as disadvantaged, including 22 high pollution census tracts without an overall CalEnviroScreen score.

In October 2021, the Office of Environmental Health Hazard Assessment (OEHHA) released a new version of CalEnviroScreen, Version 4.0. CalEPA has determined that the improvements found in Version 4.0 warrant a reconsideration of designation practices and the eventual issuance of a new designation.

Version 4.0 incorporates more recent data for all indicators, or statewide data sets. It also refines the way some indicators are calculated, to more precisely account for environmental conditions and a population's vulnerability to environmental pollutants. For example, Version 4.0 adds data on dairies and feedlots to the Groundwater Threats indicator, and it adds data on chrome metal plating facilities

[1] Health and Safety Code § 39711(a).

to the Hazardous Waste indicator. Additionally, a new indicator of Children's Lead Risk from Housing was added to account for potential lead exposure from older housing. A full summary of the changes can be viewed here: Summary of Changes in CalEnviroScreen 4.0.

The overall pattern of high-scoring census tracts across the state is very similar between the 3.0 and 4.0 versions of CalEnviroScreen; there is 85% overlap of the top 25% highest scoring tracts between the 3.0 and 4.0 versions. Nonetheless, in assessing the findings of Version 4.0, CalEPA has recognized:

- The new data result in some differences in the highest scoring census tracts between versions 3.0 and 4.0;

- There is an importance in maintaining continuity for communities pursuing funding opportunities from the California Climate Investments program; and,

- CalEnviroScreen draws upon data sets that lack complete information for tribal lands.

Based upon the aforementioned factors and the updated results in CalEnviroScreen Version 4.0, CalEPA is proposing to identify the following as disadvantaged communities:

- Highest scoring 25%[2] of census tracts from CalEnviroScreen 4.0, along with census tracts scoring in the top 5% of the Pollution Burden indicator but without an overall CalEnviroScreen score due to due to unavailable or unreliable Population Characteristics indicator data and score.

- All census tracts currently identified as disadvantaged but not in the highest scoring 25% census tracts in version 4.0 (i.e., the highest scoring 25% of census tracts in CalEnviroScreen 3.0 along with the census tracts with the highest 5% Pollution Burden scores, but without an overall CalEnviroScreen score).

- All areas within federally recognized tribal boundaries in California, as described in section IV below.

This document describes the Agency's proposed approach to identifying disadvantaged communities pursuant to SB 535. The information presented here will be discussed at two virtual workshops on October 26 and 27, 2021. Information on the public workshops can be found here. Written comments on this proposal are also welcome during the public comment period October 18, 2021 – November 16, 2021. Comments can be sent to comments@calepa.ca.gov. Based on the information in this document and comments received during the two workshops and in writing during the public comment period, CalEPA intends to designate the disadvantaged communities for purposes of implementing SB 535 by December 2021.

An interactive map of the CalEPA proposed disadvantaged communities is available here: https://arcg.is/P4LPG0

[2] The choice of a 25% threshold is described in detail below.

II. BACKGROUND

The California Global Warming Solutions Act of 2006, otherwise known as AB 32 (Chapter 488, Statutes of 2006) set a target of returning to 1990 greenhouse gas emission levels by 2020. California achieved the emission reduction target four years early. SB 32 (Chapter 249, Statutes of 2016) established a 2030 greenhouse gas emission reduction target of 40 percent below 1990 levels. California's 2017 Climate Change Scoping Plan describes the state's strategy for achieving its 2030 climate goals, proposing to strengthen established programs while further integrating efforts to reduce both greenhouse gas emissions and air pollution. The Scoping Plan, which is updated every five years, identifies a suite of cost-effective and technologically feasible measures for reducing greenhouse gas emissions, including California's Cap-and-Trade program, which is an integral part of the state's strategy to meet its climate goals.

Proceeds from the sale of State-owned Cap-and-Trade allowances are deposited into the Greenhouse Gas Reduction Fund, or GGRF, to be used for California Climate Investments. Upon the creation of the GGRF, the Legislature established a set of requirements for the use of the funds, including that the funds must be used to facilitate greenhouse gas emission reductions, benefit disadvantaged communities and low-income communities and households, and maximize other environmental, public health, and economic benefits, where applicable and to the extent feasible. The Legislature appropriates funds from the GGRF to agencies to administer California Climate Investments programs consistent with existing legislative requirements.

Statutory Requirements

Funding Allocations

In 2012, the Legislature passed SB 535 and directed that, in addition to facilitating reductions of greenhouse gas emissions in California, 25 percent of the monies allocated from the Greenhouse Gas Reduction Fund must go to projects that provide a benefit to disadvantaged communities. SB 535 also requires a minimum of 10 percent of the funds be allocated for projects located within disadvantaged communities.

In 2016, the Legislature passed Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016), which makes three primary changes to the allocation requirements established under SB 535. First, it increases the percent of funds for projects located in disadvantaged communities from 10 to 25 percent.[3] Second, it requires at least 5 percent of the monies allocated from the Greenhouse Gas Reduction Fund be used to fund projects within low-income communities or benefiting low-income households.[4] Third, it requires at least 5 percent of the monies allocated from the Greenhouse Gas Reduction Fund be used to fund projects within and benefiting low-income communities, or low-income households, that are outside of a CalEPA defined disadvantaged community but within ½ mile of a disadvantaged community.[5]

Together, SB 535 and AB 1550 guide the California Climate Investments program in prioritizing investments to disadvantaged communities and low-income communities and households most in

[3] Health and Safety Code § 39713(a).
[4] *Id.*, § 39713(b).
[5] *Id.*, § 39713(c).

need of assistance. The California Air Resources Board (CARB) assists with the implementation of both bills by, among other things, developing resources and guidance for targeting investments towards disadvantaged communities, low-income communities, and low-income households. These resources include CARB's "Funding Guidelines for Agencies Administering California Climate Investments", a mapping tool, and benefit criteria tables to guide demonstration of direct, meaningful, and assured benefits that meet community needs.[6]

[6] More information on these resources can be found here: http://www.caclimateinvestments.ca.gov.

Designations

AB 1550 defines “low-income communities” to mean “census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted pursuant to Section 50093.”[7]

Neither AB 1550 nor SB 535 provide a definition for “disadvantaged communities.” Instead, SB 535 directs CalEPA to “identify disadvantaged communities … based on geographic, socioeconomic, public health, and environmental hazard criteria.”[8] It recognizes that these criteria “may include, but are not limited to”:

- Areas disproportionately affected by environmental pollution and other hazards that canlead to negative public health effects, exposure or environmental degradation.[9]

- Areas with concentrations of people that are of low income, high unemployment, low levelsof home ownership, high rent burden, or low levels of educational attainment.[10]

Public Process:

SB 862 (Leno, Chapter 836, Statutes of 2014) requires CalEPA to hold at least one public workshop prior to the identification of disadvantaged communities.[11] It expressly exempts CalEPA’s designations of disadvantaged communities from ordinarily applicable Administrative Procedure Act rulemaking requirements.[12] In an effort to gather as much feedback as possible, CalEPA has decided to hold two public workshops to discuss the preliminary designation described in this document.

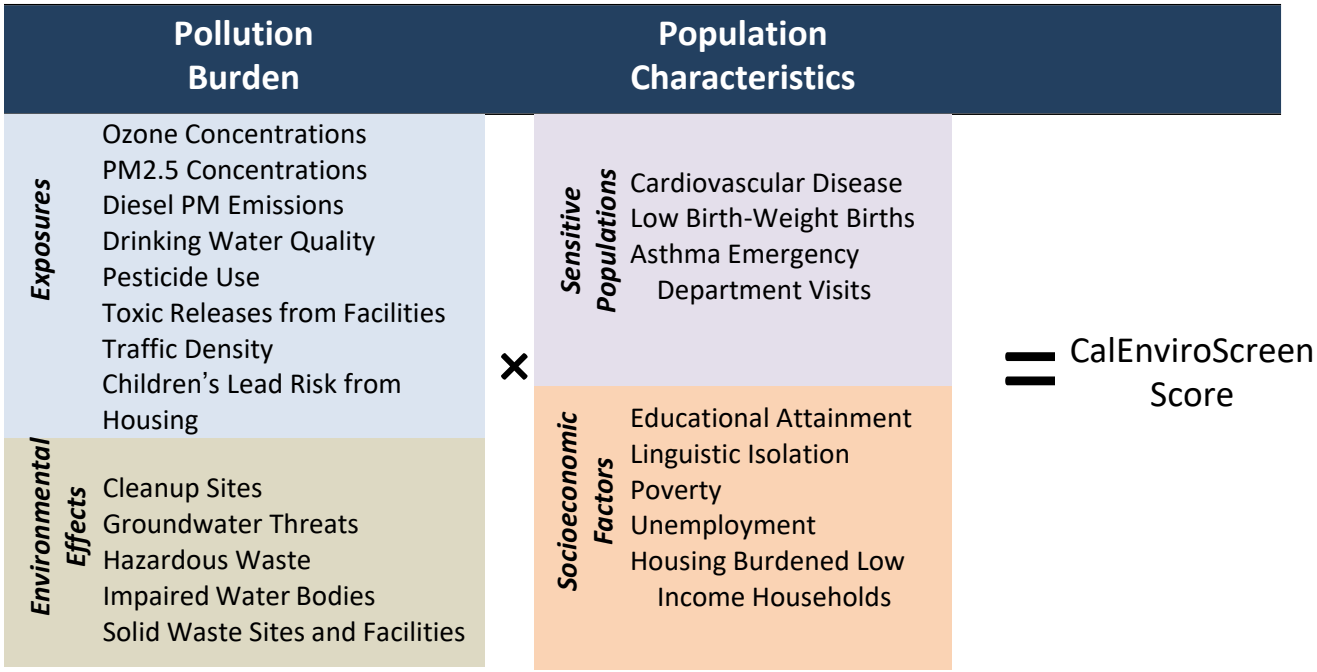
III. CALENVIROSCREEN METHODOLOGY

CalEnviroScreen 4.0, uses a quantitative method to evaluate multiple pollution sources and stressors, and vulnerability to pollution in California’s approximately 8,000 census tracts. Using data from federal and state sources, the tool consists of four components in two broad groups. Exposure and Environmental Effects components comprise a Pollution Burden group, and the Sensitive Populations and Socioeconomic Factors components comprise a Population Characteristics group. The four components are made up of environmental, health, and socioeconomic data from 21 indicators (see Figure 1). The CalEnviroScreen score is calculated by combining the individual indicator scores within each of the four components, then

[7] *Id*., § 39713(d)(2).
[8] *Id*., § 39711(a).
[9] *Id*., § 39711(a)(1).
[10] *Id*., § 39711(a)(2).
[11] *Id*., § 39711(b).
[12] *Id*., § 39711(c).

multiplying the Pollution Burden and Population Characteristics scores to produce a final score. Based on these scores the census tracts across California are ranked relative to each other.

Figure 1. CalEnviroScreen 4.0 Indicator and Component Scoring



The CalEnviroScreen methodology is based on several scientific principles including:

I. Scientific Literature: Existing research on environmental pollutants has identified socioeconomic and other sensitivity factors as "effect modifiers" that can increase healthrisk, depending on the combination ofpollutants and underlying susceptibilities.

II. Risk Assessment Principles: Some people (such as those with underlying health conditions) may be more sensitive to some chemical exposures than others. Risk assessments, using principles first advanced by the National Academy of Sciences, apply numerical factors or multipliers to account for potential human sensitivity (as well as other factors such as data gaps) in deriving acceptable exposure levels.

III. Established Risk Scoring Systems: Priority-rankings done by various emergency response organizations to score threats have used scoring systems with the formula: Risk = Threat × Vulnerability.

CalEnviroScreen 4.0, finalized in October 2021, along with previous versions of the tool was developed through an extensive stakeholder engagement process. Public comments received on the draft CalEnviroScreen 4.0 can be seen here. Version 4.0 updates all indicators in the tool

with the most recent available data and improves the way some indicators are calculated to better reflect environmental conditions or population vulnerability to pollution. Additionally, a new indicator of Children's Lead Risk from Housing was added to account for lead exposure from old housing.

IV. METHODOLOGY AND RECOMMENDATION

In 2017, during the last designation process, CalEPA determined the CalEnviroScreen methodology to be the most suitable choice for identifying disadvantaged communities pursuant to SB 535. This methodology was selected since it offered an efficient and effective means of satisfying the statutory requirements in SB 535 that disadvantaged communities be identified based on a geographic, socioeconomic, public health, and environmental hazard criteria. Additionally, CalEnviroScreen offered the advantage of having been subject to extensive public review by community groups, businesses, academic experts, and government agencies across California. CalEnviroScreen 4.0 expands upon and refines the previous version. It is for these reasons that CalEPA proposes the continued use of CalEnviroScreen as a core part of the process to identify disadvantaged communities as described in SB 535.

While CalEnviroScreen incorporates extensive statewide data on a range of indicators, it is limited to the best currently available information. To the extent data gaps exist in that information, they carry over into CalEnviroScreen. CalEPA must account for these data gaps by viewing them in light of non-quantitative sources of information, including broader social and historical contexts. Thus, in previous disadvantaged communities designations, CalEPA selected as thresholds 25% of the highest scoring census tracts, and it selected census tracts that lacked an overall CalEnviroScreen score due to unavailable or unreliable data if those tracts received scores in the highest 5% on the Pollution Burden indicator.

These thresholds were chosen through a review of related statutes and proxy indicators of disadvantage. They took into account extensive public comments. CalEPA's experience has shown that communities included in these two groupings are highly disadvantaged.

In its December 2021 designation, CalEPA proposes to use the following designations:

First, CalEPA proposes to continue to use the existing thresholds – 25% of highest scoring census tracts and highest 5% on Pollution Burden indicator – but relying on scores in CalEnviroScreen 4.0.

Second, CalEPA proposes to designate as disadvantaged all the communities it designated in 2017. While there is an 85% overlap between the census tracts designated as disadvantaged in 2017 and those in the highest scoring census tracts under CalEnviroScreen 4.0, we see value in ensuring that the 305 census tracts that were in the highest scoring 25% in CalEnviroScreen 3.0 but are not in the top 25% in CalEnviroScreen 4.0 continue to be considered disadvantaged and thus eligible for disadvantaged community-related funding opportunities through California Climate Investments. In some instances, these 305 census tracts may have fallen below the

disadvantaged community thresholds, in part, because of California Climate Investments programming. Recognizing these communities as disadvantaged will allow for program continuity.

Finally, CalEPA proposes to designate as disadvantaged all areas within the boundaries of federally-recognized Tribes,[13] including Federal American Indian Reservations and Off-Reservation Trust lands boundaries in California.[14] Data gaps related to tribal nations make it difficult to fully and accurately assess pollution burden and population characteristics of these areas in CalEnviroScreen. Specifically, because of their status as sovereign governments, federally recognized Tribes in California are not required to report or make publicly available to the state the types of data used in CalEnviroScreen in the same manner as California jurisdictions. The data used in developing the drinking water quality, pesticide use, solid waste, asthma or cardiovascular disease indicators, for example, are not required to be reported to the state by federally recognized Tribes in California. Therefore, these data are often not available to the state. CalEPA must account for such gaps by looking for information outside of CalEnviroScreen.

In stakeholder meetings, tribal representatives have raised concerns that these data gaps have meant that federally recognized Tribes in California have been effectively excluded from California Climate Investments-related funding despite high levels of poverty, health and environmental burden, increased suicide rates,[15] oftentimes related to the historical violence and deprivation federally recognized Tribes in California have endured. For example, recent census data show that federally recognized tribal lands in California have nearly double the poverty rate as the state average.[16] While not specific to federally recognized Native Americans in California (because data are not available), health disparities for Native American communities are present in the following areas:

- **Heart Disease:** Native Americans[17] were 50 percent more likely to be diagnosed with coronary heart disease.[18]

- **Diabetes:** Well documented and recent data show that Native Americans have nearly twice the prevalence of diabetes compared to white populations nationally (14.7% compared to 7.5%).[19] In California, Native American populations had a diabetes

[13] Federal Recognition refers to acknowledgement by the federal government that a Tribal government and Tribal members constitute a Tribe with a government-to-government relationship with the United States, and eligibility for the programs, services, and other relationships established for the United States for Indians, because of their status as Indians. (Title 25 United States Code section 83.2)
[14] American Indian Areas Related National Geodatabase https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-geodatabase-file.html
[15] https://www.cdc.gov/nchs/data/hestat/suicide/rates_1999_2017.htm
[16] ACS 2015-2019, showing residents of federally recognized tribal lands in California with a 22 percent poverty rate, with 43 percent of residents at 200 percent of the federal poverty level, versus state averages of 13 percent poverty rate and 30 percent of the state below 200 percent of the federal poverty level.
[17] Identified as American Indians in published reports and available data however identified as Native Americans.
[18] CDC 2021. Summary Health Statistics: National Health Interview Survey: 2018. Table A-1a. http://www.cdc.gov/nchs/nhis/shs/tables.htm
[19] Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2020. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services; 2020 available at https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf

prevalence of 10.4 percent.[20]

- **Asthma:** Native American adults have the highest asthma prevalence of any racial/ethnic groups, 40% higher than other groups. [21] Native American children are almost twice as likely to ever have had asthma.[22]

- **Obesity:** Native American adolescents are 30 percent more likely than non-Hispanic white adolescents to be obese. Native American adults are 50 percent more likely to be obese than non-Hispanic whites.[23] Obesity is a risk factor for several diseases including diabetes, heart disease, and stroke.

- **Infant Mortality:** Native Americans have almost twice the infant mortality rate.[24]

CalEPA has therefore concluded that the most reasonable way to approach data gaps for specific CalEnviroScreen indicators for tribal lands is to interpret them as reflecting "geographic, socioeconomic, public health, and environmental hazard[s]" that would support a disadvantaged designation.[25] CalEPA recognizes the value of accurate and comprehensive data as well as the burden associated with collecting data. It wishes to avoid precluding disadvantaged communities from receiving investments solely because they are unable to collect complete data showing that they are in fact disadvantaged. CalEPA believes the current designation is a critical step in enabling tribes to seek resources that can benefit their communities and, moving forward, would like to coordinate with tribes to explore ways to fill current data gaps.

CalEPA welcomes public comment on whether there are other communities or locations in California that are disadvantaged for which there are significant data gaps.

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[20] Bullock A, Sheff K, Hora I, et al. Prevalence of diagnosed diabetes in American Indian and Alaska Native adults, 2006–2017. BMJ Open Diab Res Care 2020;8:e001218. doi:10.1136/bmjdrc-2020-001218
[21] https://www.trackingcalifornia.org/asthma/who-is-vulnerable-to-asthma
[22] CDC 2021. Summary Health Statistics: National Health Interview Survey: 2018. Table A-2a. http://www.cdc.gov/nchs/nhis/shs/tables.htm
[23] CDC 2020. Summary Health Statistics: National Health Interview Survey: 2018. Table A-15a. https://www.cdc.gov/nchs/nhis/shs/tables.htm
[24] CDC 2020. Infant Mortality Statistics from the 2018 Period Linked Birth/Infant Death Data Set. National Vital Statistics Reports. Table 2. https://www.cdc.gov/nchs/data/nvsr/nvsr69/NVSR-69-7-508.pdf
[25] Health and Safety Code § 39711(a).

V. FIGURES AND MAPS

Figure 1: Each of the state's nearly 8000 census tracts is represented as a dot according to its Population Characteristics score and Pollution Burden score. Census tracts with highest pollution burden appear near the top of the figures, and those with greatest vulnerability due to population characteristics (health and socioeconomic) appear near the right side of the figures. The red dots represent those in the top 25th percentile.

Table 1: The nine regions of the state that CalEnviroScreen focuses on and for which regional graphs are presented below.

Regions	Counties Within Region
San Diego and Imperial	San Diego, Imperial
Inland Valley	San Bernardino, Riverside
Los Angeles	Los Angeles, Ventura, Orange

Central Coast	Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, San Benito
Bay Area	San Francisco, Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara, San Mateo
Sacramento	El Dorado, Placer, Sacramento, Yolo, Sutter, Yuba
North State	Del Norte, Siskiyou, Modoc, Humboldt, Trinity, Shasta, Lassen, Tehama, Plumas, Sierra, Nevada, Butte, Glenn, Colusa, Lake, Mendocino
Central Valley	San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, Kern, Mariposa, Tuolumne, Calaveras, Amador
Southern Sierra	Alpine, Mono, Inyo

Figure 2: Each of the state's nearly 8000 census tracts is presented by region and represented as a dot according to its Population Characteristics score and Pollution Burden score. The red dots represent those in the top 25th percentile

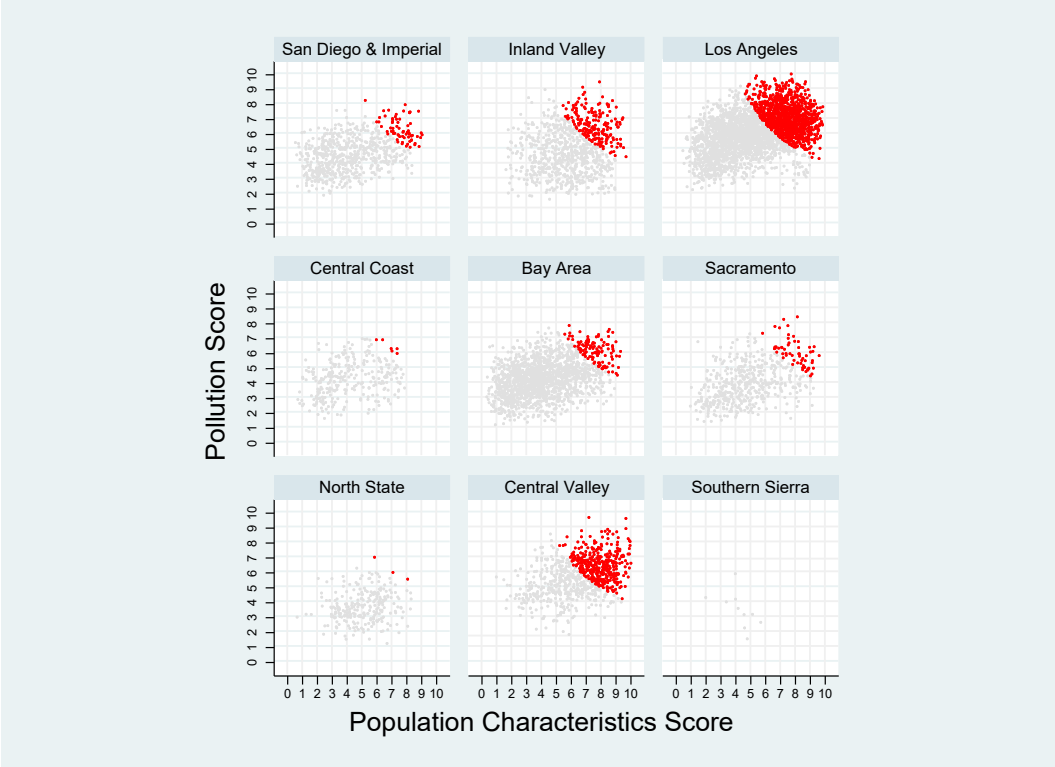

Figure 3 The 305 census tracts designated as disadvantaged in CalEnviroScreen 3.0 that no longer score in the top 25% of CalEnviroScreen 4.0 are presented as blue dots and would continue to be considered disadvantaged based on this proposed designation. The red dots represent census tracts that score in the top 25% in CalEnviroScreen 4.0.

An interactive map of the proposed disadvantaged communities is available at https://arcg.is/P4LPG0

Figure 4. Map of the proposed disadvantaged communities in the San Francisco Bay Area region

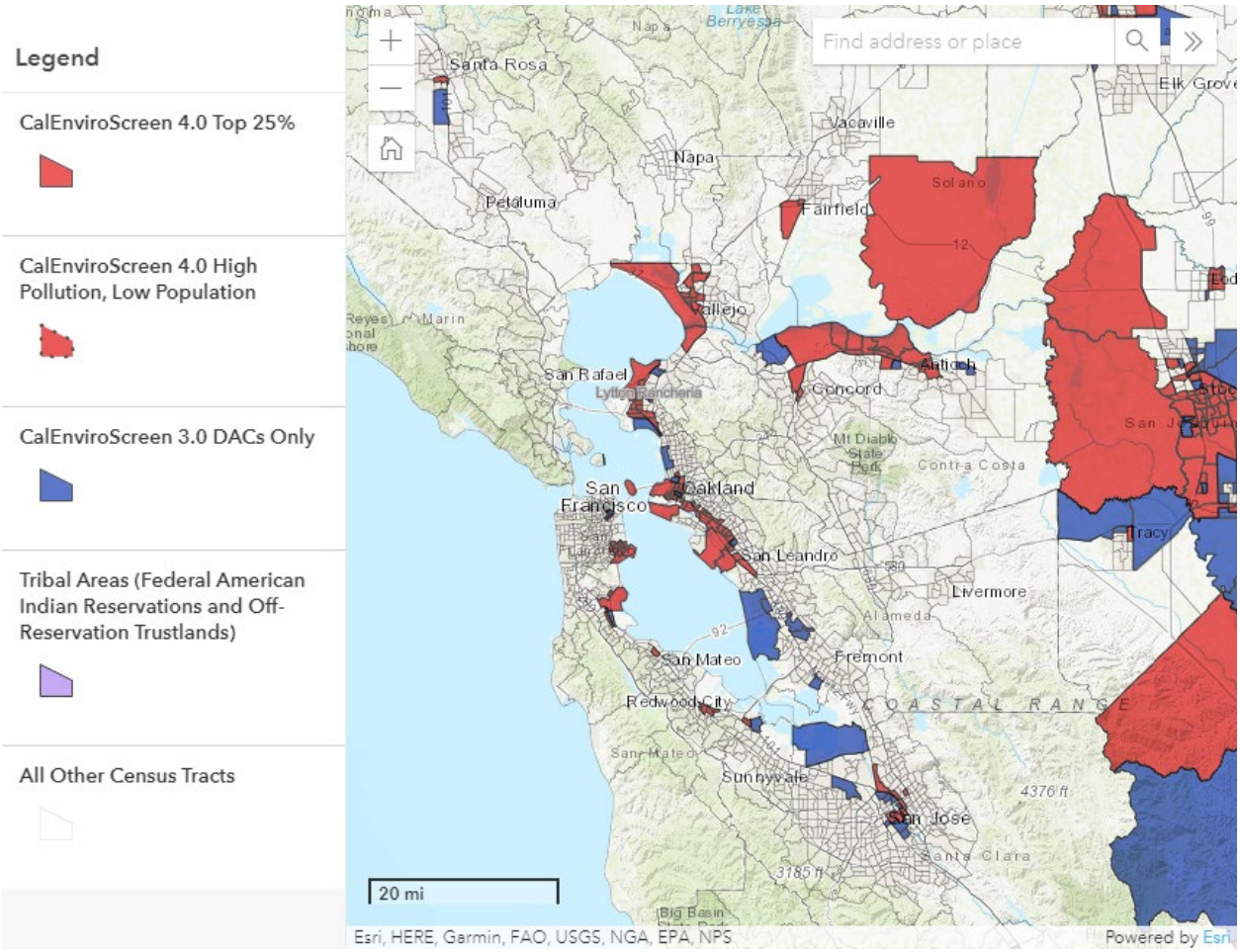

Figure 5. Map of the proposed disadvantaged communities in the Northern California region

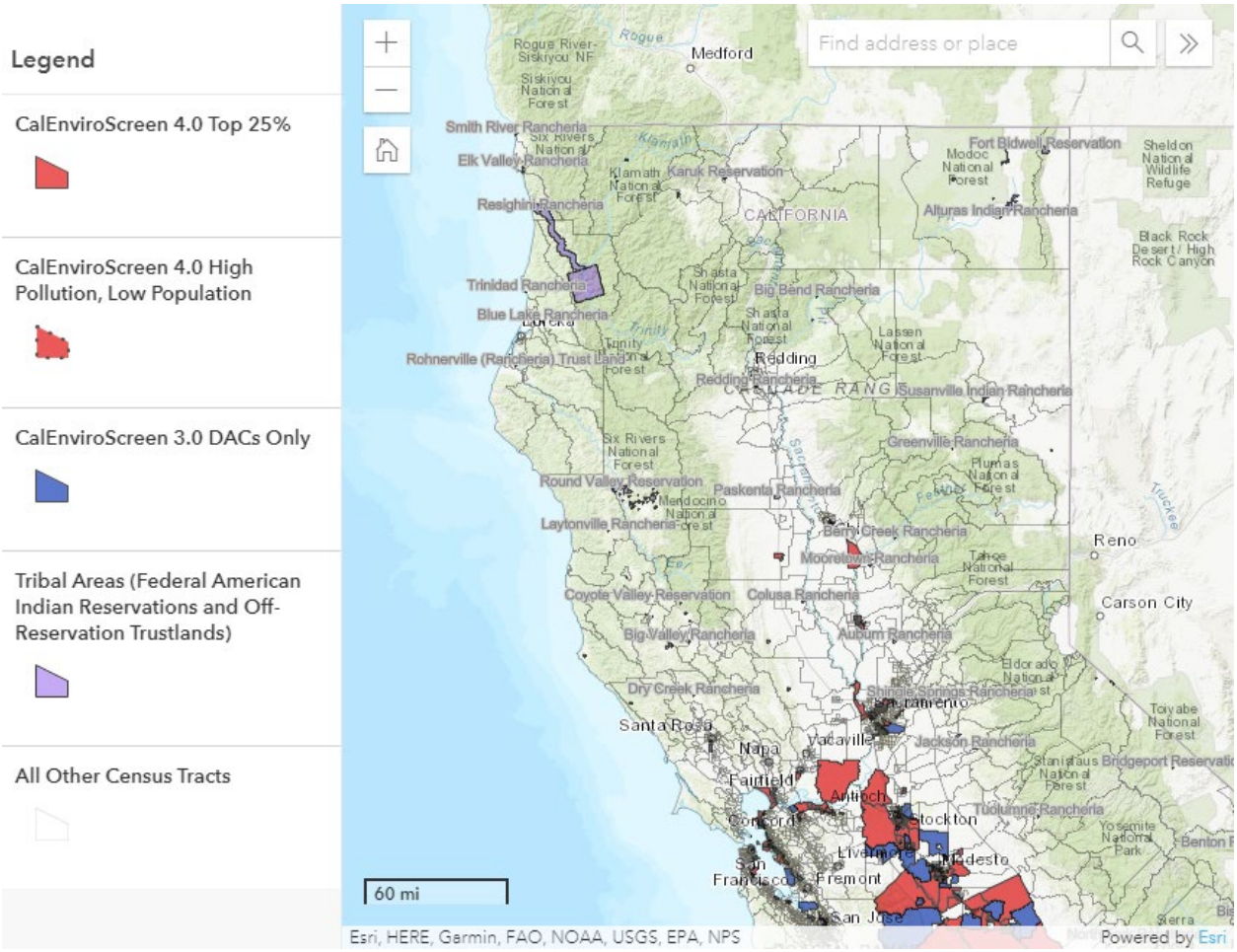

Figure 6. Map of the proposed disadvantaged communities in the Northern Central Valley region

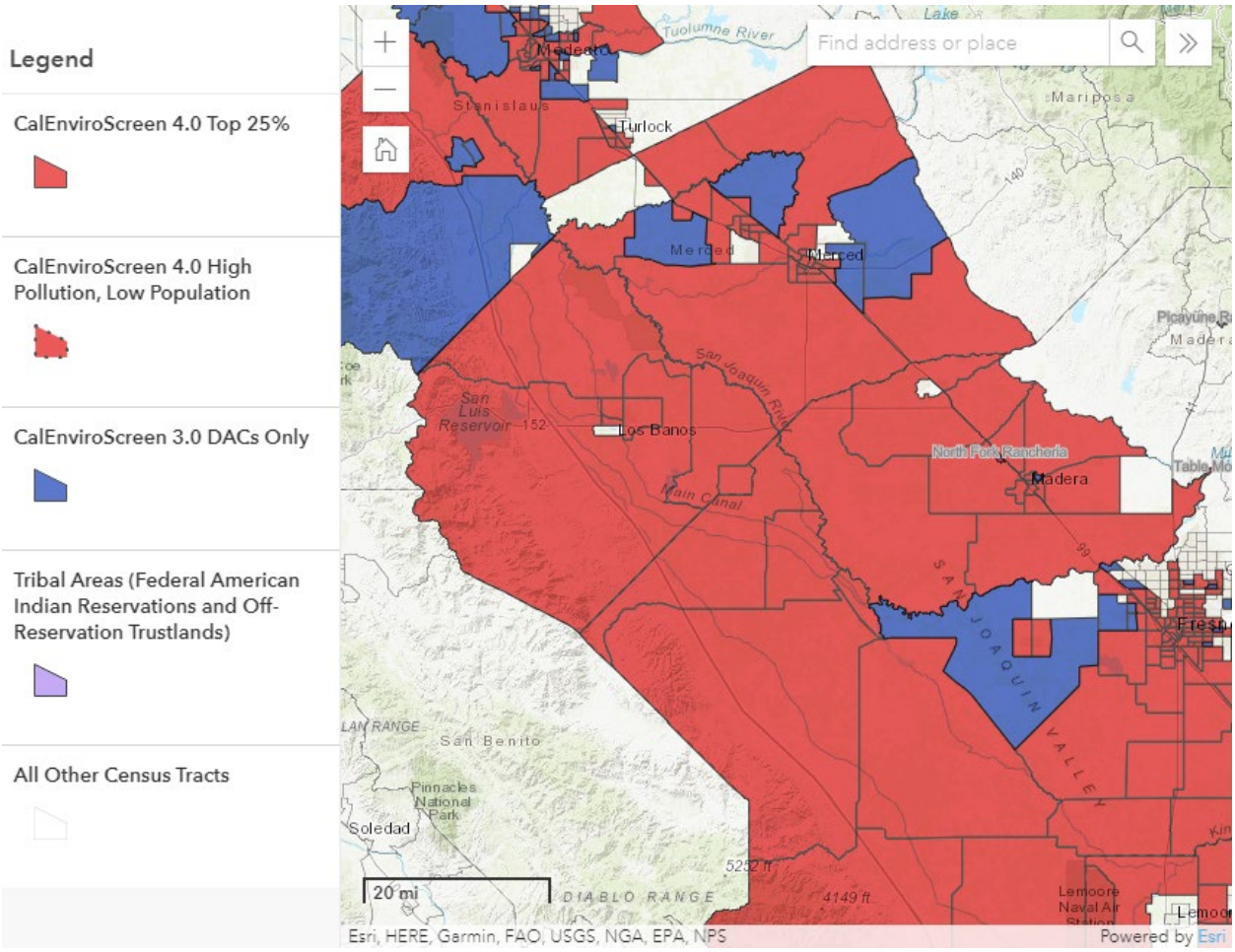

Figure 7. Map of the proposed disadvantaged communities in the Southern Central Valley region

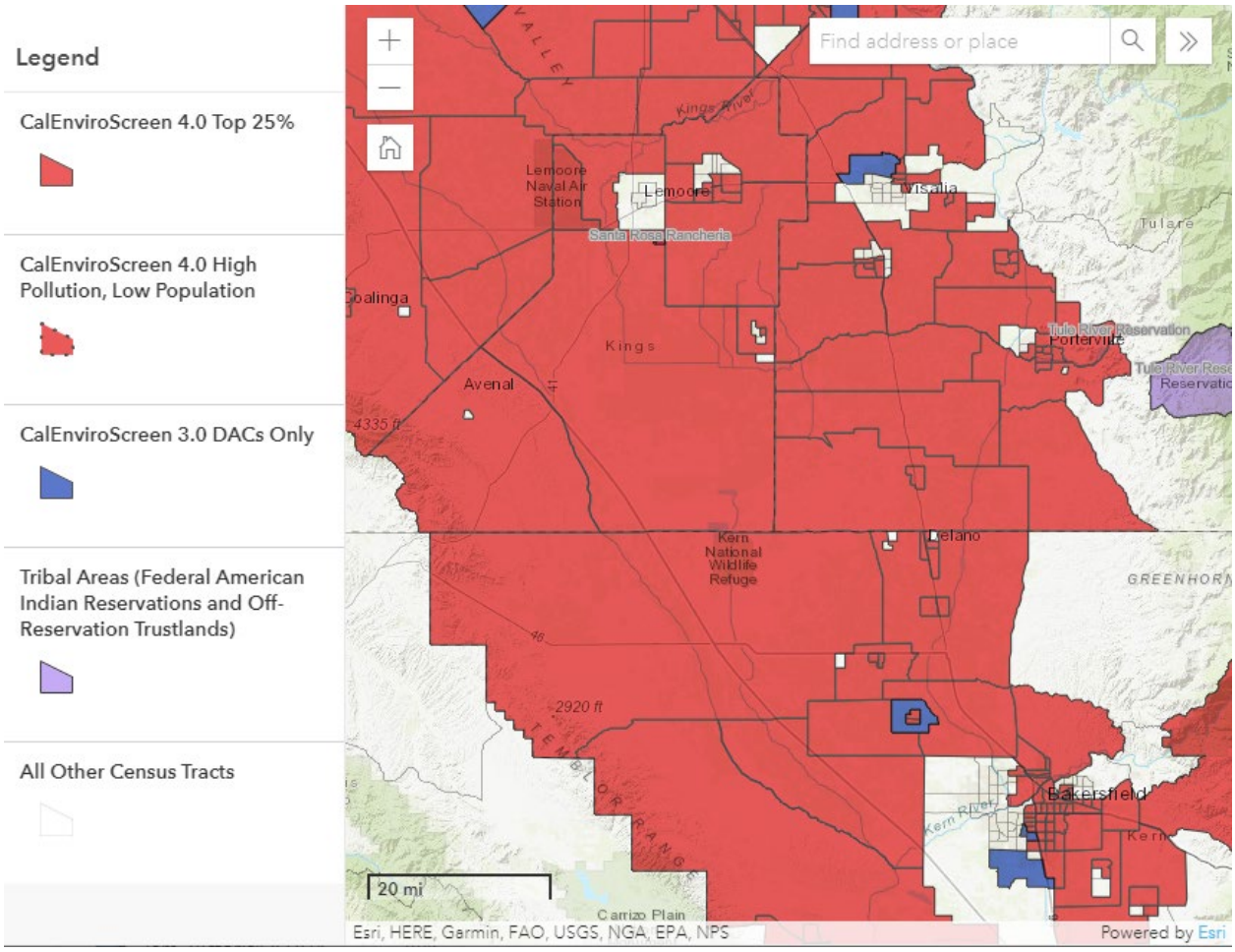

Figure 8. Map of the proposed disadvantaged communities in the Coachella Valley region

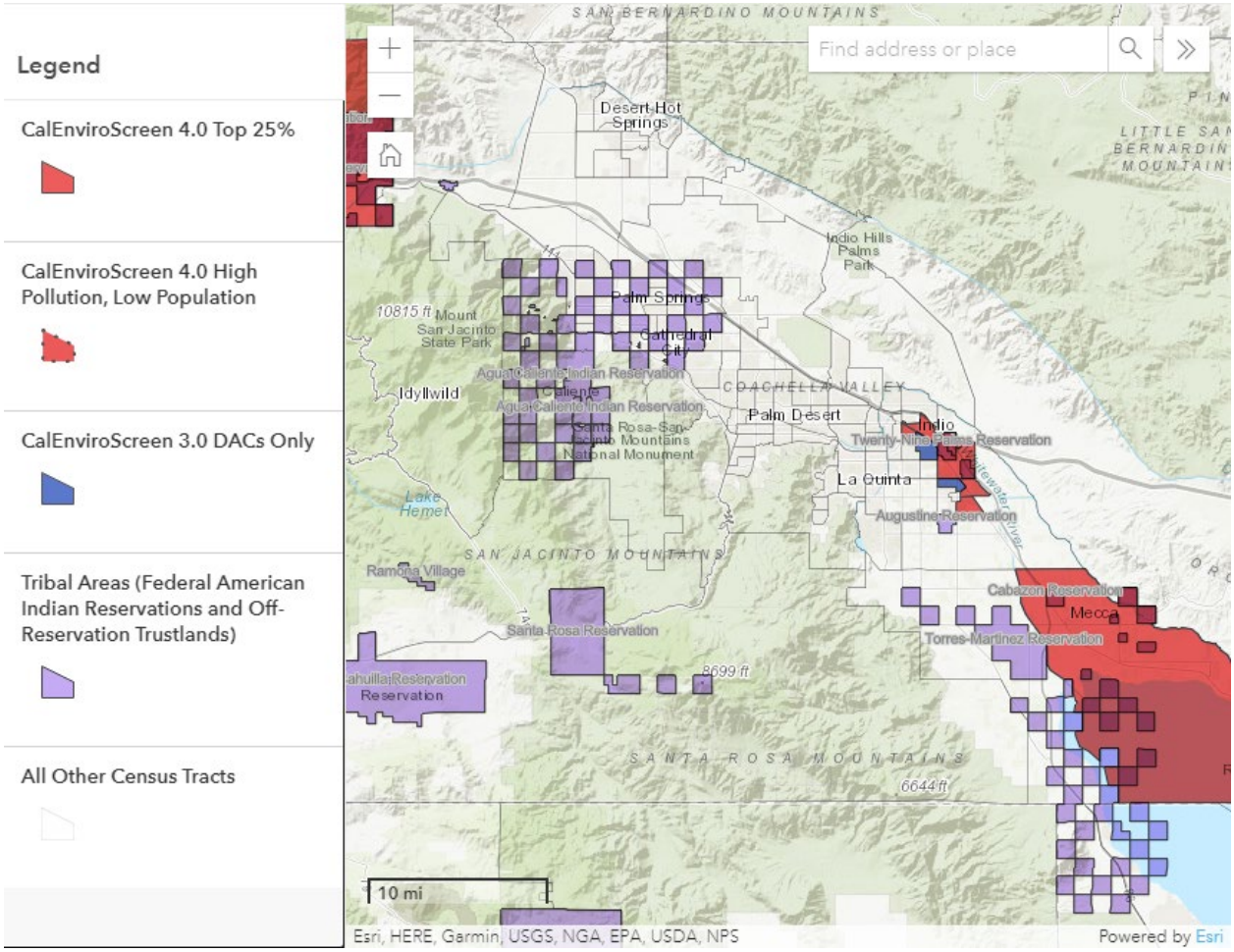

Figure 9. Map of the proposed disadvantaged communities in the Eastern Sierra region

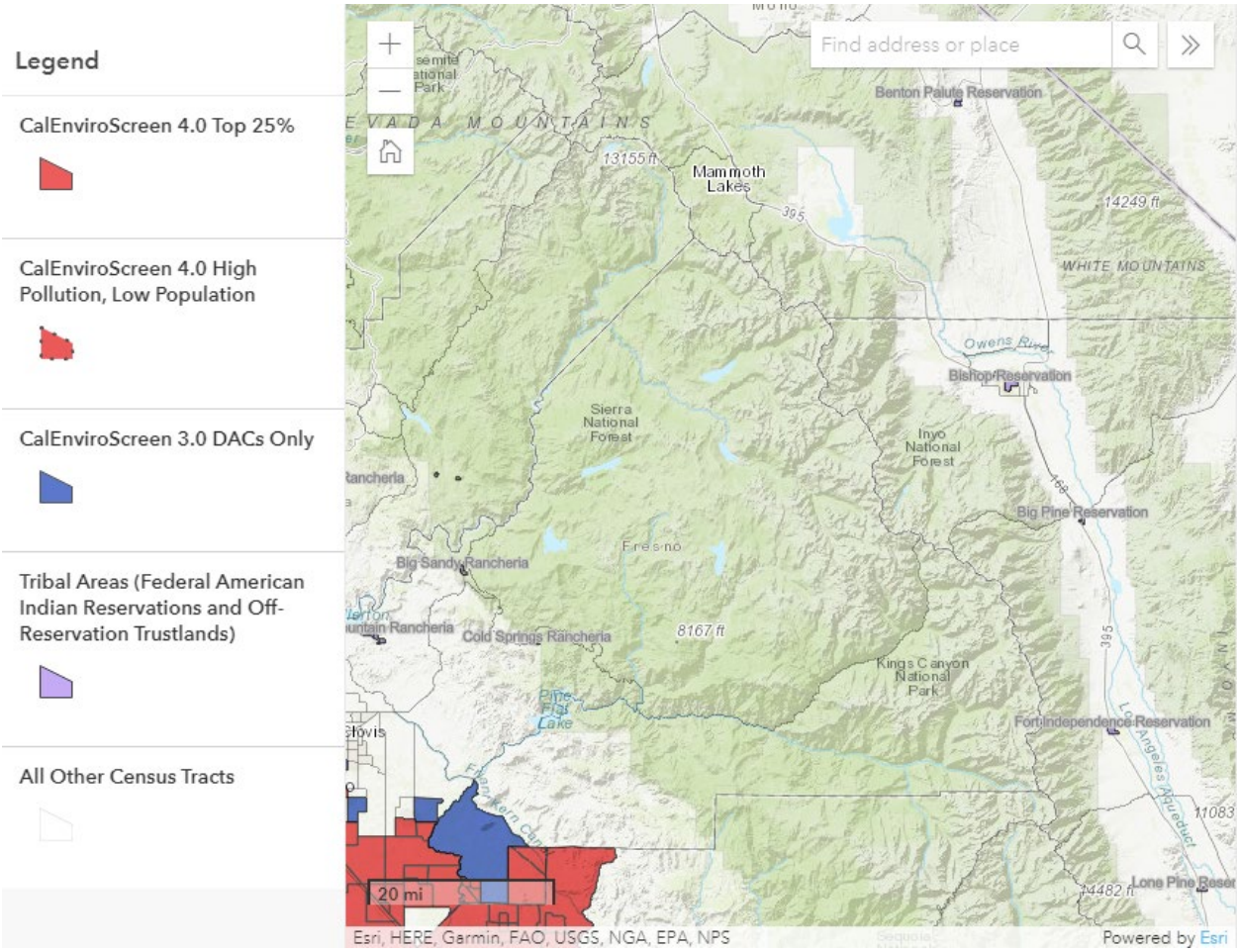

Figure 10. Map of the proposed disadvantaged communities in the Imperial Valley region

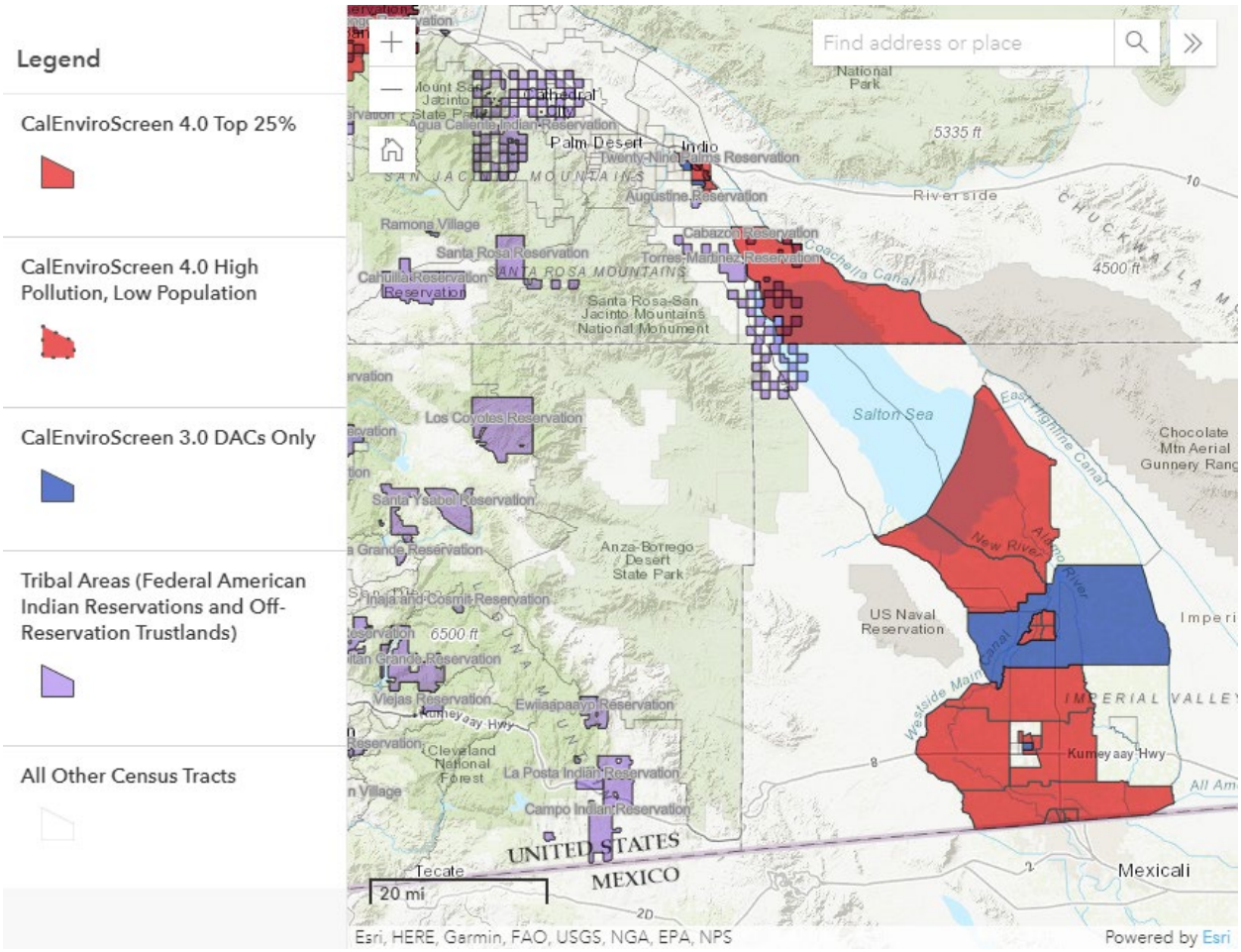

Figure 11: Map of the proposed disadvantaged communities in the Los Angeles region

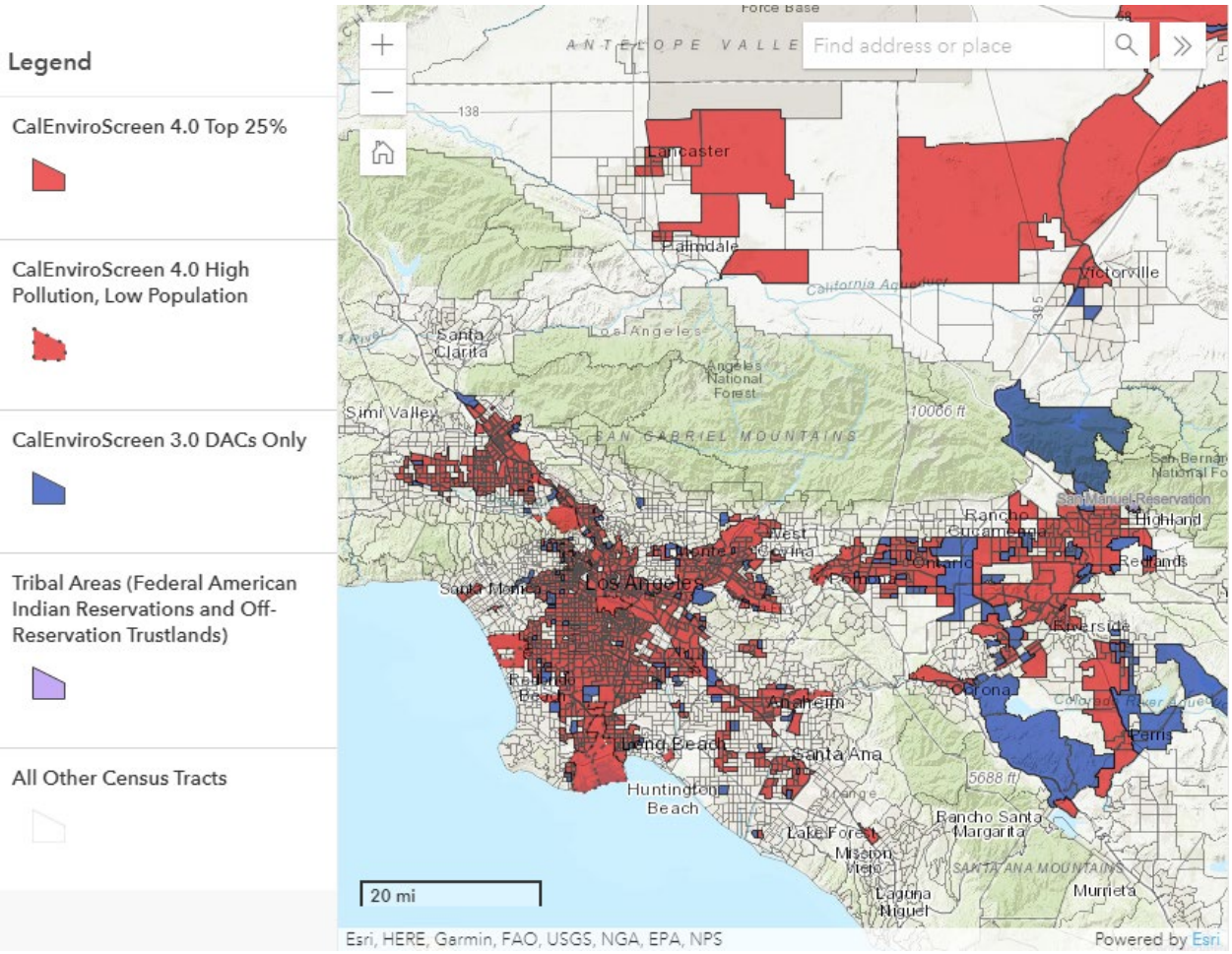

Figure 12. Map of the proposed disadvantaged communities in the San Diego region

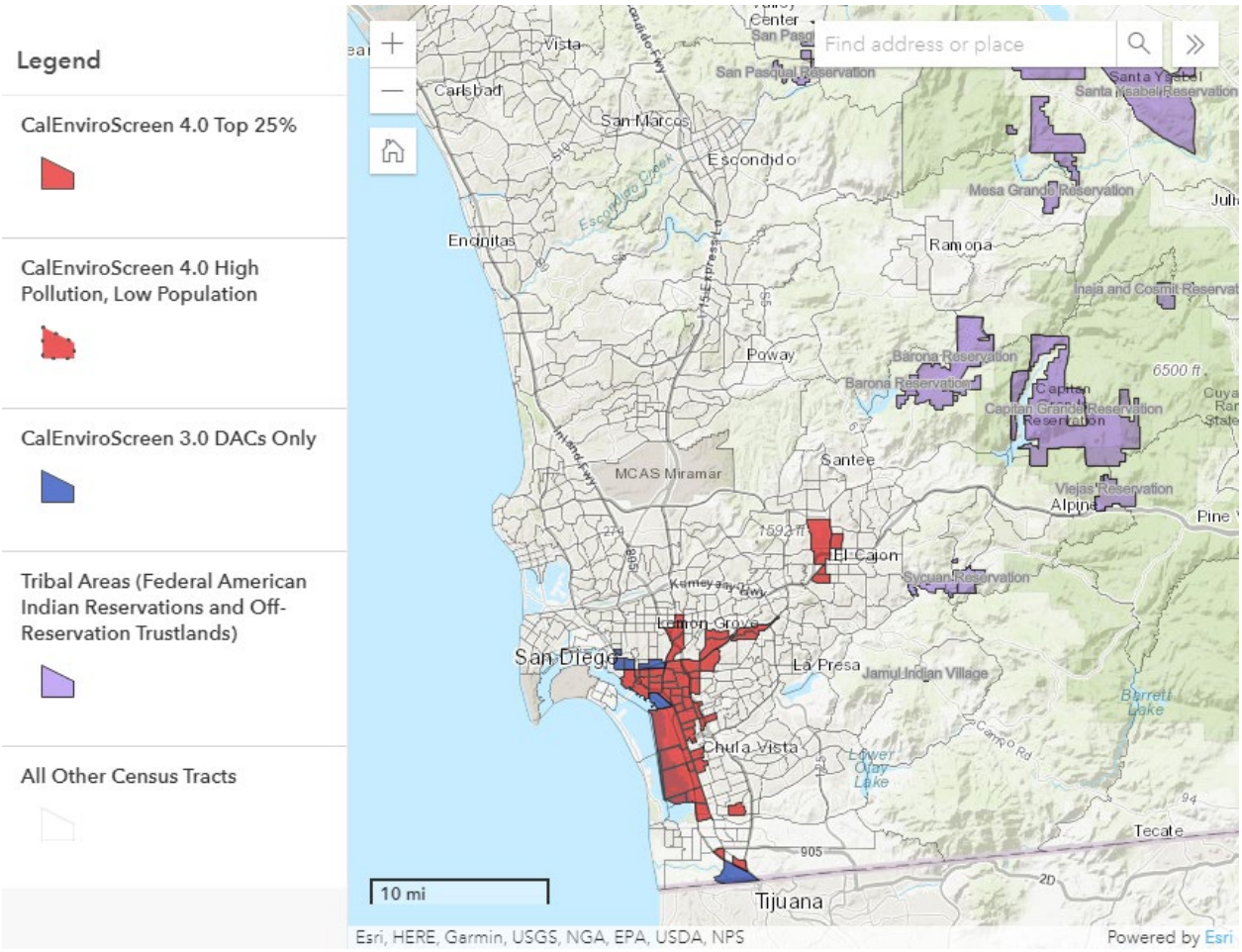

Figure 13. Map of the proposed disadvantaged communities in the Sacramento region