



Community Air Monitoring and Air Quality in Communities Disadvantaged by Health Disparities

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SPUR Digital Forum on Air Quality
July 7 2020

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- Data access & visualization
- Health research & analysis
- Health communications
- Education & training

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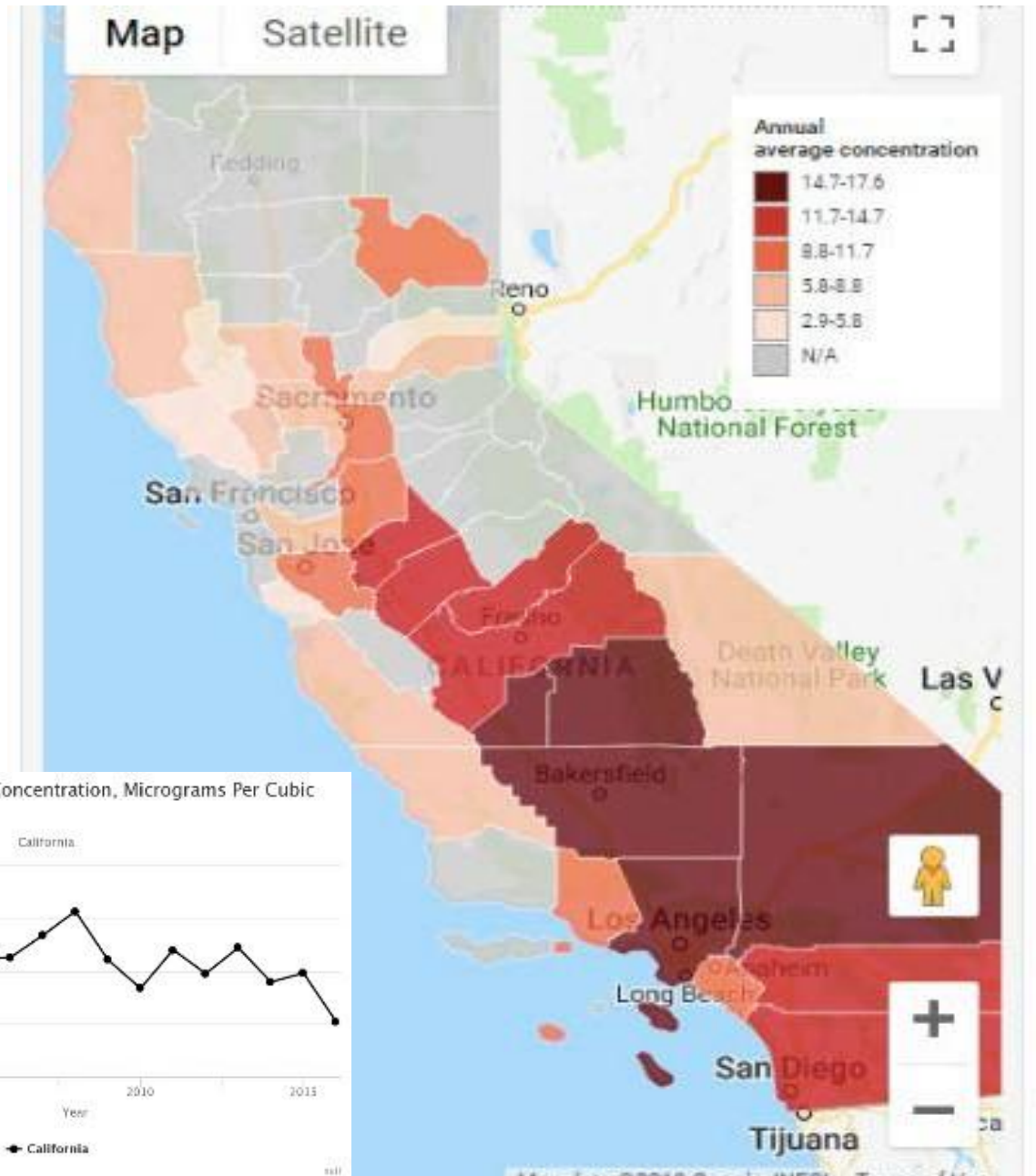
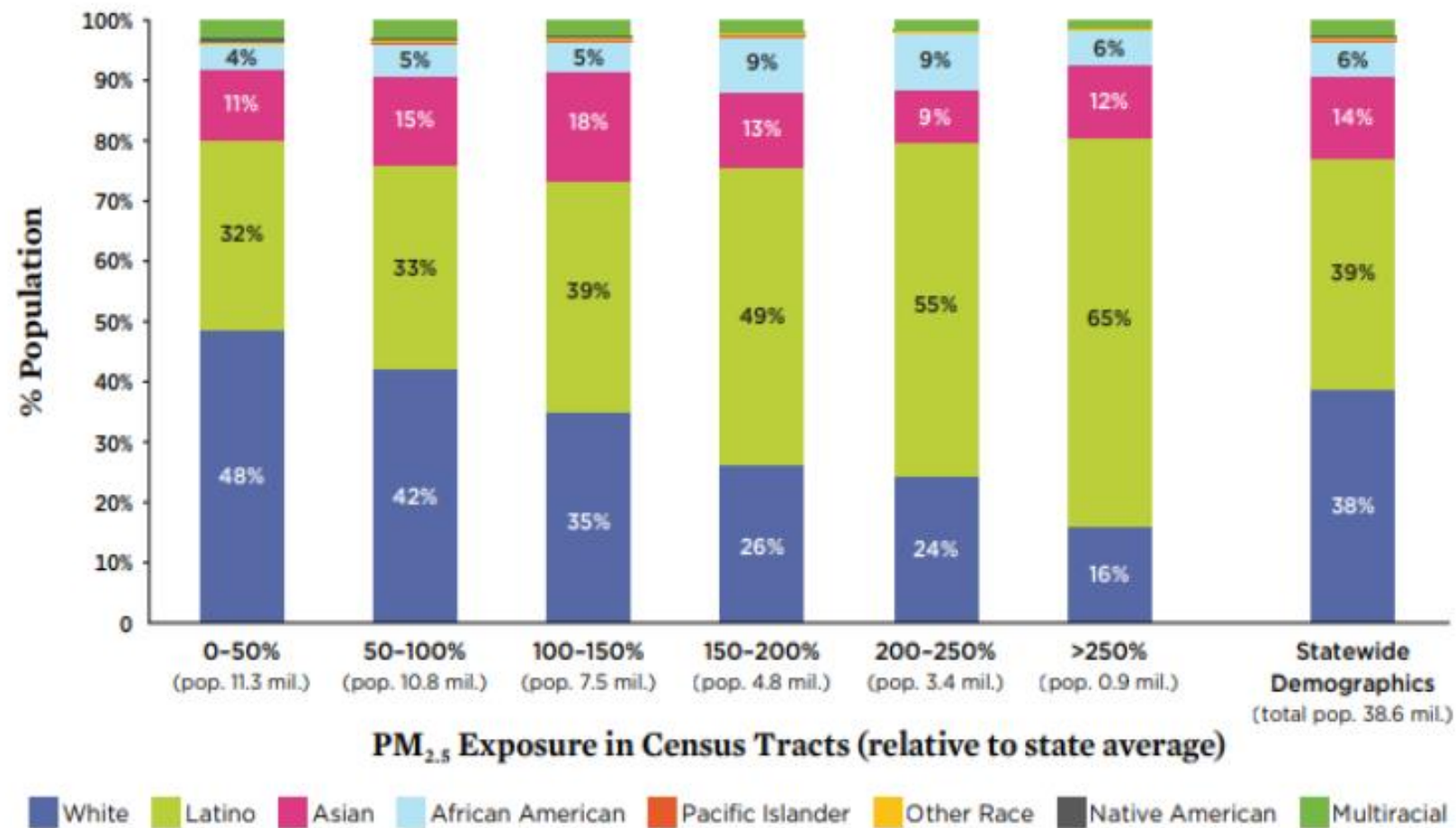


FIGURE 2. Areas with Higher PM_{2.5} Pollution Have a Higher Fraction of People of Color



Higher PM_{2.5} exposure in an area is correlated with a higher fraction of people of color. In the census tracts with the highest level of on-road vehicle pollution, more than half of the population identifies as Latino while less than a quarter identifies as white. In contrast, the population of Latino and white Californians statewide is nearly equal.

Note: The following US Census Bureau–defined racial groups were used in the analysis: White; Black or African American; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; Hispanic; Latino; and Some Other Race. In the chart above, Latino includes census respondents who select Hispanic, Latino, or both; Other Race includes census respondents who select Some Other Race as their only race.

SOURCES: US CENSUS BUREAU 2018; EPA 2014.

Source: Union of Concerned Scientists 2019

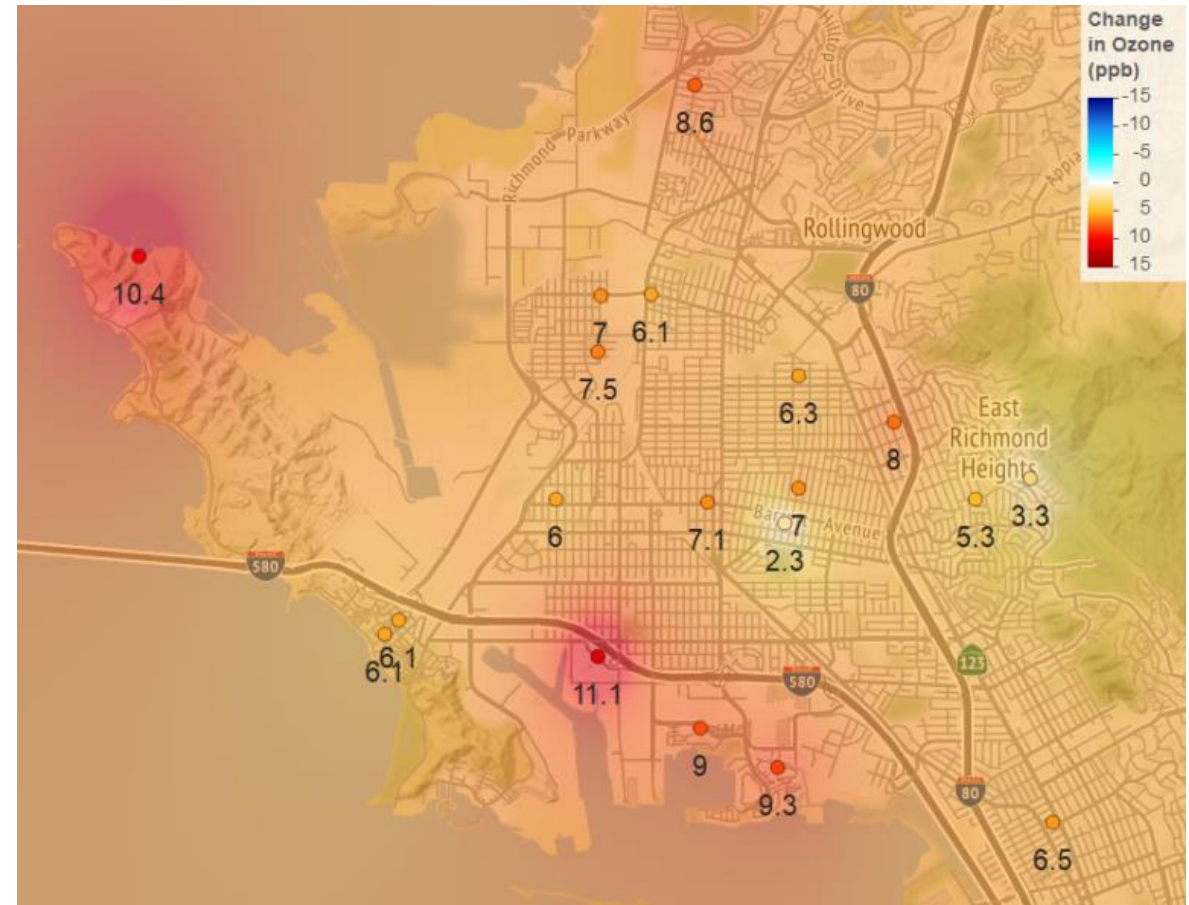
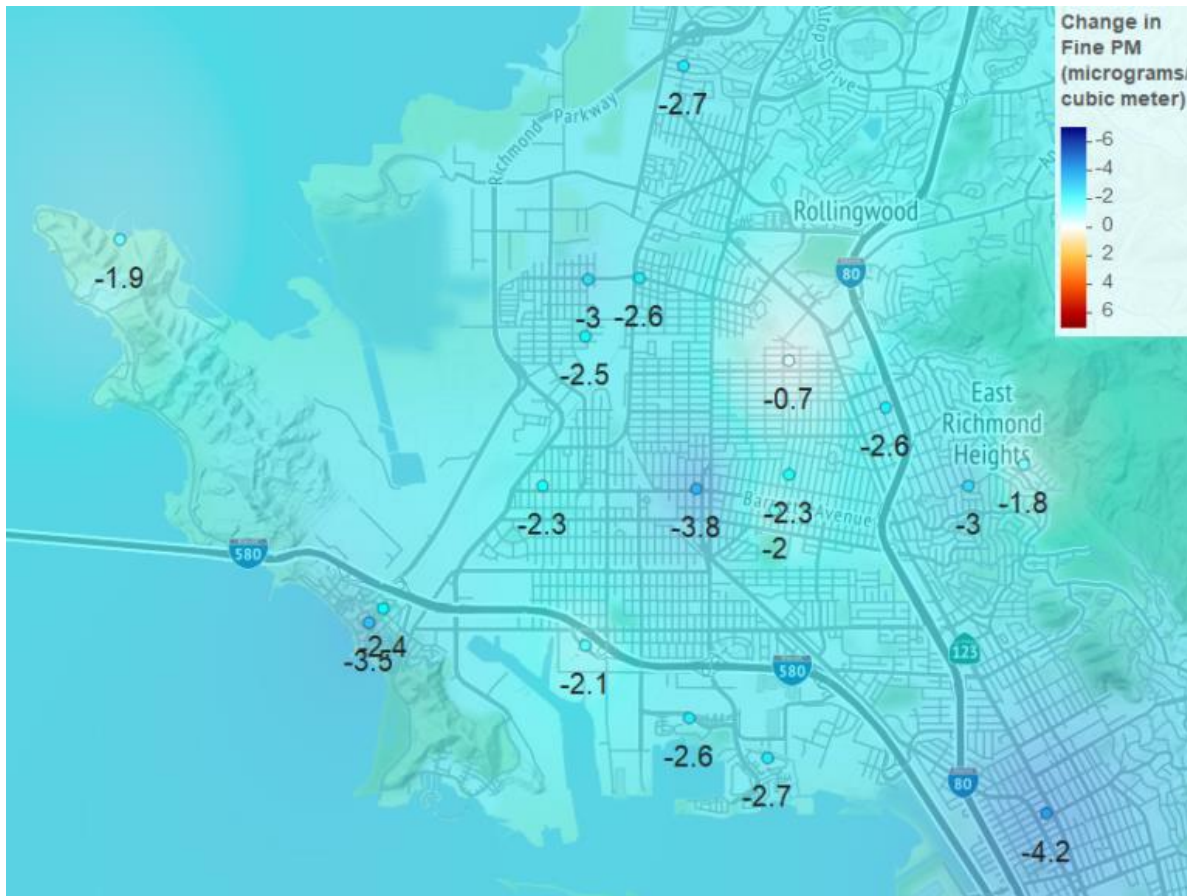
<https://www.ucsusa.org/resources/inequitable-exposure-air-pollution-vehicles-california-2019>

AB 617 Community Air Grant Partners & Project Goals



AIRE COLLABORATIVE

- Install particulate matter and pilot methane monitors
- Convene Community Steering Committees (CSCs) to inform monitor siting and other decisions
- Integrate data into existing IVAN web/app
- Increase community engagement with air quality and local emissions reduction planning
- Youth leadership development



Community air monitoring data in Richmond CA shows that PM levels decreased near freeways and railroads during the lockdown ...

Monitoring data also shows that ground-level ozone has increased near industrial land uses at this time

Source: Lukanov and Smith, PSE Blog, 4/24/20,
<https://www.psehealthyenergy.org/news/blog/richmond-monitoring-coronavirus/>

Sheltering in place may also be exacerbating existing disparities in air pollution exposures

- Increased online shopping may be redirecting more diesel truck traffic into disadvantaged communities
- Low-income and people of color are also more likely to live with unhealthy housing conditions that can compromise indoor air quality
- Increased construction activity in SF's Bayview-Hunters Point and other densely populated neighborhoods also compromises local air quality

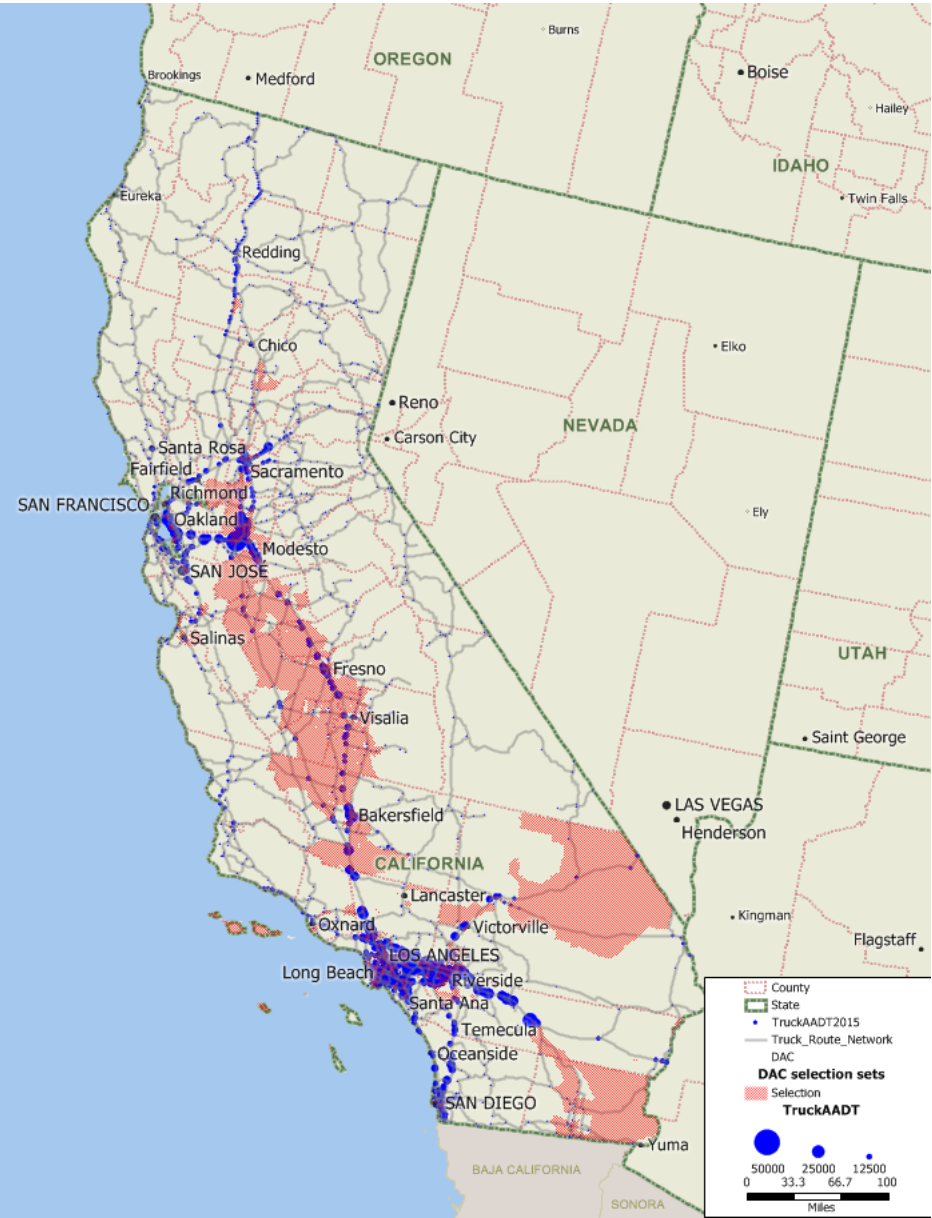


Figure 80. Location of disadvantaged communities (DACs), truck networks, heavy truck volumes

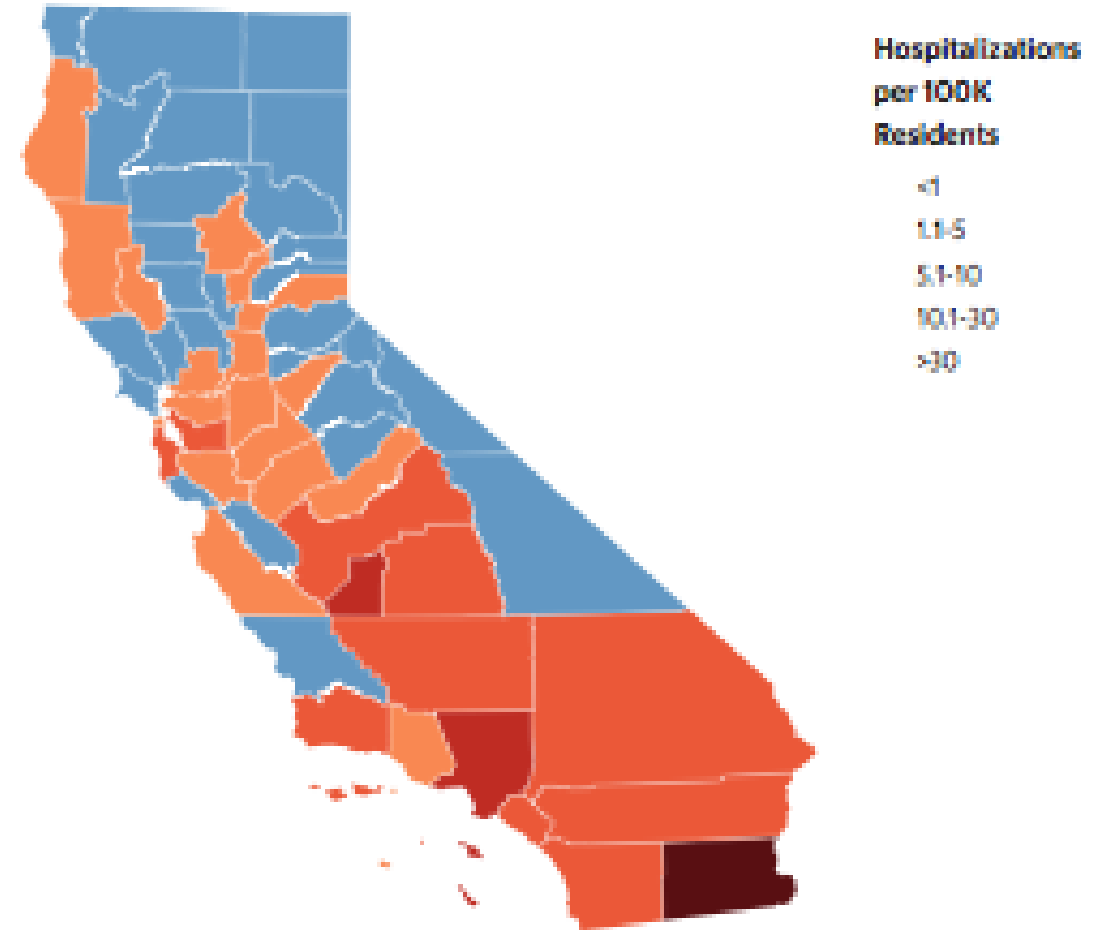
Source: Institute of Transportation Studies 2020, <https://escholarship.org/uc/item/1pv6t7q9>

Long-term exposure to air pollution may be compounding vulnerability to COVID-19 in impacted communities

- Long-term exposure to particulate matter is associated with reduced lung function in children and chronic respiratory conditions like severe asthma
- Imperial County (bottom right) has the highest rates of childhood hospitalizations for asthma AND the highest rates of COVID-19 hospitalizations in California

CURRENT COVID-19 HOSPITALIZATIONS PER 100,000 RESIDENTS

The number of COVID-19 hospital patients on June 2, per 100,000 residents.

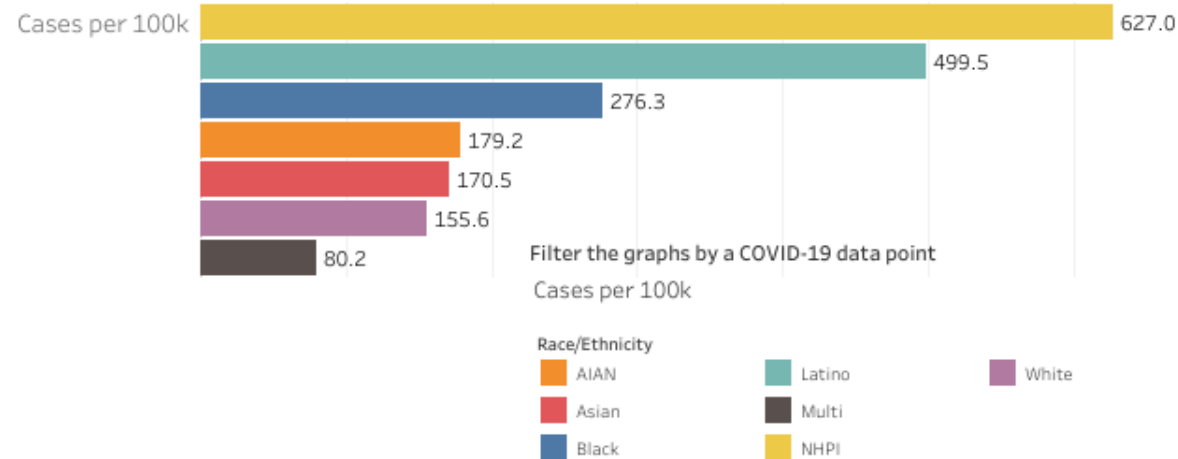


Includes only patients with a confirmed COVID-19 diagnosis. Some patients may be hospitalized outside their county of residence.

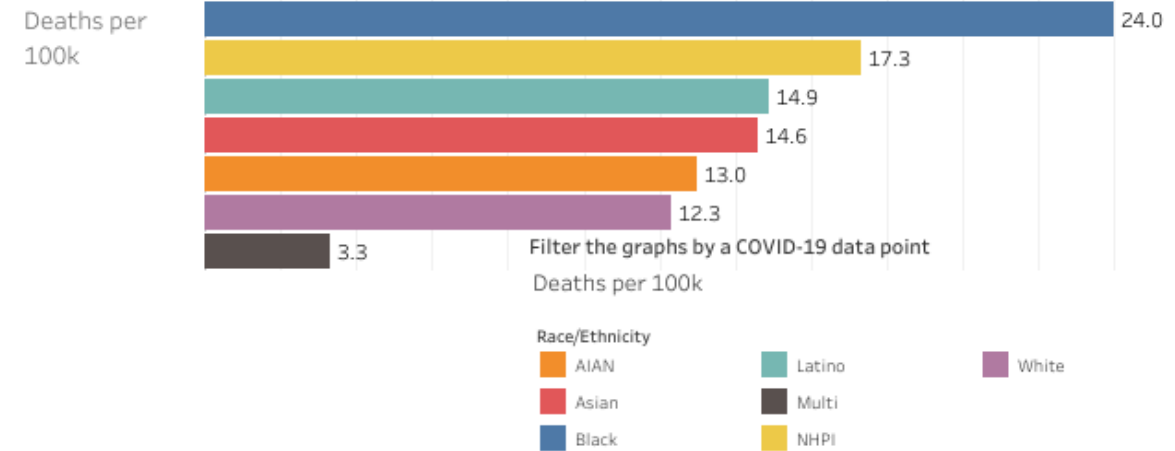
Map: Philip Reese • Source: CA Department of Public Health • [Get the data](#)

Map Source: Philip Reese, Sacramento Bee, June 3 2020

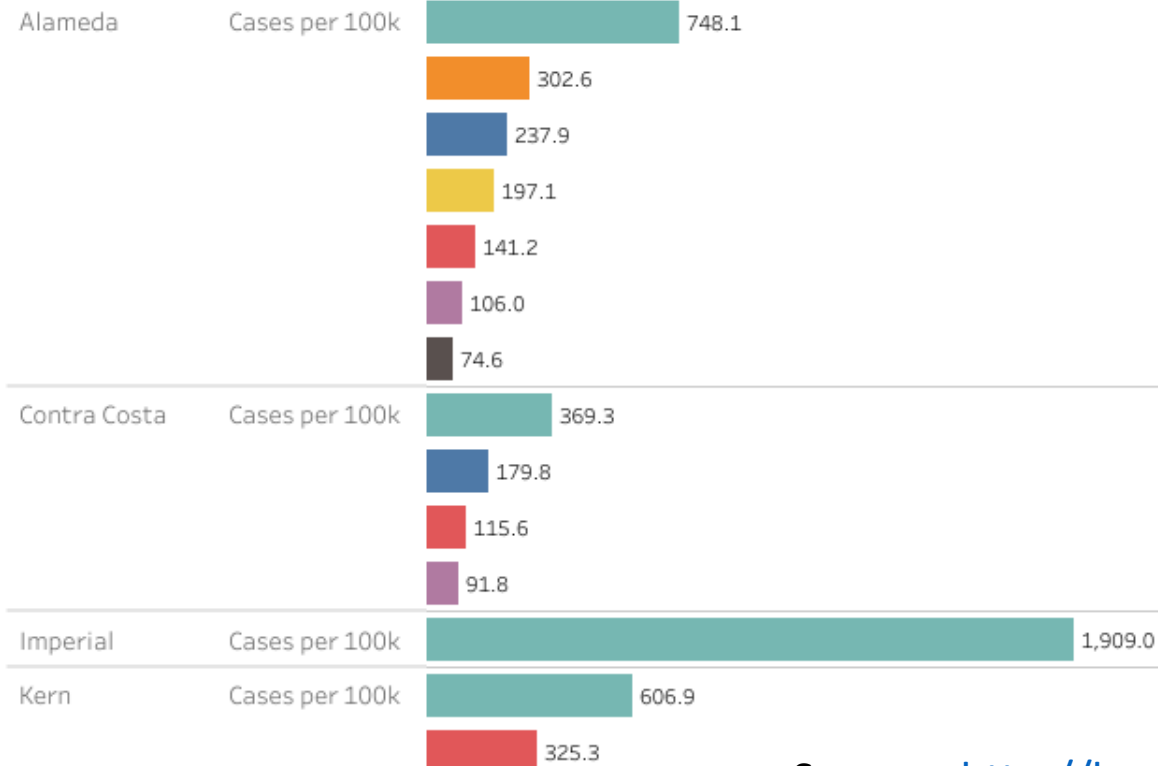
Statewide COVID-19 Numbers & Rates by Race/Ethnicity



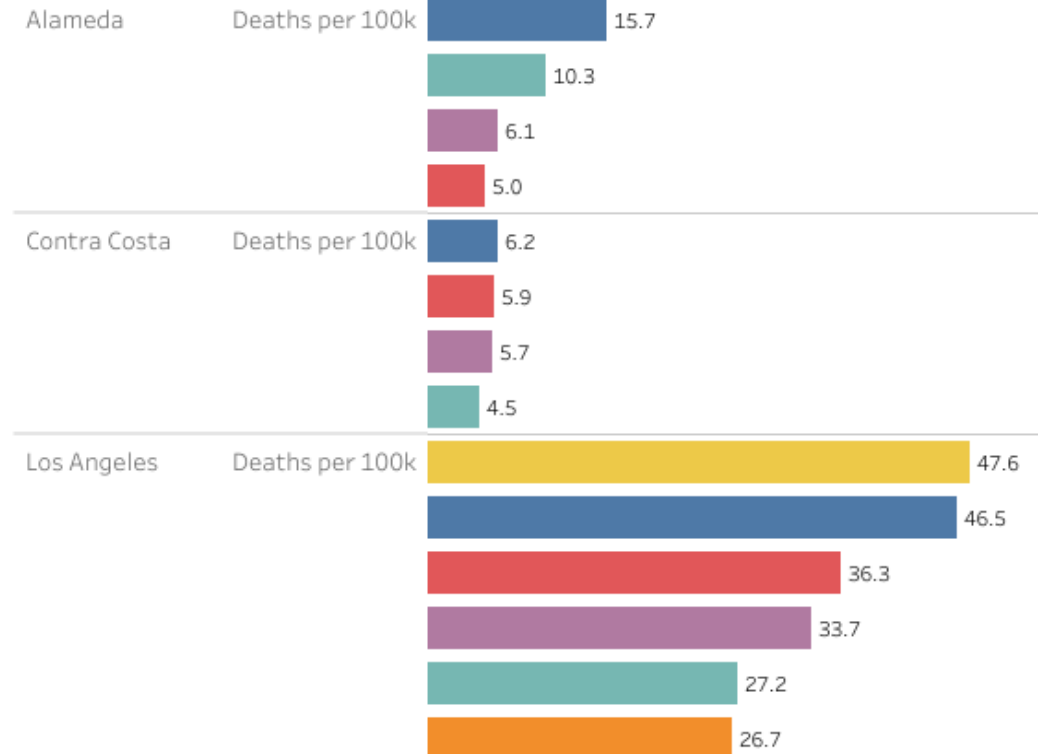
Statewide COVID-19 Numbers & Rates by Race/Ethnicity



Countywide COVID-19 Numbers & Rates by Race/Ethnicity



Countywide COVID-19 Numbers & Rates by Race/Ethnicity



Potential Future Directions to Address Health Disparities

- Improve air monitoring in disproportionately impacted communities
- Engage impacted communities in local emissions reduction planning
- Make disaggregated race and ethnicity data for COVID-19 testing, cases and deaths publicly available
- Prioritize impacted communities in COVID-19 response efforts
- Account for air pollution exposures in local land use & transportation planning

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