



## Press Release

California Environmental Protection Agency  
Office of Environmental Health Hazard Assessment  
Lauren Zeise, PhD, Director

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# Report: California climate change programs reducing air pollution in burdened communities

SACRAMENTO -- California's pioneering efforts to reduce greenhouse gas emissions are significantly reducing harmful air pollution, particularly in communities of color and disadvantaged communities, according to a [new report](#) by the Office of Environmental Health Hazard Assessment (OEHHA).

"This report shows that fighting climate change is having the added benefit of reducing harmful air pollution and improving the health of Californians, especially in overly burdened communities where the need to improve air quality is greatest," said OEHHA Director Dr. Lauren Zeise.

The report evaluates changes in air quality and health effects for residents who live near polluting facilities and face impacts from certain vehicle emissions. The two major sources evaluated were emissions from heavy-duty trucks and major industrial and energy facilities. While the results are encouraging, the report found that residents of the state's disadvantaged communities and communities of color continue to be disproportionately exposed to fine particulate matter and other air contaminants, demonstrating more work is needed to improve public health near polluting facilities.

"By comprehensively tackling air pollution in overburdened communities, the data shows we can make significant improvements. While these pollution reductions are important, the reality remains that Black and Brown communities still suffer California's worst air quality," CalEPA Secretary Jared Blumenfeld said. "By bringing together funding, enforcement, health-focused rules, market-based mechanisms, new technologies and community know-how, we can achieve a future in which all Californians breathe clean air. This report makes clear how we can target our efforts to speed up this transition."

OEHHA scientists studied trends from fine particulate (PM2.5) and toxic heavy-duty vehicle emissions from 2000 to 2019 and used projected reductions of heavy-duty vehicle emissions from 2020 to 2045. They also looked at emissions from 2011 to 2018 for greenhouse gases, PM2.5 and other pollutants from industrial and energy facilities regulated under the state's Cap-and-Trade Program, which is aimed at reducing emissions of greenhouse gases.

Scientists paid particular attention to communities heavily burdened by pollution and examined emissions and benefits of the two programs by race/ethnicity. The California Air Resources Board (CARB) administers the Cap-and-Trade Program and heavy-duty vehicle regulations, along with many other programs focused on reducing emissions of pollutants that impact air quality and climate change.

The report's main findings are:

- **Diesel particulate concentrations from heavy-duty vehicles decreased between 2000 and 2019.** The most substantial reductions were in California communities that were most burdened by pollution and population vulnerability, according to OEHHA's CalEnviroScreen 4.0 screening tool (<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>). In these communities, average diesel particulate levels dropped to less than 25 percent of their 2000 levels by 2019. Even with those reductions, diesel particulate concentrations remain higher in these communities than in other California communities.
- **[Governor Newsom's mandate](#) to use only zero-emission heavy-duty vehicles by 2045 is expected to reduce diesel particulate concentrations by 58 percent compared to current standards.** These reductions could avoid 3800 premature deaths stemming from diesel exposure. People of color would account for two-thirds of these avoided deaths.
- **In 2017, emissions of greenhouse gases, PM2.5 and air toxics from facilities subject to the Cap-and-Trade program were less than in 2012** in the most impacted communities identified by CalEnviroScreen, as well as in most other California communities. The decrease in PM2.5 exposure stemming from these facilities was 45 times greater in the state's most impacted communities than the communities with the lowest overall impacts from pollution. However, individual facilities varied significantly in how their reductions in PM2.5 and air toxics emissions compared to their reductions in greenhouse gas emissions.
- Between 2012 and 2017, Black Californians experienced a four-fold greater reduction than White Californians in airborne concentrations of PM2.5 resulting from emissions reductions at Cap-and-Trade facilities. However, Black Californians still experience twice the exposure to PM2.5 originating from facilities covered by the Cap-and-Trade Program when compared to White Californians.
- Despite these gains, emissions of greenhouse gases, PM2.5 and air toxics from the state's largest facilities remain substantially higher in pollution-burdened communities than in the least-impacted communities as identified by CalEnviroScreen.

The OEHHA report is the second in a series of ongoing evaluations to analyze the benefits and impacts of greenhouse gas emissions limits adopted by the CARB within disadvantaged communities. The report also suggests improvements to the collection and accessibility of environmental data to better inform future reports.

OEHHA released its initial report in 2017 (<https://oehha.ca.gov/media/downloads/environmental-justice/report/oehhaab32report020217.pdf>).

OEHHA's mission is to protect and enhance the health of Californians and our state's environment through scientific evaluations that inform, support, and guide regulatory and other actions.

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