KidsData

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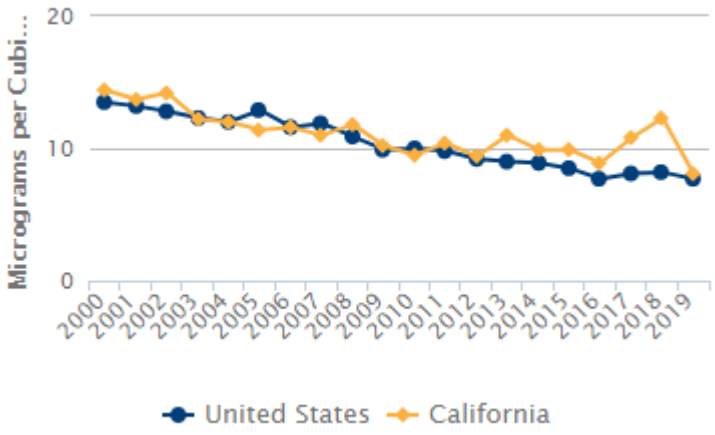
Air Quality in California

Average Particulate Matter Concentration: 2019; Showing Counties
Annual Average Particulate Matter Concentration



Definition: Annual average concentration of fine particulate matter in the air (e.g., in 2019, the average concentration of fine particulate matter in the air in Los Angeles County was 11 micrograms per cubic meter).
Data Source: California Air Resources Board, iADAM: Air Quality Data Statistics; U.S. Environmental Protection Agency, Particulate Matter (PM2.5) Trends (Dec. 2020).

Days with Ozone Concentrations Above National Standard: 2019

Locations	Days

What It Is

Kidsdata.org offers two measures of outdoor air quality related to *criteria air pollutants*:

- The annual average concentration of fine particulate matter (PM2.5) in the air
- The number of days per year with unhealthy ground-level ozone concentrations (i.e., above the national standard of 0.070 parts per million)

Depending on the indicator, data are available for counties, the state (as averages across counties), and/or the nation (as averages across testing sites).

Why This Topic Is Important

Air pollution is a serious threat to children's health, with links to adverse birth outcomes, obesity, cardiovascular and respiratory diseases, and cancer. Long-term effects also can extend beyond physical health—exposure to contaminants, especially at high concentrations and durations, is associated with deficits in cognitive and behavioral development. Children are more vulnerable to air pollution than adults, and younger children more vulnerable than older children, because their bodies and organs are less fully developed, and they breathe more air relative to their size, resulting in greater proportionate exposure. They also may experience greater exposure due to childhood activities like outdoor play.

Air pollution can occur outdoors or indoors. Motor vehicles and industrial facilities are major sources of common outdoor air pollutants, such as ground-level ozone (a main component of smog), fine particulate matter, lead, and noxious gases. These pollutants can flow indoors, where the air may be further polluted by fuel-burning stoves and appliances, household chemicals, building materials, and tobacco smoke. Among common outdoor air pollutants, fine particulate matter and ground-level ozone are considered the greatest threats to human health.

How Children Are Faring

In 2019, the average air concentration of fine particulate matter (PM2.5) across California counties was 8.1 micrograms per cubic meter (μg/m³), a drop of more than 50% compared with 1999 (17.6 μg/m³). This decrease at the state level echoes national trends. At the county level, six of the 44 counties with data in 2019—all in Southern California and the Central Valley—recorded average PM2.5 concentrations above the national public health standard of 12

Alameda County	7
Contra Costa County	2
Fresno County	39
Kern County	54
Los Angeles County	58
Orange County	11
Riverside County	64
Sacramento County	4
San Bernardino County	109
San Diego County	16
Santa Clara County	2

Definition: Number of days per year with ground-level ozone concentrations above 0.070 parts per million (e.g., in 2019, unhealthy ozone concentrations were recorded on 58 days in Los Angeles County).
Data Source: California Air Resources Board, iADAM: Air Quality Data Statistics (Dec. 2020).

μg/m³.

Of the 49 California counties with ground-level ozone data in 2019, 15 did not record any days when ozone concentrations exceeded the current national regulatory standard of 0.070 parts per million (ppm), whereas six recorded more than 30 such days. Forty years earlier, 17 counties recorded 30 or more days above 0.070 ppm.

View references for this text and additional research on this topic:
https://www.kidsdata.org/topic/80/air-quality/summary