

California: Statewide Notes

Regional trend charts, fact sheets, and other resources available online at www.lungusa.org/california

Summary

California is home to some of the most polluted air in the United States, with over 90% of residents living in counties with unhealthy air during some parts of the year. California's air quality challenges stem from a variety of causes including a population of over 36 million, heavy dependency on petroleum for transportation, and climate and geographic and weather conditions that are more conducive to poor air quality. California experiences the worst air pollution conditions in the Central Valley and Los Angeles regions where residents can experience unhealthy air several months of the year. To address these challenges, California has adopted a series of progressive regulations and programs to control mobile and stationary sources over the past four decades that are showing tremendous impacts in reducing emissions from cars, trucks, buses, fuels, construction and agricultural equipment and other sources. Air quality trends show declining emissions in most parts of the state that will lead to public health improvements.

2011 SOTA Grades (2007-2009 air data)

California cities dominate the lists of the ten most polluted cities in America for ozone (smog) and short and long-term particulate pollution. Of the 50 California counties assessed in 2011, 37 received at least one failing grade for unhealthy air.

Ozone pollution remains a significant problem throughout much of California, which is home to 8 of the top ten most ozone-polluted cities in the nation, including the top 7.

- 36 counties received an F for ozone pollution in 2011
- 9 counties received an A, 3 received a B and 1 received a C

Short Term particulate pollution is also a challenge to much of the state. California is home to 6 of the top 10 most polluted by short-term particles, including the top 2.

- 19 counties received an F for short-term particulate pollution in 2011
- 6 received an A, 6 received a B, 3 received a C and 5 received a D

Year-round particulate pollution is less of a challenge statewide, but very serious in some parts of the state. Six of the cities most polluted by annual levels of particulates are in California, including the 4 of the top 5.

- 30 counties received a PASS
- 7 counties received a FAIL

Despite these challenges, SOTA 2011 shows significant improvements for most areas of the state compared to SOTA 2010.

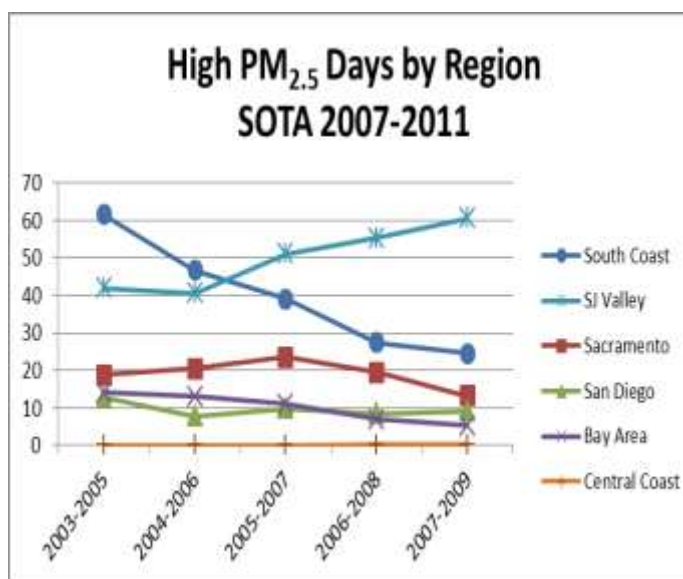
- The San Francisco Bay Area showed improvement for particle pollution in five counties including San Francisco, Santa Clara and Contra Costa and improvement in ozone pollution in three counties including San Benito, Alameda, and Santa Clara.
- The Sacramento Valley region showed improvements in ozone pollution in almost all areas, and the Sacramento Valley region showed the best ozone levels so far in this decade.
- The San Joaquin Valley region showed improvement in almost all counties for ozone pollution.
- In the Los Angeles region, all counties showed reduced days of ozone pollution and Riverside County showed reduced unhealthy days for particle pollution.
- The San Diego region showed improvement in ozone pollution.

Key Emissions Sources

- Mobile Sources (motor vehicles, diesel trucks and buses, off-road sources including construction equipment, ports, trains, etc.) are responsible for over 70% of smog forming emissions in California and about 20% of the fine particulate emissions in the state.
- Stationary Sources like oil refineries, electric utilities and manufacturing plants.
- Residential wood burning (significant contributor to wintertime particulate levels).
- Managed agricultural and forest burning is also a major source of particulate pollution.

Clean Air Progress

Over the past decade, ALA SOTA data shows that the number of unhealthy days for ozone and fine particulate matter (PM_{2.5}) has declined in most of the highest polluted areas of the state. Due in large part to California's advanced vehicle and fuel regulations, there have been fairly dramatic reductions in days with high particulate matter levels in the South Coast region. At the same time, there is also a continuing trend of increasing numbers of unhealthy days for particulate matter in the San Joaquin Valley that deserves continued focus and attention from air quality regulators.



- Over the past decade, SOTA data shows that the Los Angeles metropolitan area has seen a marked improvement in reducing ozone days, from a high of 189.5 annual bad air days down to 136.8 in the current SOTA assessment - a reduction of nearly two months of bad air or 28%.
- California's Central Valley has shown increases in unhealthy particulate pollution over the past decade. SOTA 2011 (2007-2009 data) found that Kern County (home to Bakersfield) has steadily increased to over 60 high particulate days per year since the 2007 SOTA report when the county experienced 39 unhealthy particle days. However, more recent monitoring data may show improvements.
- The Sacramento region's number of high particle pollution days has dropped by 43% since SOTA 2009.
- The San Francisco Bay Area has shown over a 70% reduction in ozone pollution and over 60% reduction in particle pollution over the past decade.
- San Diego has shown a 51% improvement in ozone pollution over the past decade of SOTA results and overall progress in reducing particle pollution, despite a small uptick this year.

Statewide Charts

The charts presented on the following page provide an overview of the changes in high pollution days reported in SOTA 2010 (2006-2008 air data) versus the high pollution days reported in the 2011 report. The counties on the left of the chart (blue bars) experienced less bad air days, counties on the right of the chart showed fewer improvements, and in some cases had more bad air days (red bars circled).

Overview of Changes from SOTA 2010 to SOTA 2011

