# 10 U.S. Cities With the Worst Atellth Pollution

The good news: Air has gotten cleaner in recent years. Now the bad: More than half of people in the U.S. still breathe air dirty enough to cause health problems, according to the American Lung Association.

Lynne Peeples September 26, 2016



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#### Better air quality

Air has gotten cleaner in recent years. But more than half of people in the U.S. still breathe air dirty enough to cause health problems, according to an American Lung Association (ALA) report.

"There is always going to be a dirtiest city," says Joel Kaufman, MD, director of the Occupational and Environmental Medicine Program at the University of Washington, in Seattle.

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Here are the 10 cities with the highest levels of fine particulates, based on annual average.

Particulates are tiny (2.5 microns or smaller) and get deep in the lungs, causing health problems.

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#### Bakersfield, Calif.

Population: 874,589

Bakersfield, Calif., residents breathe some of the country's most polluted air, based on several measures. The area ranks highest in annual and 24-hour peak averages in fine particulates.

Agriculture in this region of the San Joaquin Valley "whips up" a lot of dust, pesticides, and fertilizers, says Dr. Kaufman.

North of Los Angeles, the area also has the second-highest level of ozone pollution in the U.S. Mountains surround the valley on three sides, creating inversion layers that trap pollution, with little wind to carry it away.

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## Visalia-Porterville-Hanford, Calif.

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Population: 608,467

Not far from Bakersfield, Visalia, Porterville, and Hanford also struggle with dirty air.

Fine particles emitted by vehicles (especially diesel-powered ones), coal-fired power plants, and burning wood can penetrate deep into the lungs, while car exhaust, heat, and sunlight contribute to high ozone levels.

The dual airway irritants can exacerbate asthma and chronic obstructive pulmonary disease (COPD) as well as make breathing more difficult for people with healthy lungs.



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#### Fresno-Madera, Calif.

Fresno and neighboring Madera suffer from a trifecta of traffic, sunshine, and agriculture.

The ALA says there is growing evidence that breathing pollution near busy roads may not only worsen diseases over time, but also increase the risk of chronic diseases such as diabetes, heart disease, asthma, and COPD.

This region of the San Joaquin Valley ranks among

the worst for ozone and short-term particle pollution—fourth and second spots, respectively.



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#### Los Angeles-Long Beach, Calif.

Population: 18,550,288

Lots of people, cars, factories, and shipping ports, as well as sunny, stagnant weather and a "bowllike" topography, all contribute to local air pollution. (L.A. is the top spot for ozone and fourth for year-round particulates.)

"But there's reason to be a little optimistic," says Jonathan M. Samet, MD, director of the Institute for Global Health at the University of Southern California, in Los Angeles. "It's a pretty nice day and I can see downtown L.A. That would not have been the case 30 or 40 years ago."



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#### El Centro, Calif.

Population: 179,091

Located in the Southern California Border Region, El Centro is home to two international border crossings that attract a steady stream of traffic on both sides. Vehicles wait in long lines, spewing exhaust as they idle. The region's dry heat makes conditions even worse for people with COPD and asthma.

There are also many farms near El Centro, and dirt roads often kick up dust.

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### San Jose-San Francisco-Oakland, Calif.

Population: 8,607,423

In the Bay Area, there are two main causes of poor air quality: ozone (for which it ranks 16th) and particulate matter. Ozone is a bigger problem in the summer, while wood smoke from woodstoves and fireplaces make air quality problematic in the winter.

The Bay Area recognizes that its air quality needs improvement, and the Bay Area Air Quality
Management District has a program called Spare the Air to educate residents about air pollution, and to educate them on the ways their actions affect air quality.

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#### Modesto-Merced, Calif.

Population: 798,350

Modesto, located in the San Joaquin Valley, is surrounded by farmland and suffers from agricultural pollution similar to that in Bakersfield and the surrounding areas. It ranks fourth for short-term air particle pollution and seventh for ozone.

But this city, too, is making efforts to clean the air, including establishing strict rules for the burning of trash and yard waste.



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### Pittsburgh-New Castle-Weirton, Penn.-OH-W. Va.

Population: 2,653,781

Although far less common than in the past, the processing of coal and, yes, steel continues in this part of the Ohio River Valley.

The region ranks eighth in annual particle pollution, 14th for 24-hour particle pollution, and 26th for ozone.



### Harrisburg-York-Lebanon, Penn.

Population: 1,239,677

This central Pennsylvania region has seen its air pollution worsen dramatically in recent years. In 2014, it ranked 33rd for year-round fine particle pollution; in 2015, 12th; and now, ninth.

Harrisburg is an area with a lot of commuters. Plus, strong winds bring pollution from Baltimore and Washington, D.C., said Kevin M. Stewart, director of environmental health for the American Lung Association for the region, in an interview with the Harrisburg *Patriot-News*.

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#### Louisville-Jefferson County-Elizabethtown-Madison, KY-IN

Population: 1,498,593

The Louisville area is surrounded on all sides by hills that can hold dirty air hostage.

The heat island effect also concentrates pollutants

in the urban region of Louisville.

The region is 10th for annual particle pollution and 53rd for 24-hour particle pollution, but didn't make the top 25 list for ozone.