Downtown Los Angeles framed by a strip of smog in 2008. Air quality in the region has shown marked improvement in recent years, according to a new report from the American Lung Association. Photo by Don Ryan, the Associated Press.

The coastal Southern California region that includes Orange County remained among the five smoggiest in the nation according to the latest air-pollution report from the American Lung Association.

But the yearly “State of the Air” report also held more than a glimmer of good news: Air quality is showing significant improvement, even in the wider region that includes Los Angeles, Riverside, Long Beach and Orange County.

“We still have a lot of work to do,” said Bonnie Holmes-Gen, executive director of air quality and health for the American Lung Association in California. “But a lot of progress has been made. We’ve seen about a 33 percent reduction in the number of unhealthy days for ozone in the region.”
And while Orange County was dinged with “F” grades, improvements are being seen here, too.

“Orange County, in particular, has done very well,” she said. “There’s an average of about 10 days a year. It’s still an F-grade by our grading system, but clearly it’s far below the 95 or 100-plus days we’re seeing on other parts of the region. Orange County has the fewest number of bad-air days in the metropolitan area.”

The yearly rankings from the advocacy group rely on data from air-pollution monitoring stations across the country, and cover the three previous years. The new report, spanning 2008 to 2010, places “Los Angeles-Long Beach-Riverside,” with Orange County rolled in, at the top of the list of the 25 metropolitan areas with the most ground-level ozone pollution.

The L.A. region also landed in the top five for short-term spikes in pollution from tiny airborne particles, as well as the top five for particle pollution year-round.

Ozone is created when nitrogen oxides and hydrocarbons from tailpipes, smokestacks and other sources react with sunlight. Tiny particles can come from dust storms, construction work, agricultural operations and mining. Cars and trucks generate them as well, including bits of brake pads and tires.

Much finer particles come from combustion in power plants and factories, as well as cars and trucks.

In all three categories — ozone as well as short and long-term particle pollution — the top five spots on the list of the worst all were held by California metropolitan areas. The worst in the country for both year-round and short-term particles was Bakersfield-Delano, with Los Angeles-Long Beach-Riverside at number three for year-round, number four for short-term.

In a separate ranking of California counties, Orange received a failing grade for the number of days with high ozone pollution, as well as short-term particle pollution.

We got a “pass,” however, for year-round particle pollution.

Despite its bad marks, the larger Los Angeles region as defined in the report had the fewest unhealthy ozone days in the 13 years that the reports have been compiled.

The region also improved its numbers in the year-round particle category, though the regional picture got worse for short-term particles.

Regional improvements are part of a nationwide trend, the Lung Association said. Ozone improved in 22 of the 25 worst cities since the last report. Twenty four of the 27 worst for year-round particles saw improvement, while half of the 26 worst for short-term particles also improved.
The Lung Association credits tighter standards for the drop in pollution, and raps members of Congress who, the agency says, want to weaken the Clean Air Act and other air-quality protections.

The report says 41 percent of Americans, some 127 million, live in counties with harmful levels of ozone pollution, 16 percent, or nearly 50 million, live in 66 counties with harmful spikes in particle pollution, and 2.1 percent, or nearly 6.4 million, live with harmful year-round particle pollution.

More than 5.7 million, or 1.9 percent, live in counties that have all three.

Ozone can worsen asthma, bronchitis and emphysema, while particle pollution can increase the risk of heart attacks, strokes and other cardiovascular disease.

“Particle pollution is the most deadly pollutant in terms of causing the most number of premature deaths,” Holmes-Gen said. “A lot of that is due to heart attacks and strokes. Diesel particles contribute to lung cancer also.”

As in most years, the report calls for protection of the Clean Air Act and the passage of stricter pollution standards.

The Lung Association’s report is “pretty much on the same page” as a similar air-quality report generated by the California Air Pollution Control Officers’ Association, said Sam Atwood, spokesman for the South Coast Air Quality Management District.

“Of course, one big difference is that the Lung Association uses letter grades that don’t really have a basis in reality — especially for Orange County,” Atwood said. “Air pollution has declined dramatically, and Orange County has the best air quality in Southern California. Everything else, I think, is really on point.”
**Bad days**
According to the American Lung Association, California counties occupy the top ten of the 25 most ozone-polluted counties nationwide. Below, the top five and how Orange County compares:

The number of high ozone days in unhealthy ranges, 2008-2010

<table>
<thead>
<tr>
<th>County</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Bernardino</td>
<td>127.8</td>
</tr>
<tr>
<td>Riverside</td>
<td>111.3</td>
</tr>
<tr>
<td>Tulare</td>
<td>95.7</td>
</tr>
<tr>
<td>Kern</td>
<td>95</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>86.2</td>
</tr>
<tr>
<td>Orange</td>
<td>10.7</td>
</tr>
</tbody>
</table>

**Who’s at risk in O.C.**

<table>
<thead>
<tr>
<th>Category</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>3.01 million</td>
</tr>
<tr>
<td>Age 65 and older</td>
<td>349,677</td>
</tr>
<tr>
<td>Under 18 years old</td>
<td>736,659</td>
</tr>
</tbody>
</table>

People living with the following conditions

- Cardiovascular disease: 717,529
- Poverty: 363,924
- Diabetes: 197,679
- Adult asthma: 174,505
- Chronic bronchitis: 96,221
- Pediatric asthma: 48,867
- Ephymsema: 40,413

Source: American Lung Association

The Register
Reader Rebuttal (James Enstrom): Air pollution in L.A. region

By JAMES ENSTROM / Member, research faculty, UCLA School of Public Health and has been conducting epidemiologic research there since 1973.

The April 25, 2012, Register article "Smog report: L.A. region still among the nation's worst" is highly misleading because it uncritically relies upon two reports that exaggerate the air pollution problem in Los Angeles and Orange Counties. The air pollution problem is also exaggerated by the California Air Resources Board, and the South Coast Air Quality Management District, the two agencies that have responsibility for air quality in Southern California.

The first report, "State of the Air 2012" by the American Lung Association (ALA), focuses on two major air pollutants, ozone and fine particulate matter (PM2.5). The counties of Los Angeles and Orange and the Los Angeles South Coast Air Basin are listed as "Fail" and given a ranking of "F" based on the ALA assessment of the number of days that measured levels of ozone and PM2.5 exceed the National Ambient Air Quality Standards (NAAQS). The NAAQS were set by the US Environmental Protection Agency (EPA) in 1997 and 2006 based on the EPA assessment of the national health effects associated with these pollutants. However, extensive new evidence has been published since 2006 indicating that the health effects of these pollutants in California are substantially less than the national health effects. Also, in spite of the fact that air pollution in the South Coast Air Basin is at a record low level and that the associated health effects are minimal, the ALA report calls for "the passage of stricter pollution standards."

The second report, the April 2012 "California's Progress Toward Clean Air" by the California Air Pollution Control Officers' Association (CAPCOA), makes inaccurate claims about air pollution. The claim "For the South Coast ... the annual health costs of air pollution have been estimated to total $22 billion ($1,250 per person). . ." comes from an unpublished 2008 cost-benefit analysis done by CSU Cal State Fullerton professor Jane Hall. The claim "9,200 annual cases of premature cardiopulmonary deaths could be avoided if the national annual standard for PM2.5 was attained." comes from an unpublished 2010 CARB report on premature deaths associated with PM2.5 in California. Both the Hall and CARB reports rely primarily on the small positive relationship between PM2.5 and total mortality found in one nationwide study. This is the American Cancer Society's 1982 Cancer Prevention Study (CPS II) that examined PM2.5-related deaths during the 1980s and 1990s. This study has also been used by EPA to set the NAAQS for PM2.5.
The ALA and CAPCOA reports should be modified to reflect the vast amount of null California-specific evidence that now exists. Ten separate analyses of five major cohorts of Californians show that there is no relationship between PM2.5 and total mortality (also known as "premature deaths") in California (www.scientificintegrityinstitute.org/Enstrom081111.pdf). Additional evidence shows that ozone does not cause "premature deaths" in California. For instance, during 2007-11 CARB and AQMD paid $750,000 for a major epidemiologic study, headed by UC Berkeley professor Michael Jerrett that examined air pollutants and death in the California subjects within ACS CPS II (http://www.arb.ca.gov/board/books/2007/012507/07-1-4pres.pdf). The results of this study are contained in an October 2011 final report that found PM2.5 and ozone were not related to total mortality during 1982-2000 among about 75,000 California adults, although the authors of the report have made a somewhat different conclusion about their own findings (http://wmbriggs.com/blog/?p=4587).

Thus, a strong case can be made that the current NAAQS are not applicable to California and the South Coast Air Basin and that there are no significant adverse health effects associated with existing pollution levels. Furthermore, any effort to lower the existing levels of ozone and PM2.5 requires very expensive emissions control regulations which have adverse impacts on the California economy. These regulations can be only justified on a cost-benefit basis only if the air pollutants cause "premature deaths." But, as explained above, there are no such deaths in California. Thus, further regulations from CARB and AQMD are not scientifically and economically justified. Nevertheless, CARB has recently implemented multibillion-dollar diesel vehicle regulations designed to reduce PM2.5 (www.forbes.com/2010/06/08/california-diesel-regulation-pollution-opinions-columnists-henry-i-miller-james-e-enstrom.html).

Bonnie Holmes-Gen, executive director of Air Quality and Health for ALA in California, and Dr. Barry Wallerstein, executive officer of AQMD and South Coast APCO, are well-aware of the null California-specific evidence that has been presented to them since 2008. Yet, their latest reports do not contain this evidence and continue to exaggerate the air pollution problem in California. Future versions of these reports should accurately describe the California-specific evidence. Also, the California-specific evidence should be incorporated into the 2012 AQMD Air Quality Management Plan (www.aqmd.gov/aqmp/2012aqmp/index.htm). This plan will be finalized this year, and it is very important that it accurately reflect air pollution health effects in California and fully justify additional air pollution control measures in the South Coast.
DIAMOND BAR, AQMD Executive Officer Barry R. Wallerstein, D.Env: In his June 4 Reader Rebuttal, “Air pollution in L.A. region” James Enstrom makes several statements about the health effects of air pollution that are simply untrue. According to Enstrom, air pollution does not cause any premature deaths in Southern California and our air – among the dirtiest in the nation – doesn’t cause any significant health problems whatsoever.

An overwhelming body of peer-reviewed scientific research, some of it conducted right here in the Southland, proves his statements false. In one landmark study of more than 1,700 children in 12 Southland communities, air pollution stunted the growth of children’s lungs, potentially foreshadowing compromised lung function as adults. (See New England Journal of Medicine article here)

Studies specific to residents of Southern California have found significant associations of premature deaths and levels of particulate air pollution. (Abstract here)

The U.S. Environmental Protection Agency’s Clean Air Scientific Advisory Committee, composed of scientists with impeccable credentials and chaired by Dr. Jonathan M. Samet, a department chair at USC, has found that today’s health standard for particulate matter is not stringent enough to protect public health (See the Report here).

Relying on the best available science, AQMD works with community and business leaders to achieve health-based clean air standards required by federal law while also supporting economic growth.

To get a sense of the human impact of air pollution, I strongly urge your readers to view AQMD’s signature film at www.TheRightToBreathe.org.

The Los Angeles skyline is obscured by a heavy layer of smog and fog Tuesday afternoon, July 15, 2003, in Los Angeles. With 41 days of unhealthy air quality measured so far this year, Southern California appears to be heading into one of the worst air pollution seasons in five years. (AP Photo/Jerome T. Nakagawa)
Excessive regulations = unemployment

LOS ANGELES. James E. Enstrom, Ph.D., M.P.H., UCLA School of Public Health: The claim in the June 14 letter “Fighting for our ‘right to breathe’” by Dr. Barry Wallerstein that “James Enstrom makes several statements about the health effects of air pollution that are simply untrue” is false. During the 38.5 years I have been an epidemiologist at UCLA I have an impeccable record of making true statements. I never stated “our air – among the dirtiest in the nation – doesn’t cause any significant health problems whatsoever.”

Actually, in my June 4 Reader Rebuttal [“Air pollution in L.A. region”] I stated “a strong case can be made that the current National Ambient Air Quality Standards are not applicable to California and the South Coast Air Basin and that there are no significant adverse health effects associated with existing pollution levels. Furthermore, any effort to lower the existing levels of ozone and PM2.5 requires very expensive emissions control regulations that have adverse impacts on the California economy. These regulations can be only justified on a cost-benefit basis only if the air pollutants cause ‘premature deaths.’”

Dr. Wallerstein has not refuted my overwhelming evidence that PM2.5 does not cause premature deaths in California. The single 2005 Jerrett study that he cited as evidence of PM2.5-related deaths in Southern California must be put in perspective with all the existing evidence, particularly the unequivocally null 2011 Jerrett study. The September 10, 2010 letter to the EPA signed by Dr. Jonathan M. Samet and cited by Dr. Wallerstein reflects the opinion of the Clean Air Scientific Advisory Committee members regarding PM2.5 health effects and NAAQS. However, this letter has not been acted upon by EPA and it provides no evidence that PM2.5 causes premature deaths in California. Furthermore, serious concerns have recently been raised regarding the objectivity of CASAC members.

Finally, concern about air pollution in the South Coast Air Basin should be put into proper perspective, because there are many other factors that have an impact on health, such as, unemployment due to excessive air pollution regulations.