Despite negative public perception and misleading portrayals, American air quality has improved dramatically.

Clearing the Air

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THE UNITED STATES HAS MADE DRAMATIC progress in reducing air pollution over the last few decades, and most American cities now enjoy relatively good air quality. But polls show that most Americans believe air pollution has grown worse or will become worse in the future, and that most people face serious risks from air pollution.

This disconnect between perception and reality is, in part, the result of environmental activists' exaggerations of air pollution levels and risks, which make air pollution appear to be increasing when in fact it is has been declining. State and federal regulatory agencies sometimes also resort to such tactics, and the media generally report those claims uncritically. As a result, public fears over air pollution are out of all proportion to the actual risks posed by current air pollution levels, and there is widespread but unwarranted pessimism about the nation's prospects for further air pollution improvements.

If people overestimate their exposure to and risk from air pollution, they will demand stricter, more costly air pollution regulation. We face many threats to our health and safety, but have limited resources with which to address them; by devoting excessive resources to one exaggerated risk, we are less able to counter other genuinely more serious risks. People can make informed decisions about air pollution control only if they have accurate information on the risks they face.

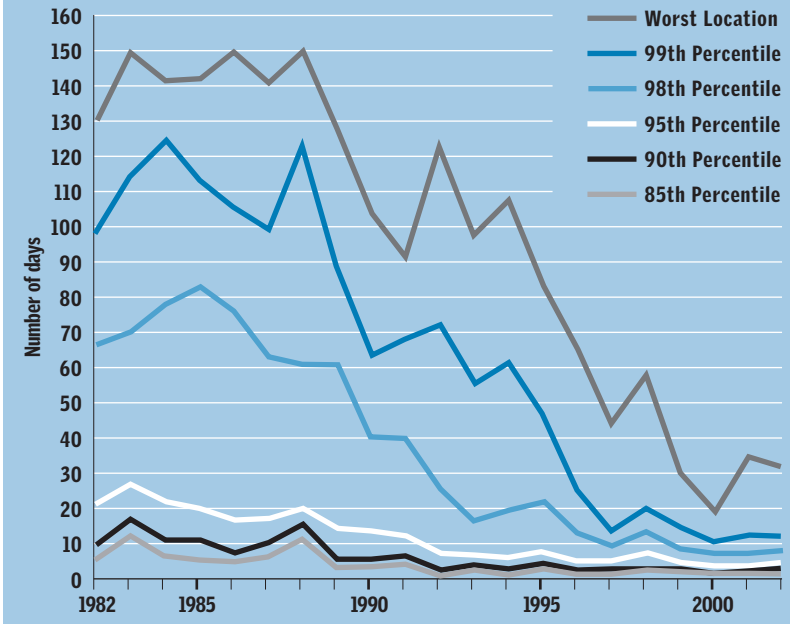
PERCEPTION AND REALITY

The Environmental Protection Agency monitors ozone and other air pollutants at hundreds of locations around the United States. EPA has two ozone standards: The first, known as the "one-hour standard," requires that daily ozone levels exceed 125 parts per billion (ppb) on no more than three days in any consecutive three-year period. Ozone levels are determined based on hourly averages (hence the name of the standard). EPA's "eight-hour standard," promulgated in 1997, is more stringent. It requires that the average of the fourth-highest daily, eight-hour average ozone level from each of the most recent three years not exceed 85 ppb. The standards are difficult to compare because of their different forms, but the one-hour standard is roughly equivalent to an eight-hour standard set at about 95 ppb.

FIGURE 1

Improving Ozone Levels

Trend in the number of days per year that the worst ozone locations in the nation exceeded the federal one-hour, 125 ppb ozone benchmark.



SOURCE: EPA AIRData website, www.epa.gov/aqspubl1/select.html.

NOTE: The chart is based on all locations with data in a given year. The number of monitoring locations has risen with time. Locations were ranked from worst to best for each year, and percentiles were plotted to create this chart.

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In the early 1980s, half of the nation's monitoring stations registered ozone in excess of the federal one-hour health standard, and they averaged more than 12 such exceedances per year. But as of the end of 2002, only 13 percent of the stations failed the one-hour standard and they averaged just four exceedances per year. Figure 1 displays national ozone trends and shows that even the most polluted areas of the country achieved impressive ozone reductions during the last 20 years. About 40 percent of monitoring locations currently exceed the more stringent eight-hour standard, but peak eight-hour ozone levels are also declining in most areas.

The nation's success with air quality extends beyond ozone to other pollutants. For example, between 1981 and 2000, carbon monoxide (CO) declined 61 percent, sulfur dioxide (SO_2) 50 percent, and nitrogen oxides (NOx) 14 percent. Only two among hundreds of the nation's monitoring locations still exceed the CO and SO_2 standards. All areas of the country meet the NOx standard. For all three pollutants, pollution levels are well below the EPA standards in almost all cases.

Likewise, airborne particulate matter (PM) has also registered large declines. $PM_{2.5}$ (PM up to 2.5 microns in diameter) dropped 33 percent from 1980 to 2000, while the soot emissions rate from diesel trucks is down almost 85 percent since 1975.

This downward trend in pollution levels will continue. On-road pollution measurements show per-mile emissions from gasoline vehicles are dropping by about 10 percent per year as the fleet turns over to more recent models that start out and stay much cleaner than vehicles built years ago. Diesel truck emissions are also declining, albeit about half as fast. Although motorists are driving more miles each year and population growth means more motorists on the roads, the increases in driving are tiny compared to the large declines in vehicle emission rates and will do little to slow progress on auto pollution.

Emissions from industrial sources will also continue to drop. Starting in 2004, EPA regulations require a 60 percent reduction in warm-season NOx emissions from coal-fired power plants and industrial boilers — the major industrial sources of ozone-forming pollution. The federal Clean Air Act requires a 20 percent reduction in PM-forming SO_2 from power plants between 2000 and 2010. Those reductions are in addition to substantial declines in industrial NOx and SO_2 emissions over the last 30 years.

MORGAN BALLARD

Misperceptions Despite past success in reducing air pollution and the positive outlook for the future, polls show most Americans think air pollution is getting worse. For example:

- A January 2002 Wirthlin Poll found that 66 percent of Americans believe air pollution has gotten worse during the past 10 years, up from 61 percent two years before, while a poll commissioned by Environmental Defense in 2000 found that 57 percent of Americans believe environmental conditions have gotten worse during the last 30 years.

- Americans also believe that environmental quality will decline in the future. The 2000 Environmental Defense poll found that 67 percent of Americans believe air pollution will continue to get worse. Likewise, a March 2001 Gallup Poll found that 57 percent of Americans believe

environmental quality is deteriorating. A 1999 *Washington Post* poll found that 51 percent of Americans believe pollution will greatly increase in the future, up from 44 percent in 1996. State-based surveys have found similar results. The Public Policy Institute of California recently reported that 78 percent of Californians believe the state has made only "some" or "hardly any" progress in solving environmental problems.

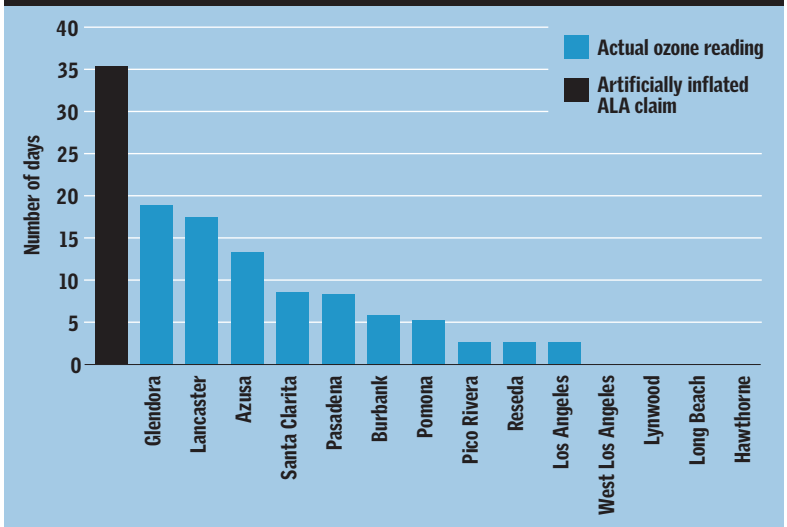
■ Most Americans also believe air pollution is still a serious threat to their health. Some 80 percent of New Yorkers rate air pollution as a "very serious" or "somewhat serious" problem, as do 77 percent of Texans. When asked about the most serious environmental issue facing California, a 34 percent plurality chose air pollution, with "growth" coming in a distant second at 13 percent.

According to the old saying, "It's not the things we didn't know that hurt us; it's the things we knew for sure that turned out to be wrong." When it comes to air pollution, why do most Americans "know" so much that is not so? Americans consider environmental groups the most credible sources of information on the environment, yet those activist groups consistently provide misleading information on air pollution levels, trends, risks, and prospects. Americans also trust information from regulatory agencies, yet the agencies often paint a misleadingly pessimistic picture. At the same time, the media often provide extensive coverage of air pollution reports and press releases from environmentalists and government regulators, yet the press reports rarely include critical examination or context on the claims those organizations make.

FIGURE 2

L.A. Air

The American Lung Association's claim as to the air quality in Los Angeles County compared to the results from monitoring stations in various parts of the county.



SOURCES: The American Lung Association's "State of the Air: 2003"; EPA's AIRData web site.

INFLATING AIR POLLUTION EXPOSURE

In its report "State of the Air 2003," the American Lung Association claimed that between 1999 and 2001, Los Angeles County averaged 35 days per year with ozone in excess of EPA's eight-hour ozone benchmark of 85 ppb. Yet, as shown in Figure 2, none of L.A. County's 14 ozone monitors registered anywhere near that many ozone exceedances. Indeed, the average L.A. County location averaged six exceedances per year — 83 percent less than the report claims — while the most densely populated areas of the county never exceeded the EPA benchmark at all.

The American Lung Association derived its inflated value by assigning an ozone violation to the entire county on any day in which at least one location in the county exceeded 85 ppb. For example, if ozone was high one day in Glendora and the next day in Santa Clarita, 50 miles away, the report counted two high-ozone days for all 9.5 million people in L.A. County. The logical fallacy here is obvious — it is like failing an entire class when one student does poorly.

The American Lung Association method exaggerates ozone exposure for tens of millions of people all across the country, as shown in Figure 3. For each county, the dash at the top marks the report's artificially inflated claim, while the other markers show the actual number of elevated ozone days per year at the worst, average, and best location in each county, reading from top to bottom. The average location in a county typically has less than half as many ozone exceedances as the report claims for the entire county.

The Public Interest Research Group (PIRG) took the American Lung Association's techniques to the state level. In its 2002 report "Danger in the Air," PIRG claimed that California exceeded the eight-hour ozone benchmark on 130 days in 2001. Yet almost half of the state's monitoring locations had no exceedances, while the average location had seven. Even the worst location in California had only about half as many ozone exceedances as PIRG claimed for the whole state. PIRG similarly claimed fictionally large ozone problems for every other state it scrutinized.

Regulatory agencies often take a similar tack in reporting ozone levels. For example, EPA recently downgraded California's San Joaquin Valley air district — a multi-county region — from "serious" to "severe" for the one-hour ozone standard. The change gave the region more time to attain the standard, but also required more stringent air pollution controls. In its press release on the action, EPA stated, "Air quality data from 1997 through 1999 indicates the San Joaquin Valley experienced 80 days of unhealthy levels of ozone air pollution." Yet Clovis, a suburb of Fresno and the most polluted location in the valley, had 40 days above the one-hour benchmark, while nearly half of the valley's monitoring locations actually complied with the one-hour ozone standard.

One might argue that talking about the number of days smog is elevated somewhere in a region is not misleading and paints a fair picture of the nature of the regional pollution problem. But the health effects of smog depend on how often a given person is exposed. Because no one is exposed to smog anywhere near as often as the activists' reports claim, the public is being encour-

aged to vastly overestimate its risk from air pollution.

Though dozens of newspapers covered one or more of those reports, most did not include any critical analysis of the proponents' assertions. Only about one in 10 papers flagged concerns regarding the fictional ozone exposure claims.

HOW WIDESPREAD IS AIR POLLUTION?

In the latest installment of its annual air pollution trends report, EPA claimed that 133 million Americans breathe air that exceeds one or more federal air pollution health standards — mainly the tough new annual $PM_{2.5}$ and eight-hour ozone standards. Yet EPA's claim is a substantial exaggeration.

The agency classifies Clean Air Act compliance status at the county level. For example, if any air pollution monitor in a county registers ozone in excess of federal requirements, that county is classified as "non-attainment." Regional classification often makes sense because pollution can be transported many miles from its source. The problem arises because EPA also uses county non-attainment status when counting the number of people who breathe polluted air. Because only one location in a county need exceed an air standard for the entire county to be classified as non-attainment, many people in a non-attainment county might still breathe clean air. Indeed, this situation is the norm, rather than the exception.

Table 1 lists the percentage of monitoring locations that complied with the one-hour and eight-hour ozone standards (as of the end of 2001) in a selection of populous ozone non-attainment counties. As the table shows, most counties have at least some areas with clean air based on the federal standards. For some counties, the vast majority of locations have clean air based on either standard. The percentage of people breathing clean air is also often greater than the monitoring data suggest. For example, the San Diego County town of Alpine, which has a population of about 13,000, is the only location that violates the eight-hour ozone standard. The county's other 2.8 million people — 99.6 percent of the population — breathe air that meets both of EPA's ozone standards.

A detailed geographic analysis would be necessary for a precise estimate, but it is likely that EPA has overestimated by about a factor of two the number of people exposed to ozone in excess of the eight-hour standard. The agency has confused a system for classifying non-attainment areas based on convenient political boundaries with a measure of actual air pollution exposure. Although EPA's trends report does highlight declines in emissions and pollution levels, it nevertheless greatly exaggerates the number of Americans exposed to polluted air.

The American Lung Association and PIRG also exaggerate the geographic extent of high air pollution levels through misleading countywide, or even statewide, summaries of air pollution data. Indeed, most areas given an "F" grade for air quality by the American Lung Association actually comply with EPA's one-hour ozone standard, and many comply with the more stringent eight-hour standard.

BUCKING THE TRENDS

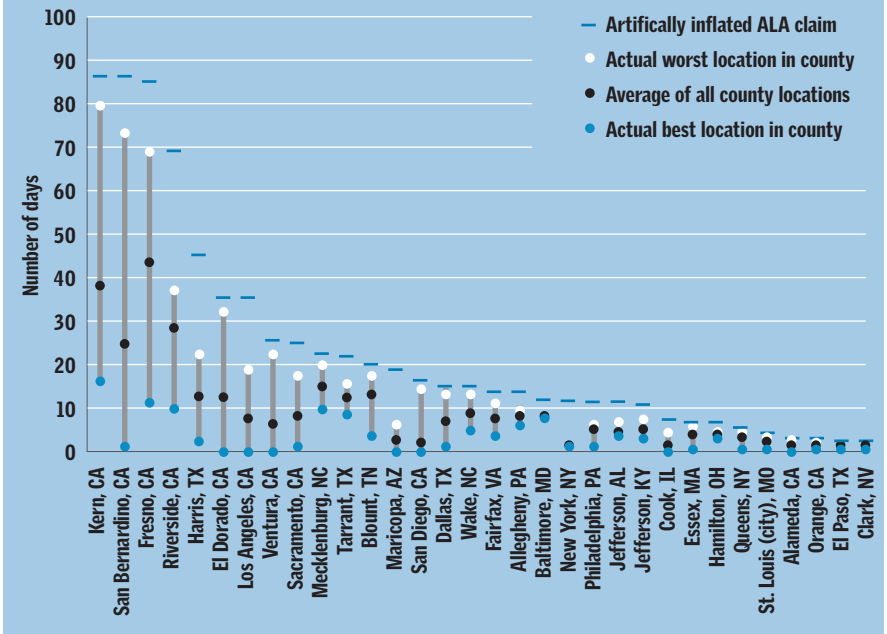
Air pollution, as noted earlier, has been on the decline for decades, and emission trends from vehicles and industrial sources confirm that pollution levels will continue to decline in the future. Yet activists have gone to great lengths to convince the public otherwise. One technique is to ignore long-term trends and instead highlight years in which air pollution levels rose when compared with the previous year.

For example, in "Danger in the Air," PIRG reported a 23 percent increase in eight-hour ozone exceedances between 2001 and 2002, while a recent National Environment Trust press release proclaimed "new survey finds massive smog problem in 2002." Ozone levels did indeed rise between 2001 and 2002, mainly because mild weather in 2001 made it an unusually low-smog year. In fact, despite a substantial overall decline in smog between 1990 and 2002, there were actually five years during this period in which ozone levels rose compared to the previous year in most parts of the country. Ozone levels are strongly affected by weather, which varies from year to year much more than pollution emissions. As a result, single-year changes in either direction cannot be used to infer long-term trends in air pollution. The national-average number of eight-hour ozone exceedances actually declined almost 50 percent between 1999

FIGURE 3

The ALA and the Facts

Number of days per year that various locations exceeded EPA's 85 ppb, eight-hour ozone benchmark compared with the American Lung Association's claims.



SOURCE: The American Lung Association's "State of the Air: 2003"; EPA's AIRData web site.

and 2000 because the weather in 1999 was unusually favorable to smog formation. This single-year change is as meaningless for inferring long-term trends as the rise in ozone between 2001 and 2002 highlighted by PIRG. Nevertheless, it is worth noting that large single-year decreases in air pollution have failed to inspire laudatory reports or press releases from environmental groups on the nation's success in fighting pollution.

Figure 4 displays the average number of days exceeding EPA's eight-hour ozone benchmark in 1993-95 and 1999-2001 for the worst 50 locations in the country, while Figure 5 does the same for a random sample of 50 additional locations. As the figures show, among areas with the worst ozone, most achieved substantial pollution reductions during the 1990s, as did many areas with more modest pollution problems. The American Lung Association, PIRG, and other environmental groups simply omit air pollution trend data from their reports. As shown below, regardless of annual fluctuations in smog levels caused by weather, the long-term trend is downward because pollution emissions from all sources continue to decline.

THE FUTURE IS CLEAR

Although often unacknowledged by environmentalists, America's past success in combating air pollution actually occurred in spite of rapid growth in vehicle travel. For example, the substantial pollution reductions achieved since 1980 occurred at the same time that total vehicle-miles increased 75 percent. But can improvements in vehicle pollution control keep pace with increased vehicle use?

Environmentalists seem to think that pollution from vehicles will inevitably increase. They cite rising population, increased vehicle travel, and the popularity of sport-utility vehicles (SUVs), and conclude that air pollution will therefore increase in the future. For example, in "Clearing the Air with Transit Spending," the Sierra Club asserts that past pollution improvements are now being "canceled out" by SUVs and suburban development. Environmentalists appear to be unaware that technological progress is reducing automobile emissions far more rapidly than driving is increasing.

On-road pollution measurements show that average emissions from gasoline vehicles are declining by about 10 percent per year, even as SUVs make up an increasing fraction of cars on the road. (See Figure 6.) Because of technological advances, newer cars continue to start out and stay cleaner as they age, when compared with previous models. EPA regulations that take effect with the 2004 model year require additional reductions of 70 percent for hydrocarbons and 80 percent for NOx below current new-car standards, along with increased durability requirements. Similar regulations for diesel trucks require a 90 percent reduction in NOx and soot emissions starting in 2007, in addition to tougher NOx standards already implemented this year.

As far as SUVs are concerned, data from vehicle inspection programs and on-road emission measurements show SUV emissions have been converging with those of cars since the late 1990s. EPA's 2004 standards also make no distinction between SUVs and compacts; Chevy Suburbans must meet the same low emissions requirements as Geo Metros. Going forward, the growing popularity of SUVs will therefore make no difference for future air quality.

Based on observed emission trends and the requirements of new regulations, per-mile emissions will decline about 90 percent during the next 20 years, as twenty-first century vehicles make up an ever-larger portion of the fleet. Thus, even if Americans drive, say, 50 percent more miles 20 years from now (a greater increase than most metro areas project), total emissions would still decline by 85 percent from current levels.

Despite the evidence of substantial ongoing emission reductions from all major pollution sources, the American Lung Association asserts in its "State of the Air: 2003" report that "much air pollution cleanup has been stalled during the past five years" because of a lack of effort by EPA.

THE DOSE MAKES THE POISON

Both the number of people affected by air pollution and the severity of the effects decline with decreasing exposure. Exposure depends not only on ambient pollution levels, but also on time spent outdoors and level of physical activity.

Epidemiologic studies have found permanent reductions in lung function in people exposed to several dozen days per year or more of ozone in excess of the one-hour standard. Environmentalists use those studies to claim that ozone

TABLE 1

Failing Grades?

Percent of monitoring locations in selected counties complying with the federal eight-hour and one-hour ozone standards, and their corresponding grade from the American Lung Association.

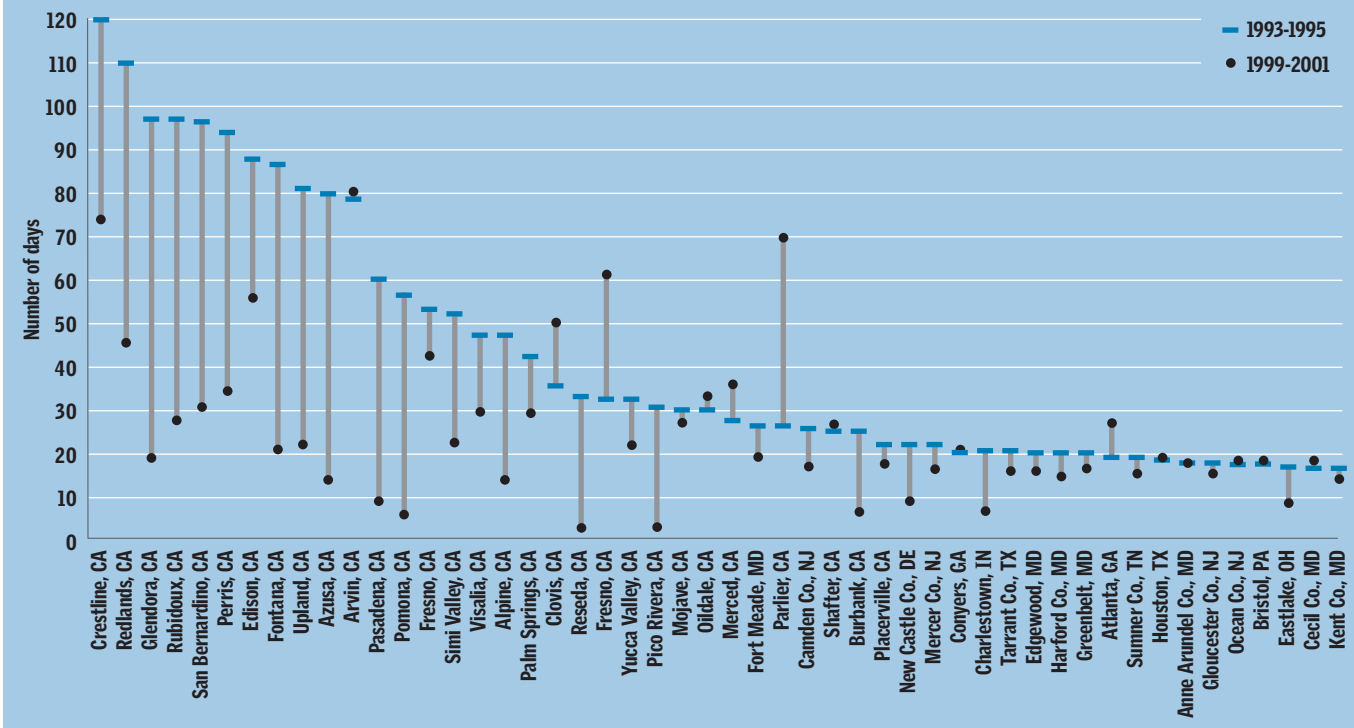
County	Major city	Percent of monitoring locations that comply with: Federal 8-hour ozone standard	Federal 1-hour ozone standard	American Lung Association air quality grade for entire county
Manhattan	New York	100%	100%	F
Cook	Chicago	94%	100%	F
San Diego	San Diego	90%	100%	F
Maricopa	Phoenix	77%	100%	F
Ventura	Ventura, Calif.	75%	86%	F
Queens	New York	75%	75%	F
Philadelphia	Philadelphia	50%	75%	F
Los Angeles	Los Angeles	50%	50%	F
Sacramento	Sacramento	43%	71%	F
Dallas	Dallas	33%	33%	F
Jefferson	Louisville	33%	100%	F
San Bernardino	San Bernardino	8%	33%	F
Wake	Raleigh	0%	100%	F
Fresno	Fresno, Calif.	0%	17%	F

NOTE: The American Lung Association gave an "F" grade to Manhattan based on measurements of ozone at the top of the former World Trade Center, 1,300 feet above ground level. Manhattan has clean air based on monitoring data at ground level, where people live and breathe. Compliance with ozone standards is as of December 31, 2001.

FIGURE 4

Improvements in the Worst Places

Trend in the number of days per year exceeding EPA's 85 ppb, eight-hour ozone benchmark at the 50 most polluted monitoring locations across the nation.



NOTE: Monitoring locations are ranked from worst to best based on eight-hour ozone levels for 1993-95. The chart displays the top 50 out of more than 600 locations with data for both periods. All locations in the U.S. with data for both 1993-95 and 1999-2001 are included. The horizontal axis gives the name of the city where the monitor is located. For locations that are not in an incorporated city (almost always a rural area), the county name is given instead. Ozone varies from place to place, so larger cities with several monitoring locations can appear more than once in the chart.

The California locations that experienced substantial increases in ozone during the 1990s are all in the southern portion of California's San Joaquin Valley. Note that California has by far the highest ozone levels in the country. The apparent increase in Atlanta's ozone is due to uniquely high ozone levels in 1999. Atlanta averaged about 13 days per year exceeding the eight-hour benchmark for 2000-2002. (National ozone data for 2002 were not available as of this writing, but data for Atlanta were supplied by the Georgia Department of Environmental Protection.)

remains a threat to lung development and long-term health. However, Figure 1 shows that even in the most polluted areas, the number of high-ozone days each year is now only a fraction of past levels, suggesting that past studies are not applicable to current pollution levels. Indeed, Figure 1 also shows that hardly any areas of the country have ever had the frequent high ozone levels associated with irreversible reductions in lung function.

Short-term exposure to high ozone levels can also harm health. Studies with human volunteers have shown that ozone levels of about 120 ppb and above, especially when combined with exercise, can cause both decreases in objective measures of lung function and increases in subjective symptoms such as coughing and pain while breathing deeply. However, at moderate ozone levels — 80 to 100 ppb — people generally do not experience measurable reductions in lung function or subjective respiratory symptoms. Laboratory studies have only found measurable respiratory effects at those ozone levels when subjects are exercising and exposed for more than two to three hours, even in people with pre-existing respiratory disease. Even here, many people are unaffected and the effects that do occur are transient and reversible, and do not harm long-term health.

Studies have also found that acute increases in ambient ozone likely cause additional emergency room visits for respiratory conditions such as asthma. Nevertheless, this effect is relatively small at current ozone levels. For example, based on the epidemiologic research, EPA projected that going from attainment of the one-hour ozone standard to attainment of the eight-hour standard would reduce emergency room visits for asthma by 0.6 percent, even though the eight-hour standard is significantly more stringent. There are two reasons for this: First, the one-hour ozone standard is health-protective for most people, and the eight-hour standard provides only a modest additional increment of protection. Second, only a few percent of respiratory aggravations, such as asthma attacks, are caused by air pollution in the first place.

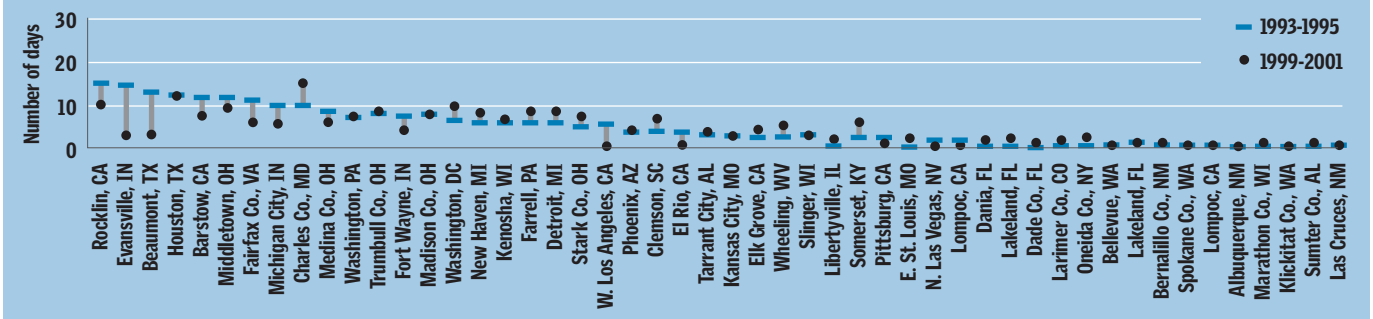
Environmental activists exaggerate the frequency and geographic extent of harmful pollution levels and also blur the distinction in health risk between modest and severe pollution problems. That misleads Americans to expect serious and permanent harm from current, relatively low levels of air pollution. For example, in "State of the Air," the American Lung Association asserts that 40 percent of Americans are "at risk" from ozone and suffer serious health damage even when ozone barely exceeds the eight-hour, 85 ppb benchmark just a few times per year, in spite of health research suggesting that this is a vast exaggeration.

PIRG's "Danger in the Air" declares without qualification that

FIGURE 5

Nationwide Changes

Trend in the number of days per year exceeding EPA's 85 ppb, eight-hour ozone benchmark at 50 randomly selected locations.



NOTE: Monitoring locations are ranked from worst to best based on eight-hour ozone levels from 1993 to 1995. The chart displays 50 randomly selected locations out of several hundred locations that were not in the top 50. All locations in the United States with data for both the 1993-95 and 1999-2001 time periods were included. All but a couple of the locations shown in the figure comply with the one-hour ozone standard, and most comply with the eight-hour standard.

"our cities, suburbs and even our national parks are shrouded in smog for much of the summer," while the American Lung Association decries "the smog that regularly blankets many urban areas during the summer months," implying that most people are frequently exposed to air pollution at levels that could cause permanent harm. In reality, among areas exceeding federal ozone standards, the average location exceeds the one-hour benchmark about four times a year and the eight-hour benchmark about 11 times a year. Most areas of the United States now meet federal ozone standards, and high ozone levels have become infrequent in most areas that do exceed the standards.

Regulators can also be guilty of risk exaggeration, encouraging inordinate public fear of current air pollution levels. Last year, the California Air Resources Board (CARB) and researchers from the University of Southern California (USC) held a press conference to release the latest results of the Children's Health Study, CARB's ongoing assessment of respiratory health in 12 California communities with a wide range of pollution levels. In this case, researchers found that very active children — about eight percent of all children — in the four communities with the highest ozone levels were more than three times as likely to develop asthma as similar children in the other eight communities with lower ozone levels. Despite the results for very active children, the study also found that higher ozone was associated with a 30 percent lower rate of asthma overall, and there was no relationship between asthma and levels of other pollutants.

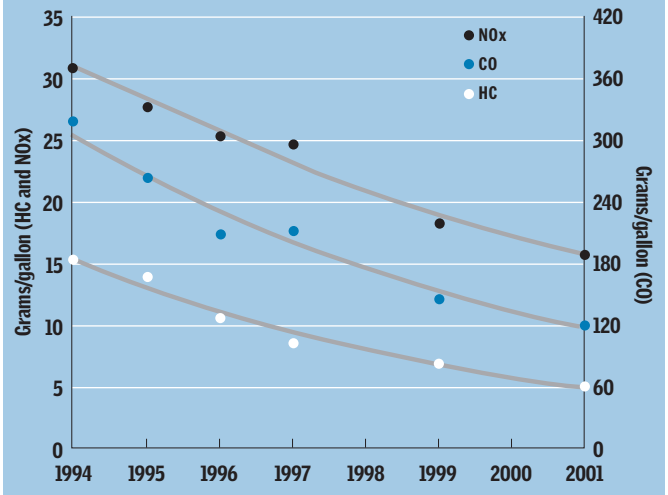
It is worth noting that epidemiologic reports like the Children's Health Study can only identify a correlation between ozone and induction of asthma, rather than definitively demonstrate a causal relationship. But the CARB study suffers from a more fundamental problem: Its results do not apply to current pollution levels. The study was based on ozone levels from 1994 to 1997 in southern California — a period when the four high-ozone communities averaged about 50 days per year exceeding the one-hour ozone standard. Ozone has declined substantially in southern California since then, and the high-ozone communities now average 80 percent fewer one-hour ozone exceedance days per year — ozone levels more typical of several other communities in the Children's Health Study for which there was no association between ozone and asthma incidence in very active children. The study also does not apply anywhere else in the country because no other area of the United States has ever had ozone levels anywhere near those of the high-ozone communities that were part of the CARB study.

Despite the irrelevance of the study's results to current air pollution levels, CARB officials and the USC scientists asserted in newspaper reports that many cities have ozone levels high enough to cause people to develop asthma. Several news stories also quoted local public health officials and activists who echoed

FIGURE 6

Cleaner Cars

Automobile emissions trends as measured from 1994 to 2001 in the Caldecott Tunnel in the San Francisco Bay Area.



SOURCE: "Trends in Exhaust Emissions from In-Use California Light-Duty Vehicles, 1994-2001," by Andrew J. Kean et al. Society of Automotive Engineers, 2002.

NOTE: Emissions are reported in grams of pollutant emitted per gallon of fuel burned. Gasoline consumption increased 13 percent between 1994 and 2001, so, for example, while the HC emission rate decreased 67 percent, total emissions decreased 63 percent after taking account of increased gasoline use. HC = hydrocarbons, CO = carbon monoxide, and NOx = nitrogen oxides.

those claims. The idea that current ozone levels could be causing asthma has now attained the status of "conventional wisdom" and health professionals and journalists naively cite the CARB study results in news stories on air pollution. Indeed, earlier this year the editors of the *Sacramento Bee* cited both the study and "State of the Air: 2003" in an editorial entitled "Smog and asthma: The link and threat are real." Yet if reporters and health experts checked ozone levels in their area against the much higher ozone levels associated with asthma in the Children's Health Study findings, they would see that those claims are incorrect.

GETTING REAL ON AIR POLLUTION

Activists and regulators do not produce reports and press releases on air quality for their own sake, but to influence public opinion. The reports and regulatory activities described above were accompanied by substantial public relations efforts, and often received coverage in many newspapers across the country. In most of those articles, reporters did not compare regulators' and activists' claims to actual pollution data and did not provide information on past trends and future prospects that would put the claims in context. As a result, activists and regulators have likely contributed to Americans' misperceptions on the state of the nation's air.

The battle against air pollution is actually a great success story in environmental protection and public health. The worst air pollution problems have been greatly reduced or eliminated, while parts of the greater San Bernardino and Fresno-Bakersfield areas in California are the only places that still frequently exceed the new eight-hour ozone benchmark. Rather than air pollution being a worsening national crisis, the vast majority of the country has attained the original federal health standards, and only a few regions are still a substantial distance from meeting the tougher new standards. Recent trends in ozone and particulate levels and in pollutant emissions, along with already-adopted new requirements, show that air pollution will continue to decline.

Whom the public trusts Most Americans trust information from environmentalists and government agencies. A 1999 poll commissioned by the American Lung Association found that 90 percent of people trust environmental information provided by the association (59 percent of them a "great deal") while 79 percent trust EPA. A 2002 poll commissioned by the Sierra Club found that 57 percent of Americans trust environmental groups for information on environmental issues. As we have seen, that trust is misplaced.

Exaggerating health risks from air pollution can be as bad as minimizing them. Either extreme results in wasted resources and diversion of people's attention from more serious risks. Unwarranted alarmism also causes unnecessary public fear. The public's interest is in an accurate portrayal of risk. People ultimately bear regulatory costs through reductions in their disposable income because regulations increase the costs of producing useful goods and services. A large body of research shows that, on average, people use their disposable income to increase health and safety for themselves and their loved ones. A regulation will improve people's health only if the health benefits of the regulation exceed the harm caused by the regulation's income-reducing costs.

Regulators and environmentalists no doubt appear to be more credible sources of objective information when compared with, say, politicians or industry lobbyists. But, like other interest groups, the goals of regulators and activists often do not coincide with the interests of the vast majority of Americans. Environmental groups want to increase support for ever-more-stringent regulations and bring in the donations that support their activism. And while regulators want to show the success of their efforts to reduce air pollution, they also want to justify the need to preserve or expand their powers and budgets. Maintaining a climate of crisis and pessimism meets those institutional goals, but at the expense of encouraging the public to exaggerate its risk.

Air pollution levels, trends, and health effects are complex issues, yet journalists and editors face many constraints in trying to interpret environmental information for the public. Reporters often do not have specific subject expertise, and may not feel comfortable trying to sort out the nuances and complexities that lie behind proponents' portrayals of environmental data. Time and space limitations often prevent or discourage efforts to seek out experts who could critically evaluate particular claims.

Yet if the media are unable or unwilling to improve environmental reporting, the public is likely to remain misinformed. At the very least, reporters and editors must begin to treat claims by ostensible "do-gooders" — environmentalists, regulators, and even university researchers — with the same skepticism appropriate for other interested parties in regulatory debates. R

READINGS

- "Air Quality Criteria for Ozone and Related Photochemical Oxidants, Volume III," published by the Environmental Protection Agency, July 1996.
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