AMERICAN LUNG ASSOCIATION®

STATE OF THE AIR 2015

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The American Lung Association assumes sole responsibility for the content of the *American Lung Association State of the Air 2015*.

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Contents

State of the Air 2015 shows that more than

four out of ten people

had unhealthy air quality in their communities.

The *State of the Air 2015* shows that progress in improving the nation's air quality was mixed. Many cities experienced strong improvement and many others suffered worse episodes of unhealthy air. While most of the nation has much cleaner air quality than even a decade ago, a few cities even reported their worst episodes. Nearly 138.5 million people—almost 44 percent of the nation—live where pollution levels are too often dangerous to breathe. Fortunately, that represents fewer people exposed than in our previous report. Despite that risk, some seek to weaken the Clean Air Act, the public health law that has driven the cuts in pollution since 1970, and to undermine the ability of the nation to fight for healthy air.

The *State of the Air 2015* report looks at levels of ozone and particle pollution found in official monitoring sites across the United States in 2011, 2012, and 2013. The report uses the most current quality-assured nationwide data available for these analyses.

The report examines particle pollution ($PM_{2.5}$) in two different ways: averaged year-round (annual average) and over short-term levels (24-hour). For both ozone and short-term particle pollution, the analysis uses a weighted average number of days that recognizes places with higher levels of pollution. For the year-round particle pollution rankings, the report uses averages calculated and reported by the U.S. Environmental Protection Agency (EPA). For comparison, the *State of the Air 2014* report covered data from 2010, 2011, and 2012.

Overall Trends

Thanks to stronger standards for pollutants and for the sources of pollution, the United States has seen **continued reduction in ozone and particle pollution** as well as other pollutants for decades. Figure 1 from the EPA shows that since 1970, the air has gotten cleaner while the population, the economy,

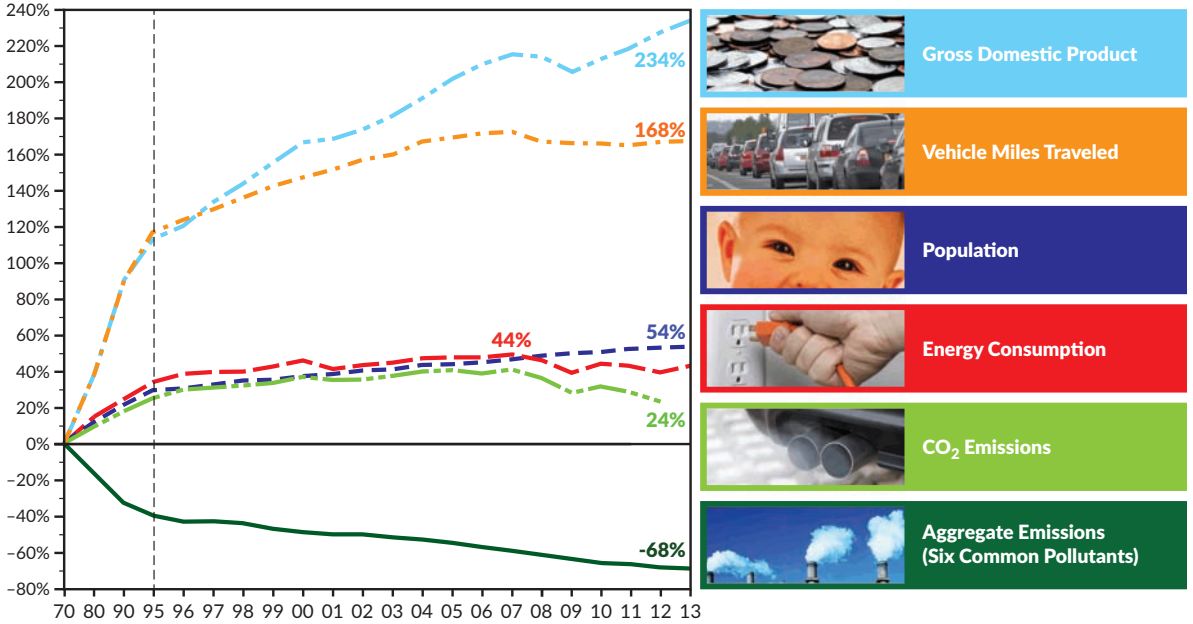


Figure 1 Air emissions have dropped steadily since 1970 thanks to the Clean Air Act. Even as the economy continues to recover from the recession, emissions that contribute to the most widespread pollutants continue to drop. (Source: U.S. EPA, Air Quality Trends, 2015.)

energy use and miles driven increased greatly. Even as the economy continues to recover after the recession, overall air emissions that create the six most widespread pollutants continue to drop.

Overall, **the best progress came in the continued reduction of year-round particle pollution in the eastern half of the nation**, thanks to cleaner diesel fleets and cleaner fuels used in power plants. Continued progress cleaning up pollution makes a difference, but a changing climate is making it harder to protect human health. **Many cities had a record number of days with high short-term particle pollution**, particularly in the West, where continuing drought and heat may have increased the dust, grass fires and wildfires, while burning wood as a heat source appears to contribute to the problem in many smaller cities. The impact of climate change is particularly apparent in the West where the heat and drought create situations ripe for episodes of high particle days. High use of wood-burning stoves contributes to the dangerous particle levels in the winter in places like Fairbanks, Alaska and Logan, Utah.

Unfortunately, particle pollution data from all of Illinois, most of Tennessee and many counties in Georgia were missing because of problems with data processing in laboratories and other data issues. This means that no one knows if the levels of particle pollution were unhealthy in many cities that have been among the most polluted cities in last year's report, including Chicago, St. Louis, and Atlanta.

Many cities continued a decade of progress reducing ozone, but many others had more unhealthy air days. Particularly in California, thirteen of the 25 most ozone-polluted cities had fewer high ozone days on average in 2011-2013 compared to 2010-2012. Unfortunately, twelve cities recorded more days of unhealthy air, while one city had no change from the previous report. Rising temperatures create conditions favorable to forming ozone. Thanks to the Clean Air Act, even these places have much better air quality compared to fifteen years ago in the earliest reports. Communities will need more help to reduce ozone pollution in the warmer temperatures expected from the changing climate.

Los Angeles remains as the metropolitan area with the worst ozone pollution, as it has for all but one of the 16 reports, although Los Angeles reported its lowest average year-round particles and fewest high ozone days in the report's history.

Year-round Particle Pollution

The best progress came in the continued reduction of year-round particle pollution in 2011-2013, especially in the eastern U.S. Of the 25 metro areas with the worst year-round levels of particle pollution, fourteen reduced their annual levels compared to 2010-2013—and **13 cities recorded their cleanest years yet**, some continuing to reduce levels for the second report in a row. Eleven of the cities with the highest year-round particle levels now get a passing grade; that is, they meet the official health-based standard for year-round particle pollution.

Fresno-Madera (CA) improved, but remained the most polluted metropolitan area for year-round particle pollution, as it was in the 2014 report. Some of the biggest improvements have been in the East and South—and Los Angeles, which had its lowest ever annual average level of particle pollution since our report began. Five other cities also had their lowest year-round particle pollution, but still had levels above the national air quality standard: Pittsburgh, Cleveland, Philadelphia, New York City, and Louisville (KY). Six other cities had their lowest year-round particle pollution, but met the national air quality standard, a marker that they benefited decisively from the measures put in place to reduce this dangerous air pollutant. Those cities include: Lancaster (PA), Birmingham (AL), Indianapolis (IN), Houston, Macon (GA), Little Rock (AR), and Wheeling (WV). Two other cities improved and also met the national air quality standard: El Paso-Las Cruces (TX-NM), and Shreveport (LA).

Many of the seven cities with more annual particle pollution compared to the 2014 report are in the West, especially in the central valley of California. Six of those metro areas still fail the national air quality standard: Bakersfield (CA), Modesto-Merced (CA), El Centro (CA), San Jose-San Francisco, Cincinnati and Harrisburg-York (PA). Only Erie (PA) recorded higher annual particle levels and still met the national air quality standards. Johnstown (PA) had the same level as in the 2014 report, failing the standard, while new monitoring data added Altoona (PA) to the list, but at a level that

passes the national test.

Data are missing for 4 cities that were in the 2014 most polluted cities list. Data are unavailable for St. Louis, Atlanta, Chicago and Columbus (GA) so it is impossible to know whether the air quality there improved or worsened. Problems with data processing in Illinois, most of Tennessee and part of Georgia prevented people in those states from having information on their particle pollution levels for this period.

Continued cleanup of power plants and the continued turnover of the diesel fleet have likely driven these reductions. These steps continue because of the Clean Air Act and U.S. Environmental Protection Agency steps to enforce it.

Short-term Particle Pollution

Episodes of high levels of particles increased as a problem during the years covered by this report compared to last year's report. Western states were especially hard hit, with drought and wildfires contributing to the existing problem. Many cities suffered more days as short-term particle pollution worsened, especially in the West. Five cities had their worst records since our report began.

Six cities set a record for their highest weighted average number of unhealthy particle pollution days ever, while 15 other cities had additional high-particle days on average in 2011-2013 compared to 2010-2012. Cities that recorded their largest number of days with high particle pollution on average were Visalia (CA), San Francisco, Fairbanks (AK), Phoenix, Yakima (WA) and Reno (NV). San Francisco is included because of the addition last year of San Joaquin County to the San Jose-San Francisco–Oakland Consolidated Statistical Area. The other cities with higher weighted average number of days in this report include Fresno-Madera (CA), which retained its ranking as the most polluted for short-term particle pollution in the nation; Modesto-Merced (CA); Los Angeles; Salt Lake City; Logan (UT- ID); Sacramento (CA); New York City; Seattle; Harrisburg-York (PA), Eugene (OR); Lancaster (PA); Philadelphia; Boise City (ID); and Medford-Grants Pass (OR).

Four cities reduced their average number of days with unhealthy particle levels. One city—Pittsburgh—had its fewest unhealthy days on average ever in our report history. The other three cities that reduced their pollution were: Missoula (MT); El Paso-Las Cruces (TX-NM); and Indianapolis.

Increased heat and continuing drought in the West likely contributed to the worsening problem, although they are not the only sources. High particle days frequently result from use of wood-burning stoves for heat, dust storms, wildfires and weather patterns that trap in emissions from power plants, trucks, buses, trains, ships and industrial sources.

Data are missing on one city that was listed among the most polluted in the 2014 report. Data are unavailable for Chicago so it is impossible to know whether the air quality there improved or worsened. Problems with data processing in Illinois, most of Tennessee and part of Georgia prevented people in those states from having information on their particle pollution levels for this period.

Ozone Pollution

Many cities suffered fewer ozone days (by weighted average) than in the 2014 report, but almost as many of the most polluted cities suffered more days. Steps to reduce ozone continue to pay off in many ozone-burdened metropolitan areas, as exemplified in Los Angeles, still ranked as the most ozone-polluted city in the nation. Los Angeles experienced its best three-year period since this report began, dropping more than one-third of its average number of unhealthy air days since the late 1990s. Four other metropolitan areas reported their fewest high ozone days on average in the 2015 report: Visalia (CA); Bakersfield (CA); Sacramento (CA); and Washington, DC- Baltimore.

Thirteen of the 25 most ozone-polluted cities had fewer high ozone days on average in 2011-2013 compared with 2010-2012. In addition to the five cities noted above, eight other cities improved: Houston, St. Louis, Chicago, Pittsburgh, Cincinnati, Sheboygan (W), Kansas City, and Memphis.

Twelve cities fared worse, suffering slightly more high ozone days on average, while one remained the same. Cities that

recorded more high ozone days or days with higher ozone included: Fresno (CA); Dallas-Fort Worth; Modesto-Merced (CA); Las Vegas; Phoenix; New York City; Tulsa (OK); Denver; El Centro (CA); Fort Collins (CO); Grand Rapids (MI); and South Bend (IN). Oklahoma City (OK) recorded the same weighted average for ozone as in the 2014 report.

Changes in ozone likely came from multiple factors, including weather. Ozone forms best in warmer, sunny weather with still winds. The warm, drier summer in 2012 contributed to higher ozone readings and more frequent high ozone days, while the wetter weather in 2013 in the east contributed to a drop in these days. Real success despite extended hot, dry days in California came from concentrated efforts to reduce emissions that contribute to ozone.

The improvements documented in the past sixteen years of this report show the benefit of steps taken to reduce ozone. Even the more polluted cities had significantly fewer unhealthy ozone days than they had a decade ago.

Cleanest Cities

Six cities ranked on all three lists of the cleanest cities in 2011-2013. That means they had no days in the unhealthy level for ozone or short-term particle pollution and were on the list of the cleanest cities for year-round particle pollution. Listed alphabetically, the six cities are:

- Bismarck, ND
- Cape Coral-Fort Myers-Naples, FL
- Elmira-Corning, NY
- Fargo-Wahpeton, ND-MN
- Rapid City-Spearfish, SD
- Salinas, CA

Eleven other cities ranked as the cleanest for both year-round and short-term particle pollution, listed alphabetically:

- Bangor, ME
- Farmington, NM
- Flagstaff, AZ
- Homosassa Springs, FL
- Kahului-Wailuku-Lahaina, HI
- Lakeland-Winter Haven, FL
- North Port-Sarasota, FL
- Palm Bay-Melbourne-Titusville, FL
- Prescott, AZ
- Sierra Vista-Douglas, AZ
- Tampa-St. Petersburg-Clearwater, Fl

Two other cities were on both the cleanest cities lists for ozone and for year-round particle pollution, listed alphabetically:

- Burlington-South Burlington, VT
- Urban Honolulu, HI

Thirteen other cities made both the cleanest cities lists for ozone and for short-term particle pollution, listed alphabetically:

- Brownsville-Harlingen-Raymondville, TX
- Des Moines-Ames-West Des Moines, IA
- Dothan-Enterprise-Ozark, AL
- Eau Claire-Menomonie, WI
- Gadsden, AL
- Harrisonburg-Staunton-Waynesboro, VA
- La Crosse-Onalaska, WI-MN
- Lincoln-Beatrice, NE
- McAllen-Edinburg, TX
- Monroe-Ruston-Bastrop, LA
- Montgomery, AL
- Rochester-Austin, MN
- Sioux Falls, SD

People At Risk

Looking at the nation as a whole, the American Lung Association State of the Air 2015 finds—

- **More than 4 in 10 people (nearly 44 %) in the United States live in counties that have unhealthful levels of either ozone or particle pollution.**

  Nearly 138.5 million Americans live in 287 counties where they are exposed to unhealthful levels of air pollution in the form of either ozone or short-term or year-round levels of particles.

  - This is a decrease of more than 9.1 million people compared to 2010-2012, when 47% lived where there were unhealthy levels, as we covered in the 2014 report. However, it is still a larger percentage of the population than in the 2009-2011 period covered by the 2013 report.

- **More than 4 in 10 people in the United States (40.7%) live in areas with unhealthful levels of ozone.**

  Counties that were graded F for ozone levels have a combined population of more than 128.7 million. These people live in the 254 counties where the monitored air quality places them at risk for premature death, aggravated asthma, difficulty breathing, cardiovascular harm and lower birth weight. The actual number who breathe unhealthy levels of ozone is likely

More than 17.7 million people in the U.S. live in counties where the outdoor air failed all three tests.

much larger, since this number does not include people who live in adjacent counties in metropolitan areas where no monitors exist.

- **More than 13 percent of people in the United States live in an area with too many days with unhealthful levels of particle pollution.**

  Close to 41.7 million Americans live in 55 counties that experienced too many days with unhealthy spikes in particle pollution, a decrease from the last report. This number may undercount the total because of lack of data from Illinois, Tennessee and Georgia. Short-term spikes in particle pollution can last from hours to several days and can increase the risk of heart attacks, strokes and emergency room visits for asthma and cardiovascular disease, and most importantly, can increase the risk of early death.

- **Nearly 24 million people (7.6%) in the United States live in counties with unhealthful year-round levels of particle pollution.**

  These people live in the 24 counties where chronic levels are regularly a threat to their health. This number may undercount the total because of lack of data from Illinois, Tennessee and Georgia. Even when levels are fairly low, exposure to particles over time can increase risk of hospitalization for asthma, damage to the lungs and, significantly, increase the risk of premature death.

- **Nearly 17.8 million people (5.6%) in the United States live in 12 counties with unhealthful levels of all three: ozone and short-term and year-round particle pollution.**

  This is 10 million fewer people than were exposed to all three problems in the 2014 report when nearly 9% were exposed. However, data are missing on particle pollution in all or parts of 3 states.

With the risks from airborne pollution so great, the American Lung Association seeks to inform people who may be in danger. Many people are at greater risk because of their age or because they have asthma or other chronic lung disease, cardiovascular disease or diabetes. The following list identifies the numbers of people in each at-risk group. The numbers living in counties that fail all three tests may be undercounted because of the missing data on particle pollution in Illinois, Tennessee and Georgia.

- **Older and Younger**—More than 17.6 million adults age 65 and over and close to 33.4 million children under 18 years old live in counties that received an F for at least one pollutant. Close to 2.2 million seniors and close to 4.4 million children live in counties failing all three tests.
- **People with Asthma**—Close to 3.1 million children and close to 9.5 million adults with asthma live in counties of the United States that received an F for at least one pollutant. Close to 393,000 children and close to 1.2 million adults with asthma live in counties failing all three tests.
- **Chronic Obstructive Pulmonary Disease (COPD)**—More than 6.3 million people with COPD live in counties that received an F for at least one pollutant. More than 632,000 people with COPD live in counties failing all three tests.
- **Cardiovascular Disease**—More than 8.6 million people with cardiovascular diseases live in counties that received an F for at least one pollutant; close to 909,000 people live in counties failing all three tests.
- **Diabetes**—More than 3.5 million people with diabetes live in counties that received an F for either short-term or year round particle pollution; close to 2.2 million live in counties failing both tests. Having diabetes increases the risk of harm from particle pollution.
- **Poverty**—Nearly 21.4 million people with incomes meeting the federal poverty definition live in counties that received an F for at least one pollutant. More than 3.4 million people in poverty live in counties failing all three tests. Evidence shows that people who have low incomes may face higher risk from air pollution.

What Needs To Be Done

Our nation has made significant progress, but clearly more must be done to reduce the burden of air pollution and improve the health of millions of Americans. Cleaning up air pollution requires strong and coordinated effort on the part of our federal and state leaders.

President Barack Obama, EPA Administrator Gina McCarthy, Members of Congress, Governors and state leaders all have a key role to play. These leaders have a choice to make: either support steps to improve the air we breathe so that it does not cause or worsen lung disease, or allow pressure from polluting industries to weaken healthy air protections. The American Lung Association urges our nation's leaders to stand up for public health and take these important steps for to improve the air we all breathe:

Protect the Clean Air Act

The continued improvement shown in the State of the Air report is possible because of the Clean Air Act, the nation's strong public health law put in place by an overwhelming bipartisan majority in Congress more than 40 years ago. The Clean Air Act requires that the EPA and each state take steps to clean up the air and protect public health by reducing pollution. Unfortunately, some in Congress continue to seek weakening changes to the Clean Air Act that would dismantle progress made in the last 40 years and make it harder to achieve future reductions. To achieve the promise of the Clean Air Act, Congress must keep the law strong, fully implemented and enforced.

Reduce Carbon Pollution from Power Plants by Adopting a Strong Final Clean Power Plan

In 2014, EPA proposed the Clean Power Plan as a way to reduce carbon pollution from power plants by 2030, working with states. Now President Obama and EPA need to finish the job and issue strong final standards for carbon pollution from new and existing plants as soon as possible. Power plants are the largest stationary source of greenhouse gases in the United States. Energy production accounts for 86 percent of total 2009 greenhouse gas emissions, and the electric sector represents 39 percent of all energy-related carbon dioxide (CO_2) emissions. Scientists tell us that carbon pollution contributes to a warming climate, enhancing conditions for ozone formation, and making it harder to reduce this lethal pollutant. Taking steps to reduce carbon pollution from electricity generation will also reduce ozone and particle pollution. EPA's own analysis shows that these co-benefits can prevent up to 6,600 premature deaths and up to 150,000 asthma attacks in children in 2030.

Revise the Ozone Air Quality Standard to Reflect the Science and Protect Health

National air quality standards set the official limits that drive the cleanup of air pollution around the nation. The Clean Air Act requires that the EPA set national air quality standards for ozone based on the need to protect public health, "with an adequate margin of safety." The Clean Air Act also requires that the EPA review the standards every five years to make sure that the standards are based on the most current science.

Today, the research shows that the current standard is woefully inadequate to protect public health, and a much stronger standard is needed. Multiple reviews by the independent scientists who advise the EPA have confirmed that the current standard fails to provide the protection required under the law. The good news is that the EPA proposed to strengthen the health-based standard in November 2014, with the EPA Administrator recommending a standard between 65 and 70 parts per billion (ppb) from the current standard of 75 ppb. EPA is also seeking input on an even more protective standard of 60ppb. The American Lung Association and the leading medical and public health organizations strongly support the most protective standard under consideration, 60 ppb. A standard set at the most protective level (60ppb) would prevent 7,900 premature deaths and 1.8 million asthma attacks in children, and 1.9 million school days missed in 2025, for all counties in the U.S. expected to meet the standard that year. That estimate does not include California, which is not expected to meet that standard until after 2025. Under a court order, the EPA must adopt a standard by October 1, 2015. The Lung Association will continue to urge the EPA to set the most protective standard.

Set Strong Limits on Air Pollution that Blows Across State Lines

Air pollution, including ozone and particle pollution, can be transported by the wind hundreds of miles away from its source, placing a significant health burden on communities and states that have no ability to limit pollution from neighboring states. The EPA, working with the states, must move rapidly to reduce transported ozone and particle pollution to protect downwind communities, who otherwise have limited ability to intervene or protect themselves. The American Lung Association urges EPA to strengthen

the limits on transported ozone and particle pollution to help downwind states protect their citizens from pollution blown hundreds of miles across the nation.

Clean Up Harmful Emissions from Dirty Diesel Vehicles and Heavy Equipment

Rules the EPA put in effect over the past several years mean that new diesel vehicles and equipment must be much cleaner. Still, the vast majority of diesel trucks, buses, and heavy equipment (such as bulldozers) will likely be in use for thousands more miles, spewing dangerous diesel exhaust into communities and neighborhoods. The good news is that affordable technology exists to cut emissions by 90 percent. Congress needs to fund the EPA's diesel cleanup ("retrofit") program. Congress should also require that clean diesel equipment be used in federally-funded construction programs.

Improve the Air Pollution Monitoring

The grades in this report come from information from the nationwide air pollution monitoring network. That network forms the infrastructure for air pollution. States and local governments use monitors to accurately measure the amount of air pollution in the community.

Less than one-third of all counties have ozone or particle pollution monitors, seriously limiting the ability to adequately detect and track the levels of harmful air pollution. Unfortunately, funds for existing air pollution monitors have been cut across the nation. More monitoring is needed near roadways to measure the highest levels of exposures from air pollution related to traffic. These resources may be cut further unless Congress and the White House resolve to protect the health of the nation from air pollution.

What You Can Do

You can do a great deal to help reduce air pollution outdoors by speaking up and stepping up. Here's how.

1. Speak up for Healthy Air Protections

Tell the White House we need strong standards for carbon pollution from all power plants and truly protective standards for ozone.

Send a message to Congress. Urge them to support cleaner, healthier air and oppose measures to block or delay the cleanup of air pollution. They should support and protect the Clean Air Act.

Share your story. Do you or any member of your family have a personal reason to want healthier, cleaner air? Go to www.Fightingforair.org to let us know how healthy air affects you. Your story helps us remind decision-makers what is at stake when it comes to clean air.

Get involved. Participate in your community's review of its air pollution plans and support state and local efforts to clean up air pollution. To find your local air pollution control agency, go to www.4cleanair.org.

2. Step up to curb pollution at home

Drive less. Combine trips, walk, bike, carpool or vanpool, and use buses, subways or other alternatives to driving. Vehicle emissions are a major source of air pollution. Support community plans that provide ways to get around that don't require a car, such as more sidewalks, bike trails and transit systems.

Use less electricity. Turn out the lights and use energy-efficient appliances. Generating electricity is one of the biggest sources of pollution, particularly in the eastern United States.

Don't burn wood or trash. Burning firewood and trash are among the largest sources of particles in many parts of the country. If you must use a fireplace or stove for heat, convert your woodstoves to natural gas, which has far fewer polluting emissions. Compost and recycle as much as possible and dispose of other waste properly; don't burn it. Support efforts in your community to ban outdoor burning of construction and yard wastes. Avoid the use of outdoor hydronic heaters, also called outdoor wood boilers, which are frequently much more polluting than woodstoves.

Make sure your local school system requires clean school buses, which includes replacing or retrofitting old school buses with filters and other equipment to reduce emissions. Make sure your local schools don't idle their buses, a step that can immediately reduce emissions.

People at Risk from Short-term Particle Pollution (24-Hour $PM_{2.5}$)

In Counties where the Grades were:	Chronic Diseases						Age Groups			
	Adult Asthma	Pediatric Asthma	COPD	CV Disease	Diabetes	Poverty	Under 18	65 and Over	Total Population	Number of Counties
Grade A	5,873,452	1,781,786	4,227,802	5,732,397	6,460,720	12,957,361	19,217,471	11,536,072	83,272,298	301
Grade B	2,615,351	792,005	1,846,023	2,493,590	2,787,986	5,829,437	8,783,638	5,059,225	38,026,959	110
Grade C	1,560,518	415,733	956,618	1,329,569	1,582,604	3,152,549	4,595,488	2,962,552	21,280,654	47
Grade D	842,001	259,211	570,964	763,122	917,382	1,931,586	2,966,989	1,607,707	12,332,260	22
Grade F	2,840,983	922,566	1,691,463	2,353,536	3,056,176	7,051,483	10,305,570	5,245,485	41,695,213	55
National Population in Counties with $PM_{2.5}$ Monitors	15,402,677	4,743,496	10,519,625	14,447,891	16,830,963	34,643,917	52,041,420	29,869,710	222,852,103	645

People at Risk from Year-Round Particle Pollution (Annual $PM_{2.5}$)

In Counties where the Grades were:	Chronic Diseases						Age Groups			
	Adult Asthma	Pediatric Asthma	COPD	CV Disease	Diabetes	Poverty	Under 18	65 and Over	Total Population	Number of Counties
Pass	11,283,728	3,369,299	7,761,955	10,581,911	12,180,145	24,522,130	36,995,221	21,769,489	160,320,502	461
Fail	1,612,794	534,994	950,153	1,320,642	1,789,777	4,456,874	5,905,934	2,993,874	23,972,657	24
National Population in Counties with $PM_{2.5}$ Monitors	15,310,374	4,713,855	10,414,136	14,330,603	16,728,976	34,436,558	51,751,007	29,691,344	221,584,918	637

People at Risk from Ozone

In Counties where the Grades were:	Chronic Diseases					Age Groups			
	Adult Asthma	Pediatric Asthma	COPD	CV Disease	Poverty	Under 18	65 and Over	Total Population	Number of Counties
Grade A	1,623,346	458,994	1,120,203	1,579,454	3,612,375	5,203,594	3,557,443	23,231,242	159
Grade B	1,998,401	534,599	1,458,651	2,052,142	4,088,464	6,156,919	4,374,436	28,290,500	120
Grade C	1,881,476	571,988	1,340,394	1,821,888	3,852,691	6,375,726	3,753,224	27,168,081	136
Grade D	1,656,017	479,459	1,175,434	1,616,503	3,455,764	5,303,158	3,227,038	23,553,321	98
Grade F	8,782,289	2,881,245	5,919,569	8,049,199	20,062,207	30,952,896	16,389,559	128,725,230	254
National Population in Counties with Ozone Monitors	16,255,094	5,020,263	11,240,312	15,444,254	35,729,354	55,043,053	32,008,251	235,696,206	815

Note: *The State of the Air 2015* covers the period 2011-2013. The Appendix provides a full discussion of the methodology.

People at Risk In 25 U.S. Cities Most Polluted by Short-term Particle Pollution (24-hour $PM_{2.5}$)

2015 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Diabetes[9]	Poverty[10]
1	Fresno-Madera, CA	1,107,661	320,969	122,769	28,434	68,326	35,215	50,742	76,410	302,747
2	Bakersfield, CA	864,124	256,286	83,355	22,704	52,702	26,422	37,419	57,022	189,029
3	Visalia-Porterville-Hanford, CA	605,103	186,336	59,173	16,507	36,242	18,179	25,830	39,162	161,927
4	Modesto-Merced, CA	788,719	225,161	88,537	19,947	49,080	25,498	36,795	55,529	176,917
5	Los Angeles-Long Beach, CA	18,351,929	4,449,763	2,197,260	394,199	1,212,912	633,626	915,447	1,383,294	3,173,150
6	San Jose-San Francisco-Oakland, CA	8,469,854	1,870,604	1,119,507	165,714	578,767	310,320	453,045	682,920	1,014,067
7	Salt Lake City-Provo-Orem, UT	2,389,225	743,554	213,920	45,611	148,651	64,220	99,124	113,349	284,263
8	Logan, UT-ID	129,763	40,841	11,495	2,622	7,895	3,295	5,091	5,762	17,613
9	Fairbanks, AK	100,436	24,790	7,558	2,180	7,074	3,810	4,402	4,592	8,497
10	Pittsburgh-New Castle-Weirton, PA-OH-WV	2,659,937	517,286	481,225	52,576	203,830	159,280	223,889	225,070	336,867
11	Missoula, MT	111,807	21,728	14,635	1,788	7,779	5,266	6,624	5,989	18,908
12	Phoenix-Mesa-Scottsdale, AZ	4,398,762	1,113,693	604,442	121,465	291,167	228,913	301,692	338,791	756,661
13	Yakima, WA	247,044	74,058	30,799	5,090	17,137	9,562	13,435	14,416	51,184
14	Sacramento-Roseville, CA	2,482,660	593,746	341,775	52,599	165,924	90,455	133,253	199,725	402,463
15	New York-Newark, NY-NJ-CT-PA	23,484,225	5,208,397	3,308,078	470,293	1,741,306	1,049,821	1,565,768	1,777,519	3,265,046
15	Reno-Carson City-Fernley, NV	590,428	131,134	92,788	10,308	34,894	32,226	43,075	46,707	85,454
17	El Paso-Las Cruces, TX-NM	1,044,496	294,994	119,945	26,262	57,674	40,385	55,829	78,609	241,447
18	Seattle-Tacoma, WA	4,459,677	987,530	573,920	67,874	345,126	192,013	264,420	287,959	558,610
19	Harrisburg-York-Lebanon, PA	1,233,708	271,818	197,882	27,743	92,102	68,709	95,169	97,083	131,307
20	Eugene, OR	356,212	68,159	59,766	5,706	32,743	18,846	26,051	26,422	73,471
20	Lancaster, PA	529,600	128,486	85,085	13,114	38,335	28,477	39,703	40,138	54,181
22	Philadelphia-Reading-Camden, PA-NJ-DE-MD	7,146,706	1,611,257	1,034,071	155,846	530,288	359,527	497,353	531,268	953,193
23	Boise City-Mountain Home-Ontario, ID-OR	729,547	195,533	92,525	17,160	46,196	23,556	38,048	43,564	116,913
23	Indianapolis-Carmel-Muncie, IN	2,336,237	581,643	294,556	46,408	180,762	136,419	162,411	185,079	349,835
25	Medford-Grants Pass, OR	291,851	60,714	60,814	5,083	25,843	16,430	23,905	23,756	54,430

Notes:

1. Cities are ranked using the highest weighted average for any county within that Combined or Metropolitan Statistical Area.
2. **Total Population** represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those **under 18** and **65 and over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. **Pediatric asthma** estimates are for those under 18 years of age and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. **Adult asthma** estimates are for those 18 years and older and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma.
7. **COPD** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. **CV disease** is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
10. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.

People at Risk In 25 U.S. Cities Most Polluted by Year-Round Particle Pollution (Annual $PM_{2.5}$)

2015 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Diabetes[9]	Poverty[10]
1	Fresno-Madera, CA	1,107,661	320,969	122,769	28,434	68,326	35,215	50,742	76,410	302,747
2	Bakersfield, CA	864,124	256,286	83,355	22,704	52,702	26,422	37,419	57,022	189,029
3	Visalia-Porterville-Hanford, CA	605,103	186,336	59,173	16,507	36,242	18,179	25,830	39,162	161,927
4	Modesto-Merced, CA	788,719	225,161	88,537	19,947	49,080	25,498	36,795	55,529	176,917
5	Los Angeles-Long Beach, CA	18,351,929	4,449,763	2,197,260	394,199	1,212,912	633,626	915,447	1,383,294	3,173,150
6	El Centro, CA	176,584	50,940	20,339	4,513	10,926	5,688	8,239	12,374	38,067
7	San Jose-San Francisco-Oakland, CA	8,469,854	1,870,604	1,119,507	165,714	578,767	310,320	453,045	682,920	1,014,067
8	Cincinnati-Wilmington-Maysville, OH-KY-IN	2,196,629	533,524	292,504	52,177	161,635	144,112	168,306	166,969	309,586
9	Pittsburgh-New Castle-Weirton, PA-OH-WV	2,659,937	517,286	481,225	52,576	203,830	159,280	223,889	225,070	336,867
10	Cleveland-Akron-Canton, OH	3,501,538	772,540	570,198	75,140	264,324	232,292	288,367	291,142	536,298
11	Philadelphia-Reading-Camden, PA-NJ-DE-MD	7,146,706	1,611,257	1,034,071	155,846	530,288	359,527	497,353	531,268	953,193
12	Harrisburg-York-Lebanon, PA	1,233,708	271,818	197,882	27,743	92,102	68,709	95,169	97,083	131,307
12	Johnstown-Somerset, PA	217,019	41,189	42,975	4,204	16,628	13,282	19,100	19,064	30,560
14	New York-Newark, NY-NJ-CT-PA	23,484,225	5,208,397	3,308,078	470,293	1,741,306	1,049,821	1,565,768	1,777,519	3,265,046
15	Louisville/Jefferson County—Elizabethtown—Madison, KY-IN	1,490,724	349,525	205,747	34,072	110,025	117,040	131,892	121,025	211,086
16	Lancaster, PA	529,600	128,486	85,085	13,114	38,335	28,477	39,703	40,138	54,181
17	Altoona, PA	126,314	25,974	23,918	2,651	9,508	7,457	10,666	10,652	19,894
17	Birmingham-Hoover-Talladega, AL	1,313,105	305,712	189,321	36,432	85,980	104,029	125,962	138,180	218,927
17	Indianapolis-Carmel-Muncie, IN	2,336,237	581,643	294,556	46,408	180,762	136,419	162,411	185,079	349,835
20	Houston-The Woodlands, TX	6,508,323	1,760,785	631,535	159,533	344,949	250,334	343,680	498,871	1,050,548
20	Macon-Warner Robins, GA	417,473	103,022	55,398	11,089	26,250	21,100	27,171	35,246	86,505
22	Little Rock-North Little Rock, AR	898,683	215,724	122,384	18,967	56,224	59,676	77,035	75,464	142,834
23	El Paso-Las Cruces, TX-NM	1,044,496	294,994	119,945	26,262	57,674	40,385	55,829	78,609	241,447
23	Erie-Meadville, PA	367,670	80,160	58,675	8,182	27,546	20,343	28,126	28,655	59,912
23	Shreveport-Bossier City, LA	446,471	109,612	63,421	8,616	26,048	25,350	38,720	39,654	87,957
23	Wheeling, WV-OH	145,757	28,128	27,425	2,584	10,958	11,583	15,334	14,519	22,679

Notes:

1. Cities are ranked using the highest Design Value for any county within that Combined or Metropolitan Statistical Area.
2. **Total Population** represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those **under 18** and **65 and over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. **Pediatric asthma** estimates are for those under 18 years of age and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. **Adult asthma** estimates are for those 18 years and older and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma.
7. **COPD** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. **CV disease** is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
10. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.

People at Risk In 25 Most Ozone-Polluted Cities

2015 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Poverty[9]
1	Los Angeles-Long Beach, CA	18,351,929	4,449,763	2,197,260	394,199	1,212,912	633,626	915,447	3,173,150
2	Visalia-Porterville-Hanford, CA	605,103	186,336	59,173	16,507	36,242	18,179	25,830	161,927
3	Bakersfield, CA	864,124	256,286	83,355	22,704	52,702	26,422	37,419	189,029
4	Fresno-Madera, CA	1,107,661	320,969	122,769	28,434	68,326	35,215	50,742	302,747
5	Sacramento-Roseville, CA	2,482,660	593,746	341,775	52,599	165,924	90,455	133,253	402,463
6	Houston-The Woodlands, TX	6,508,323	1,760,785	631,535	159,533	344,949	250,334	343,680	1,050,548
7	Dallas-Fort Worth, TX-OK	7,206,144	1,935,629	745,554	175,579	384,060	282,399	392,934	1,069,998
8	Modesto-Merced, CA	788,719	225,161	88,537	19,947	49,080	25,498	36,795	176,917
9	Las Vegas-Henderson, NV-AZ	2,273,195	536,416	324,174	43,350	134,010	116,515	154,614	375,479
10	Phoenix-Mesa-Scottsdale, AZ	4,398,762	1,113,693	604,442	121,465	291,167	228,913	301,692	756,661
11	New York-Newark, NY-NJ-CT-PA	23,484,225	5,208,397	3,308,078	470,293	1,741,306	1,049,821	1,565,768	3,265,046
12	Tulsa-Muskogee-Bartlesville, OK	1,131,458	282,545	160,838	31,199	76,507	66,702	87,508	169,693
13	Denver-Aurora, CO	3,277,309	784,677	370,191	68,992	218,369	109,846	142,143	397,651
14	El Centro, CA	176,584	50,940	20,339	4,513	10,926	5,688	8,239	38,067
15	Oklahoma City-Shawnee, OK	1,390,835	346,127	175,414	38,220	93,837	78,343	100,459	205,084
16	Fort Collins, CO	315,988	65,099	42,528	5,724	21,966	11,353	15,046	42,547
16	St. Louis-St. Charles-Farmington, MO-IL	2,905,893	666,421	421,158	53,945	225,143	156,154	221,691	379,992
18	Grand Rapids-Wyoming-Muskegon, MI	1,407,323	347,323	185,874	38,021	122,354	89,486	104,530	203,843
19	Chicago-Naperville, IL-IN-WI	9,912,730	2,380,781	1,245,287	218,620	589,842	386,984	620,405	1,403,734
20	Sheboygan, WI	114,922	26,382	18,161	2,049	9,145	5,237	7,646	12,249
21	Pittsburgh-New Castle-Weirton, PA-OH-WV	2,659,937	517,286	481,225	52,576	203,830	159,280	223,889	336,867
22	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA	9,443,180	2,176,749	1,149,549	222,089	685,067	418,692	570,448	883,118
23	Cincinnati-Wilmington-Maysville, OH-KY-IN	2,196,629	533,524	292,504	52,177	161,635	144,112	168,306	309,586
24	Kansas City-Overland Park-Kansas City, MO-KS	2,393,623	587,534	310,151	49,264	182,028	123,128	167,116	308,003
25	Memphis-Forrest City, TN-MS-AR	1,369,006	351,480	160,432	31,860	74,363	91,085	117,293	272,926
25	South Bend-Elkhart-Mishawaka, IN-MI	721,543	178,949	107,828	15,661	57,641	45,224	55,249	122,532

Notes:

1. Cities are ranked using the highest weighted average for any county within that Combined or Metropolitan Statistical Area.
2. **Total Population** represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those **under 18** and **65 and over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. **Pediatric asthma** estimates are for those under 18 years of age and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. **Adult asthma** estimates are for those 18 years and older and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma.
7. **COPD** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. **CV disease** is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.

People at Risk in 25 Counties Most Polluted by Short-term Particle Pollution (24-hour $PM_{2.5}$)

2015 Rank[1]	County	ST	Total Population[2]	At-Risk Groups								High $PM_{2.5}$ Days in Unhealthy Ranges, 2011–2013	
				Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Diabetes[9]	Poverty[10]	Weighted Avg.[11]	Grade[12]
1	Fresno	CA	955,272	278,110	103,705	24,637	58,765	30,120	43,282	65,253	268,773	47.0	F
2	Kern	CA	864,124	256,286	83,355	22,704	52,702	26,422	37,419	57,022	189,029	43.2	F
3	Kings	CA	150,960	41,854	13,265	3,708	9,403	4,549	6,334	9,707	28,877	40.8	F
4	Stanislaus	CA	525,491	145,255	61,652	12,868	33,197	17,455	25,308	38,162	113,074	38.0	F
5	Riverside	CA	2,292,507	615,555	294,281	54,531	146,427	78,238	114,669	171,404	392,513	33.5	F
6	Lemhi	ID	7,712	1,375	2,037	121	554	376	652	697	1,373	31.2	F
7	Madera	CA	152,389	42,859	19,064	3,797	9,561	5,096	7,460	11,157	33,974	28.8	F
8	Los Angeles	CA	10,017,068	2,322,711	1,187,071	205,766	670,227	347,183	499,827	755,975	1,872,964	26.2	F
9	Ravalli	MT	40,823	8,450	8,950	695	2,778	2,339	3,330	2,860	8,008	23.7	F
10	San Joaquin	CA	704,379	198,720	80,542	17,604	44,161	23,160	33,502	50,634	137,451	21.3	F
11	Salt Lake	UT	1,079,721	308,137	101,015	18,902	69,914	30,586	47,220	54,135	134,970	20.7	F
12	Cache	UT	116,909	36,460	9,753	2,237	7,169	2,905	4,439	5,033	16,042	19.3	F
13	Merced	CA	263,228	79,906	26,885	7,079	15,883	8,043	11,487	17,367	63,843	18.2	F
14	Franklin	ID	12,854	4,381	1,742	385	726	390	652	729	1,571	17.7	F
15	Utah	UT	551,891	193,132	38,512	11,847	31,871	12,467	18,561	21,205	74,189	16.2	F
16	Fairbanks North Star Borough	AK	100,436	24,790	7,558	2,180	7,074	3,810	4,402	4,592	8,497	15.5	F
17	Shoshone	ID	12,690	2,510	2,652	221	882	544	922	1,017	2,431	13.8	F
18	Weber	UT	238,519	69,901	25,995	4,288	15,323	6,998	11,195	12,669	31,343	12.8	F
19	Tulare	CA	454,143	144,482	45,908	12,799	26,839	13,630	19,496	29,455	133,050	11.2	F
20	Allegheny	PA	1,231,527	235,864	210,970	24,074	95,161	70,847	98,751	99,933	161,788	10.0	F
21	Inyo	CA	18,467	3,888	3,782	344	1,307	807	1,254	1,834	2,839	9.8	F
22	Lake	OR	7,820	1,407	1,774	118	712	470	690	691	1,543	9.3	F
23	Silver Bow	MT	34,523	7,154	5,856	589	2,359	1,781	2,394	2,112	6,709	9.0	F
24	Missoula	MT	111,807	21,728	14,635	1,788	7,779	5,266	6,624	5,989	18,908	8.2	F
25	Maricopa	AZ	4,009,412	1,016,299	538,073	110,843	265,248	207,731	272,789	306,866	696,086	7.7	F

Notes:

1. Counties are ranked by weighted average. See note 11 below.
2. **Total Population** represents the at-risk populations in counties with $PM_{2.5}$ monitors.
3. Those **under 18** and **65 and over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. **Pediatric asthma** estimates are for those under 18 years of age and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. **Adult asthma** estimates are for those 18 years and older and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma.
7. **COPD** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. **CV disease** is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
10. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.
11. The **Weighted Average** was derived by counting the number of days in each unhealthful range (orange, red, purple, maroon) in each year (2011-2013), multiplying the total in each range by the assigned standard weights (i.e., 1 for orange, 1.5 for red, 2.0 for purple, 2.5 for maroon), and calculating the average.
12. **Grade** is assigned by weighted average as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

People at Risk In 25 Counties Most Polluted by Year-Round Particle Pollution (Annual $PM_{2.5}$)

				At-Risk Groups								$PM_{2.5}$ Annual, 2011–2013	
2015 Rank[1]	County	ST	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Diabetes[9]	Poverty[10]	Design Value[11]	Pass/ Grade[12]
1	Madera	CA	152,389	42,859	19,064	3,797	9,561	5,096	7,460	11,157	33,974	18.1	Fail
2	Kern	CA	864,124	256,286	83,355	22,704	52,702	26,422	37,419	57,022	189,029	17.3	Fail
3	Kings	CA	150,960	41,854	13,265	3,708	9,403	4,549	6,334	9,707	28,877	17.0	Fail
4	Tulare	CA	454,143	144,482	45,908	12,799	26,839	13,630	19,496	29,455	133,050	16.6	Fail
5	Fresno	CA	955,272	278,110	103,705	24,637	58,765	30,120	43,282	65,253	268,773	16.4	Fail
6	Stanislaus	CA	525,491	145,255	61,652	12,868	33,197	17,455	25,308	38,162	113,074	15.7	Fail
7	Riverside	CA	2,292,507	615,555	294,281	54,531	146,427	78,238	114,669	171,404	392,513	15.1	Fail
8	Imperial	CA	176,584	50,940	20,339	4,513	10,926	5,688	8,239	12,374	38,067	14.3	Fail
9	San Joaquin	CA	704,379	198,720	80,542	17,604	44,161	23,160	33,502	50,634	137,451	13.8	Fail
10	Butler	OH	371,272	90,516	47,573	8,804	27,488	22,452	26,395	27,170	47,855	13.6	Fail
11	Allegheny	PA	1,231,527	235,864	210,970	24,074	95,161	70,847	98,751	99,933	161,788	13.4	Fail
12	Merced	CA	263,228	79,906	26,885	7,079	15,883	8,043	11,487	17,367	63,843	13.3	Fail
13	Los Angeles	CA	10,017,068	2,322,711	1,187,071	205,766	670,227	347,183	499,827	755,975	1,872,964	13.0	Fail
14	Plumas	CA	18,859	3,263	4,525	289	1,413	916	1,445	2,104	2,917	12.8	Fail
14	Shoshone	ID	12,690	2,510	2,652	221	882	544	922	1,017	2,431	12.8	Fail
16	San Bernardino	CA	2,088,371	578,417	208,565	51,241	131,342	66,473	94,315	144,112	392,242	12.6	Fail
17	Cuyahoga	OH	1,263,154	274,640	204,413	26,713	95,840	83,463	103,263	104,358	237,268	12.5	Fail
18	Delaware	PA	561,973	127,010	83,515	12,963	41,833	30,268	41,306	42,428	58,964	12.4	Fail
19	Hamilton	OH	804,520	187,530	111,965	18,240	60,236	50,042	59,823	61,195	146,764	12.3	Fail
19	Cambria	PA	140,499	26,993	27,742	2,755	10,734	8,555	12,302	12,269	21,465	12.3	Fail
19	Lebanon	PA	135,486	30,953	24,472	3,159	9,919	7,709	10,984	10,988	14,738	12.3	Fail
22	Northampton	PA	299,791	62,361	50,896	6,365	22,672	17,132	23,940	24,274	29,237	12.2	Fail
23	Stark	OH	375,432	83,018	64,778	8,075	28,238	25,229	31,786	31,920	56,543	12.1	Fail
23	Clark	IN	112,938	26,181	15,741	2,089	8,942	6,941	8,386	9,499	13,047	12.1	Fail
25	Lancaster	PA	529,600	128,486	85,085	13,114	38,335	28,477	39,703	40,138	54,181	12.0	Pass
25	Lemhi	ID	7,712	1,375	2,037	121	554	376	652	697	1,373	12.0	Pass

Notes:

1. Counties are ranked by Design Value. See note 11 below.
2. **Total Population** represents the at-risk populations in counties with $PM_{2.5}$ monitors.
3. Those **under 18** and **65 and over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. **Pediatric asthma** estimates are for those under 18 years of age and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. **Adult asthma** estimates are for those 18 years and older and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma.
7. **COPD** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. **CV disease** is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
10. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.
11. The **Design Value** is the calculated concentration of a pollutant based on the form of the Annual $PM_{2.5}$ National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the current (2012) standard. (U.S. EPA).
12. **Grades** are based on EPA's determination of meeting or failure to meet the NAAQS for annual $PM_{2.5}$ levels during 2011-2013. Counties meeting the NAAQS received grades of Pass; counties not meeting the NAAQS received grades of Fail.

People at Risk in 25 Most Ozone-Polluted Counties

2014 Rank[1]	County	ST	Total Population[2]	At-Risk Groups							High Ozone Days in Unhealthy Ranges, 2011–2013	
				Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Poverty[9]	Weighted Avg.[10]	Grade[11]
1	San Bernardino	CA	2,088,371	578,417	208,565	51,241	131,342	66,473	94,315	392,242	117.7	F
2	Riverside	CA	2,292,507	615,555	294,281	54,531	146,427	78,238	114,669	392,513	97.0	F
3	Tulare	CA	454,143	144,482	45,908	12,799	26,839	13,630	19,496	133,050	82.7	F
4	Los Angeles	CA	10,017,068	2,322,711	1,187,071	205,766	670,227	347,183	499,827	1,872,964	76.7	F
5	Kern	CA	864,124	256,286	83,355	22,704	52,702	26,422	37,419	189,029	69.7	F
6	Fresno	CA	955,272	278,110	103,705	24,637	58,765	30,120	43,282	268,773	68.0	F
7	Uintah	UT	35,555	11,918	3,248	731	2,140	943	1,472	3,817	35.2	F
8	Madera	CA	152,389	42,859	19,064	3,797	9,561	5,096	7,460	33,974	31.8	F
9	Sacramento	CA	1,462,131	360,895	181,076	31,971	96,329	51,022	74,142	272,592	30.7	F
10	Harris	TX	4,336,853	1,187,625	388,443	107,603	228,402	162,296	218,480	788,276	24.7	F
11	Kings	CA	150,960	41,854	13,265	3,708	9,403	4,549	6,334	28,877	23.5	F
12	Tarrant	TX	1,911,541	522,683	189,414	47,357	100,974	73,732	101,859	286,019	22.8	F
13	Stanislaus	CA	525,491	145,255	61,652	12,868	33,197	17,455	25,308	113,074	22.3	F
14	Denton	TX	728,799	193,127	60,255	17,498	38,783	27,427	36,309	64,055	21.7	F
15	Duchesne	UT	20,308	6,956	2,187	427	1,211	557	905	2,091	20.5	F
16	Clark	NV	2,027,868	489,627	260,156	38,488	116,641	100,210	130,734	325,684	20.3	F
17	Maricopa	AZ	4,009,412	1,016,299	538,073	110,843	265,248	207,731	272,789	696,086	19.7	F
18	El Dorado	CA	181,737	38,761	31,203	3,434	12,858	7,672	11,621	20,575	19.5	F
19	Fairfield	CT	939,904	224,358	133,684	22,052	70,241	41,397	57,941	88,010	18.8	F
20	Tulsa	OK	622,409	158,584	79,490	17,511	41,724	35,246	45,356	95,783	18.3	F
21	Jefferson	CO	551,798	117,185	78,326	10,303	37,656	21,088	28,059	49,495	17.0	F
22	Dallas	TX	2,480,331	671,624	234,557	60,851	131,322	94,013	127,961	477,557	16.8	F
23	Imperial	CA	176,584	50,940	20,339	4,513	10,926	5,688	8,239	38,067	16.2	F
24	Oklahoma	OK	755,245	192,521	93,326	21,258	50,525	41,992	53,722	129,256	15.7	F
25	Collin	TX	854,778	235,649	79,420	21,351	44,958	32,871	44,949	67,525	15.3	F

Notes:

1. Counties are ranked by weighted average. See note 10 below.
2. Total Population represents the at-risk populations in counties with $PM_{2.5}$ monitors.
3. Those **under 18** and **65 and over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. **Pediatric asthma** estimates are for those under 18 years of age and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. **Adult asthma** estimates are for those 18 years and older and represent the **estimated** number of people who had asthma in 2013 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma.
7. **COPD** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. **CV disease** is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.
10. The **Weighted Average** was derived by counting the number of days in each unhealthful range (orange, red, purple) in each year (2011-2013), multiplying the total in each range by the assigned standard weights (i.e., 1 for orange, 1.5 for red, 2.0 for purple), and calculating the average.
11. Grade is assigned by weighted average as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

Cleanest U.S. Cities for Short-term Particle Pollution (24-hour $PM_{2.5}$)[1]

Metropolitan Statistical Area	Population
Alexandria, LA	154,753
Asheville-Brevard, NC	470,560
Austin-Round Rock, TX	1,883,051
Bangor, ME	153,364
Beckley, WV	124,432
Bismarck, ND	123,751
Bloomington-Bedford, IN	208,933
Bowling Green-Glasgow, KY	216,546
Brownsville-Harlingen-Raymondville, TX	439,197
Buffalo-Cheektowaga, NY	1,213,007
Cape Coral-Fort Myers-Naples, FL	1,000,757
Charleston-Huntington-Ashland, WV-OH-KY	702,984
Charlotte-Concord, NC-SC	2,493,040
Charlottesville, VA	224,055
Chattanooga-Cleveland-Dalton, TN-GA-AL	940,299
Cincinnati-Wilmington-Maysville, OH-KY-IN	2,196,629
Colorado Springs, CO	678,319
Columbus-Marion-Zanesville, OH	2,370,839
Dayton-Springfield-Sidney, OH	1,079,679
Des Moines-Ames-West Des Moines, IA	755,200
Dothan-Enterprise-Ozark, AL	248,513
Eau Claire-Menomonie, WI	208,692
Elmira-Corning, NY	187,156
Fargo-Wahpeton, ND-MN	246,386
Farmington, NM	126,503
Fayetteville-Lumberton-Laurinburg, NC	548,059
Fayetteville-Springdale-Rogers, AR-MO	491,966
Flagstaff, AZ	136,539
Florence, SC	206,261
Florence-Muscle Shoals, AL	147,317
Fort Collins, CO	315,988
Fort Smith, AR-OK	279,974
Gadsden, AL	103,931
Goldsboro, NC	124,583
Grand Island, NE	83,989
Greenville-Washington, NC	221,727
Gulfport-Biloxi-Pascagoula, MS	382,516
Harrisonburg-Staunton-Waynesboro, VA	248,661
Hickory-Lenoir, NC	408,533
Homosassa Springs, FL	139,271
Hot Springs-Malvern, AR	130,673
Houma-Thibodaux, LA	209,890
Houston-The Woodlands, TX	6,508,323
Huntsville-Decatur-Albertville, AL	683,871
Kahului-Wailuku-Lahaina, HI	160,292
Kalamazoo-Battle Creek-Portage, MI	528,156
La Crosse-Onalaska, WI-MN	135,512
Lafayette-Opelousas-Morgan City, LA	616,113
Lake Charles, LA	202,040
Lakeland-Winter Haven, FL	623,009
Lansing-East Lansing-Owosso, MI	536,221
Lexington-Fayette-Richmond-Frankfort, KY	708,677
Lima-Van Wert-Celina, OH	220,461
Lincoln-Beatrice, NE	335,989
Lynchburg, VA	256,455
Macon-Warner Robins, GA	417,473
McAllen-Edinburg, TX	877,959
Mobile-Daphne-Fairhope, AL	609,619
Monroe-Ruston-Bastrop, LA	253,035
Montgomery, AL	373,510
Morgantown-Fairmont, WV	193,001
New Orleans-Metairie-Hammond, LA-MS	1,467,880
North Port-Sarasota, FL	931,788
Oklahoma City-Shawnee, OK	1,390,835
Owensboro, KY	116,401
Palm Bay-Melbourne-Titusville, FL	550,823
Parkersburg-Marietta-Vienna, WV-OH	153,780
Pensacola-Ferry Pass-Brent, FL	466,913
Pittsfield, MA	129,585
Portland-Lewiston-South Portland, ME	627,504
Prescott, AZ	215,133
Pueblo-Cañon City, CO	207,902
Rapid City-Spearfish, SD	166,341
Richmond, VA	1,245,764
Roanoke, VA	311,835
Rochester-Austin, MN	251,180
Rochester-Batavia-Seneca Falls, NY	1,178,141
Rocky Mount-Wilson-Roanoke Rapids, NC	306,626
Saginaw-Midland-Bay City, MI	387,293
Salinas, CA	428,826
Salisbury, MD-DE	385,438
San Antonio-New Braunfels, TX	2,277,550
Santa Maria-Santa Barbara, CA	435,697
Sierra Vista-Douglas, AZ	129,473
Sioux Falls, SD	243,513
Springfield-Branson, MO	533,616
Springfield-Greenfield Town, MA	698,136
St. George, UT	147,800
Syracuse-Auburn, NY	741,411
Tallahassee-Bainbridge, FL-GA	400,614
Tampa-St. Petersburg-Clearwater, FL	2,870,569
Texarkana, TX-AR	149,619
Toledo-Port Clinton, OH	649,298
Tulsa-Muskogee-Bartlesville, OK	1,131,458
Waterloo-Cedar Falls, IA	169,484
Wheeling, WV-OH	145,757
Wichita-Arkansas City-Winfield, KS	673,598

Note:

1. Monitors in these cities reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2006 NAAQS.

Top 25 Cleanest U.S. Cities for Year-Round Particle Pollution (Annual $PM_{2.5}$)[1]

Rank[2]	Design Value[3]	Metropolitan Statistical Area	Population
1	4.2	Prescott, AZ	215,133
2	4.7	Farmington, NM	126,503
3	4.8	Casper, WY	80,973
3	4.8	Cheyenne, WY	95,809
5	5.3	Flagstaff, AZ	136,539
6	6.1	Duluth, MN-WI	279,887
6	6.1	Kahului-Wailuku-Lahaina, HI	160,292
6	6.1	Palm Bay-Melbourne-Titusville, FL	550,823
6	6.1	Salinas, CA	428,826
10	6.2	Anchorage, AK	396,142
10	6.2	Bismarck, ND	123,751
10	6.2	Rapid City-Spearfish, SD	166,341
13	6.5	Cape Coral-Fort Myers-Naples, FL	1,000,757
13	6.5	Elmira-Corning, NY	187,156
15	6.6	North Port-Sarasota, FL	931,788
16	6.7	Albuquerque-Santa Fe-Las Vegas, NM	1,163,966
16	6.7	Sierra Vista-Douglas, AZ	129,473
18	6.9	Burlington-South Burlington, VT	214,796
19	7.0	Fargo-Wahpeton, ND-MN	246,386
19	7.0	Homosassa Springs, FL	139,271
19	7.0	Lakeland-Winter Haven, FL	623,009
19	7.0	Orlando-Deltona-Daytona Beach, FL	2,975,658
23	7.1	Bangor, ME	153,364
23	7.1	Miami-Fort Lauderdale-Port St. Lucie, FL	6,447,610
23	7.1	Tampa-St. Petersburg-Clearwater, FL	2,870,569
23	7.1	Urban Honolulu, HI	983,429

Notes:

1. This list represents cities with the lowest levels of annual $PM_{2.5}$ air pollution.
2. Cities are ranked by using the highest design value for any county within that metropolitan area.
3. The **Design Value** is the calculated concentration of a pollutant based on the form of the Annual $PM_{2.5}$ National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the current (2012) standard. (U.S. EPA).

Cleanest U.S. Cities for Ozone Air Pollution[1]

Metropolitan Statistical Area	Population
Bellingham, WA	206,353
Bend-Redmond-Prineville, OR	186,769
Bismarck, ND	123,751
Blacksburg-Christiansburg-Radford, VA	180,351
Brownsville-Harlingen-Raymondville, TX	439,197
Brunswick, GA	113,807
Burlington-South Burlington, VT	214,796
Cape Coral-Fort Myers-Naples, FL	1,000,757
Charleston-North Charleston, SC	712,220
Cheyenne, WY	95,809
Crestview-Fort Walton Beach-Destin, FL	253,618
Des Moines-Ames-West Des Moines, IA	755,200
Dothan-Enterprise-Ozark, AL	248,513
Eau Claire-Menomonie, WI	208,692
Elmira-Corning, NY	187,156
Eugene, OR	356,212
Fairbanks, AK	100,436
Fargo-Wahpeton, ND-MN	246,386
Gadsden, AL	103,931
Gainesville-Lake City, FL	337,925
Harrisonburg-Staunton-Waynesboro, VA	248,661
Idaho Falls-Rexburg-Blackfoot, ID	232,740
Ithaca-Cortland, NY	152,593
La Crosse-Onalaska, WI-MN	135,512
Lincoln-Beatrice, NE	335,989
Logan, UT-ID	129,763
McAllen-Edinburg, TX	877,959
Medford-Grants Pass, OR	291,851
Missoula, MT	111,807
Monroe-Ruston-Bastrop, LA	253,035
Montgomery, AL	373,510
New Bern-Morehead City, NC	196,091
Panama City, FL	190,816
Rapid City-Spearfish, SD	166,341
Rochester-Austin, MN	251,180
Rockford-Freeport-Rochelle, IL	443,748
Rome-Summerville, GA	120,959
Salinas, CA	428,826
Savannah-Hinesville-Statesboro, GA	518,020
Sebring, FL	97,616
Sioux City-Vermillion, IA-SD-NE	182,649
Sioux Falls, SD	243,513
Spokane-Spokane Valley-Coeur d'Alene, WA-ID	679,989
Steamboat Springs-Craig, CO	36,616
Tallahassee-Bainbridge, FL-GA	400,614
Tuscaloosa, AL	235,628
Urban Honolulu, HI	983,429
Utica-Rome, NY	297,766
Waterloo-Cedar Falls, IA	169,484
Wausau-Stevens Point-Wisconsin Rapids, WI	308,439
Williamsport-Lock Haven, PA	156,708

Note:

1. This list represents cities with no monitored ozone air pollution in unhealthful ranges using the Air Quality Index based on 2008 NAAQS.

Cleanest Counties for Short-term Particle Pollution (24-hour $PM_{2.5}$)[1]

County	State	MSAs and Respective CSA[2]
Anchorage Municipality	AK	Anchorage, AK
Kenai Peninsula Borough	AK	
Baldwin	AL	Mobile-Daphne-Fairhope, AL
Clay	AL	
Colbert	AL	Florence-Muscle Shoals, AL
DeKalb	AL	
Etowah	AL	Gadsden, AL
Houston	AL	Dothan-Enterprise-Ozark, AL
Madison	AL	Huntsville-Decatur-Albertville, AL
Mobile	AL	Mobile-Daphne-Fairhope, AL
Montgomery	AL	Montgomery, AL
Morgan	AL	Huntsville-Decatur-Albertville, AL
Russell	AL	Columbus-Auburn-Opelika, GA-AL
Shelby	AL	Birmingham-Hoover-Talladega, AL
Talladega	AL	Birmingham-Hoover-Talladega, AL
Arkansas	AR	
Ashley	AR	
Garland	AR	Hot Springs-Malvern, AR
Jackson	AR	
Polk	AR	
Union	AR	
Washington	AR	Fayetteville-Springdale-Rogers, AR-MO
Cochise	AZ	Sierra Vista-Douglas, AZ
Coconino	AZ	Flagstaff, AZ
Mohave	AZ	Las Vegas-Henderson, NV-AZ
Pima	AZ	Tucson-Nogales, AZ
Yavapai	AZ	Prescott, AZ
Humboldt	CA	
Lake	CA	
Mendocino	CA	
Monterey	CA	Salinas, CA
San Benito	CA	San Jose-San Francisco-Oakland, CA
Santa Barbara	CA	Santa Maria-Santa Barbara, CA
Shasta	CA	Redding-Red Bluff, CA
Sonoma	CA	San Jose-San Francisco-Oakland, CA
Arapahoe	CO	Denver-Aurora, CO
Douglas	CO	Denver-Aurora, CO
El Paso	CO	Colorado Springs, CO
La Plata	CO	
Larimer	CO	Fort Collins, CO
Montezuma	CO	
Pueblo	CO	Pueblo-Cañon City, CO
Litchfield	CT	New York-Newark, NY-NJ-CT-PA
New London	CT	Hartford-West Hartford, CT
Kent	DE	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Sussex	DE	Salisbury, MD-DE
Brevard	FL	Palm Bay-Melbourne-Titusville, FL
Citrus	FL	Homosassa Springs, FL
Escambia	FL	Pensacola-Ferry Pass-Brent, FL
Hillsborough	FL	Tampa-St. Petersburg-Clearwater, FL
Lee	FL	Cape Coral-Fort Myers-Naples, FL
Leon	FL	Tallahassee-Bainbridge, FL-GA
Orange	FL	Orlando-Deltona-Daytona Beach, FL
Pinellas	FL	Tampa-St. Petersburg-Clearwater, FL
Polk	FL	Lakeland-Winter Haven, FL
Sarasota	FL	North Port-Sarasota, FL
Seminole	FL	Orlando-Deltona-Daytona Beach, FL
Bibb	GA	Macon-Warner Robins, GA
Clarke	GA	Atlanta—Athens-Clarke County—Sandy Springs, GA
Clayton	GA	Atlanta—Athens-Clarke County—Sandy Springs, GA
DeKalb	GA	Atlanta—Athens-Clarke County—Sandy Springs, GA
Hall	GA	Atlanta—Athens-Clarke County—Sandy Springs, GA
Houston	GA	Macon-Warner Robins, GA
Walker	GA	Chattanooga-Cleveland-Dalton, TN-GA-AL
Kauai	HI	
Maui	HI	Kahului-Wailuku-Lahaina, HI
Black Hawk	IA	Waterloo-Cedar Falls, IA
Delaware	IA	
Johnson	IA	Cedar Rapids-Iowa City, IA
Lee	IA	
Montgomery	IA	
Polk	IA	Des Moines-Ames-West Des Moines, IA

Notes:

1. Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2006 NAAQS.
2. MSA and CSA are terms used by the U.S. Office of Management and Budget for statistical purposes. MSA stands for Metropolitan Statistical Area. CSA stands for Combined Statistical Area, which may include multiples and individual counties.

Cleanest Counties for Short-term Particle Pollution (24-hour $PM_{2.5}$)[1] (cont.)

County	State	MSAs and Respective CSA[2]
Pottawattamie	IA	Omaha-Council Bluffs-Fremont, NE-IA
Van Buren	IA	
Delaware	IN	Indianapolis-Carmel-Muncie, IN
Henry	IN	Indianapolis-Carmel-Muncie, IN
LaPorte	IN	Chicago-Naperville, IL-IN-WI
Monroe	IN	Bloomington-Bedford, IN
Spencer	IN	
Johnson	KS	Kansas City-Overland Park-Kansas City, MO-KS
Linn	KS	Kansas City-Overland Park-Kansas City, MO-KS
Sedgwick	KS	Wichita-Arkansas City-Winfield, KS
Sumner	KS	Wichita-Arkansas City-Winfield, KS
Wyandotte	KS	Kansas City-Overland Park-Kansas City, MO-KS
Bell	KY	
Boyd	KY	Charleston-Huntington-Ashland, WV-OH-KY
Campbell	KY	Cincinnati-Wilmington-Maysville, OH-KY-IN
Carter	KY	
Christian	KY	Clarksville, TN-KY
Daviess	KY	Owensboro, KY
Fayette	KY	Lexington-Fayette—Richmond—Frankfort, KY
Hardin KY-IN	KY	Louisville/Jefferson County—Elizabethtown—Madison,
Henderson	KY	Evansville, IN-KY
Madison	KY	Lexington-Fayette—Richmond—Frankfort, KY
McCracken	KY	Paducah-Mayfield, KY-IL
Warren	KY	Bowling Green-Glasgow, KY
Calcasieu Parish	LA	Lake Charles, LA
Iberville Parish	LA	Baton Rouge, LA
Jefferson Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Lafayette Parish	LA	Lafayette-Opelousas-Morgan City, LA
Ouachita Parish	LA	Monroe-Ruston-Bastrop, LA
Rapides Parish	LA	Alexandria, LA
St. Bernard Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Tangipahoa Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Terrebonne Parish	LA	Houma-Thibodaux, LA
Berkshire	MA	Pittsfield, MA
Bristol	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Essex	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Hampden	MA	Springfield-Greenfield Town, MA
Plymouth	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Worcester	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Anne Arundel	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Baltimore	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Garrett	MD	
Harford	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Montgomery	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Androscoggin	ME	Portland-Lewiston-South Portland, ME
Aroostook	ME	
Cumberland	ME	Portland-Lewiston-South Portland, ME
Hancock	ME	
Kennebec	ME	
Oxford	ME	
Penobscot	ME	Bangor, ME
Allegan	MI	Grand Rapids-Wyoming-Muskegon, MI
Bay	MI	Saginaw-Midland-Bay City, MI
Berrien	MI	South Bend-Elkhart-Mishawaka, IN-MI
Chippewa	MI	
Genesee	MI	Detroit-Warren-Ann Arbor, MI
Ingham	MI	Lansing-East Lansing-Owosso, MI
Kalamazoo	MI	Kalamazoo-Battle Creek-Portage, MI
Kent	MI	Grand Rapids-Wyoming-Muskegon, MI
Lenawee	MI	Detroit-Warren-Ann Arbor, MI
Macomb	MI	Detroit-Warren-Ann Arbor, MI
Missaukee	MI	
Monroe	MI	Detroit-Warren-Ann Arbor, MI
Oakland	MI	Detroit-Warren-Ann Arbor, MI
Ottawa	MI	Grand Rapids-Wyoming-Muskegon, MI
St. Clair	MI	Detroit-Warren-Ann Arbor, MI

Notes:

1. Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2006 NAAQS.
2. MSA and CSA are terms used by the U.S. Office of Management and Budget for statistical purposes. MSA stands for Metropolitan Statistical Area. CSA stands for Combined Statistical Area, which may include multiples and individual counties.

Cleanest Counties for Short-term Particle Pollution (24-hour $PM_{2.5}$)[1] (cont.)

County	State	MSAs and Respective CSA[2]
Washtenaw	MI	Detroit-Warren-Ann Arbor, MI
Dakota	MN	Minneapolis-St. Paul, MN-WI
Lyon	MN	
Olmsted	MN	Rochester-Austin, MN
Scott	MN	Minneapolis-St. Paul, MN-WI
Buchanan	MO	Kansas City-Overland Park-Kansas City, MO-KS
Cass	MO	Kansas City-Overland Park-Kansas City, MO-KS
Cedar	MO	
Clay	MO	Kansas City-Overland Park-Kansas City, MO-KS
Greene	MO	Springfield-Branson, MO
Jefferson	MO	St. Louis-St. Charles-Farmington, MO-IL
DeSoto	MS	Memphis-Forrest City, TN-MS-AR
Grenada	MS	
Hancock	MS	Gulfport-Biloxi-Pascagoula, MS
Harrison	MS	Gulfport-Biloxi-Pascagoula, MS
Jackson	MS	Gulfport-Biloxi-Pascagoula, MS
Powder River	MT	
Richland	MT	
Buncombe	NC	Asheville-Brevard, NC
Caswell	NC	
Catawba	NC	Hickory-Lenoir, NC
Chatham	NC	Raleigh-Durham-Chapel Hill, NC
Cumberland	NC	Fayetteville-Lumberton-Laurinburg, NC
Davidson	NC	Greensboro—Winston-Salem—High Point, NC
Durham	NC	Raleigh-Durham-Chapel Hill, NC
Edgecombe	NC	Rocky Mount-Wilson-Roanoke Rapids, NC
Forsyth	NC	Greensboro—Winston-Salem—High Point, NC
Gaston	NC	Charlotte-Concord, NC-SC
Guilford	NC	Greensboro—Winston-Salem—High Point, NC
Haywood	NC	Asheville-Brevard, NC
Jackson	NC	
Martin	NC	
McDowell	NC	Hickory-Lenoir, NC
Mecklenburg	NC	Charlotte-Concord, NC-SC
Mitchell	NC	
Montgomery	NC	
Pitt	NC	Greenville-Washington, NC
Robeson	NC	Fayetteville-Lumberton-Laurinburg, NC
Rowan	NC	Charlotte-Concord, NC-SC
Swain	NC	
Wayne	NC	Goldsboro, NC
Billings	ND	
Burke	ND	
Burleigh	ND	Bismarck, ND
Cass	ND	Fargo-Wahpeton, ND-MN
Dunn	ND	
McKenzie	ND	
Mercer	ND	
Oliver	ND	Bismarck, ND
Hall	NE	Grand Island, NE
Lancaster	NE	Lincoln-Beatrice, NE
Scotts Bluff	NE	
Belknap	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Grafton	NH	
Hillsborough	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Merrimack	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Rockingham	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Atlantic	NJ	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Bergen	NJ	New York-Newark, NY-NJ-CT-PA
Essex	NJ	New York-Newark, NY-NJ-CT-PA
Gloucester	NJ	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Mercer	NJ	New York-Newark, NY-NJ-CT-PA
Middlesex	NJ	New York-Newark, NY-NJ-CT-PA
Morris	NJ	New York-Newark, NY-NJ-CT-PA
Ocean	NJ	New York-Newark, NY-NJ-CT-PA
Passaic	NJ	New York-Newark, NY-NJ-CT-PA
San Juan	NM	Farmington, NM
Bronx	NY	New York-Newark, NY-NJ-CT-PA
Chautauqua	NY	
Erie	NY	Buffalo-Cheektowaga, NY

Notes:

1. Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2006 NAAQS.
2. MSA and CSA are terms used by the U.S. Office of Management and Budget for statistical purposes. MSA stands for Metropolitan Statistical Area. CSA stands for Combined Statistical Area, which may include multiples and individual counties.

Cleanest Counties for Short-term Particle Pollution (24-hour $PM_{2.5}$)[1] (cont.)

County	State	MSAs and Respective CSA[2]
Essex	NY	
Kings	NY	New York-Newark, NY-NJ-CT-PA
Monroe	NY	Rochester-Batavia-Seneca Falls, NY
New York	NY	New York-Newark, NY-NJ-CT-PA
Niagara	NY	Buffalo-Cheektowaga, NY
Onondaga	NY	Syracuse-Auburn, NY
Orange	NY	New York-Newark, NY-NJ-CT-PA
Queens	NY	New York-Newark, NY-NJ-CT-PA
Richmond	NY	New York-Newark, NY-NJ-CT-PA
Steuben	NY	Elmira-Corning, NY
Suffolk	NY	New York-Newark, NY-NJ-CT-PA
Allen	OH	Lima-Van Wert-Celina, OH
Athens	OH	
Butler	OH	Cincinnati-Wilmington-Maysville, OH-KY-IN
Clark	OH	Dayton-Springfield-Sidney, OH
Franklin	OH	Columbus-Marion-Zanesville, OH
Greene	OH	Dayton-Springfield-Sidney, OH
Hamilton	OH	Cincinnati-Wilmington-Maysville, OH-KY-IN
Lake	OH	Cleveland-Akron-Canton, OH
Lawrence	OH	Charleston-Huntington-Ashland, WV-OH-KY
Lorain	OH	Cleveland-Akron-Canton, OH
Lucas	OH	Toledo-Port Clinton, OH
Medina	OH	Cleveland-Akron-Canton, OH
Montgomery	OH	Dayton-Springfield-Sidney, OH
Portage	OH	Cleveland-Akron-Canton, OH
Preble	OH	
Scioto	OH	Charleston-Huntington-Ashland, WV-OH-KY
Summit	OH	Cleveland-Akron-Canton, OH
Trumbull	OH	Youngstown-Warren, OH-PA
Adair	OK	
Oklahoma	OK	Oklahoma City-Shawnee, OK
Sequoyah	OK	Fort Smith, AR-OK
Tulsa	OK	Tulsa-Muskogee-Bartlesville, OK
Monroe	PA	New York-Newark, NY-NJ-CT-PA
Kent	RI	Boston-Worcester-Providence, MA-RI-NH-CT
Chesterfield	SC	
Florence	SC	Florence, SC
Richland	SC	Columbia-Orangeburg-Newberry, SC
Spartanburg	SC	Greenville-Spartanburg-Anderson, SC
Brookings	SD	
Brown	SD	
Codington	SD	
Custer	SD	Rapid City-Spearfish, SD
Jackson	SD	
Minnehaha	SD	Sioux Falls, SD
Pennington	SD	Rapid City-Spearfish, SD
Hamilton	TN	Chattanooga-Cleveland-Dalton, TN-GA-AL
Bexar	TX	San Antonio-New Braunfels, TX
Bowie	TX	Texarkana, TX-AR
Cameron	TX	Brownsville-Harlingen-Raymondville, TX
Ellis	TX	Dallas-Fort Worth, TX-OK
Harris	TX	Houston-The Woodlands, TX
Hidalgo	TX	McAllen-Edinburg, TX
Travis	TX	Austin-Round Rock, TX
Washington	UT	St. George, UT
Albemarle	VA	Charlottesville, VA
Arlington	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Bristol City	VA	Johnson City-Kingsport-Bristol, TN-VA
Charles City	VA	Richmond, VA
Chesterfield	VA	Richmond, VA
Henrico	VA	Richmond, VA
Loudoun	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Lynchburg City	VA	Lynchburg, VA
Page	VA	
Roanoke City	VA	Roanoke, VA
Rockingham	VA	Harrisonburg-Staunton-Waynesboro, VA
Salem City	VA	Roanoke, VA
Virginia Beach City	VA	Virginia Beach-Norfolk, VA-NC
Bennington	VT	
Ashland	WI	

Notes:

1. Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2006 NAAQS.
2. MSA and CSA are terms used by the U.S. Office of Management and Budget for statistical purposes. MSA stands for Metropolitan Statistical Area. CSA stands for Combined Statistical Area, which may include multiples and individual counties.

Cleanest Counties for Short-term Particle Pollution (24-hour $PM_{2.5}$)[1] (cont.)

County	State	MSAs and Respective CSA[2]
Eau Claire	WI	Eau Claire-Menomonie, WI
Forest	WI	
Grant	WI	
Kenosha	WI	Chicago-Naperville, IL-IN-WI
La Crosse	WI	La Crosse-Onalaska, WI-MN
Ozaukee	WI	Milwaukee-Racine-Waukesha, WI
Sauk	WI	Madison-Janesville-Beloit, WI
Taylor	WI	
Vilas	WI	
Waukesha	WI	Milwaukee-Racine-Waukesha, WI
Cabell	WV	Charleston-Huntington-Ashland, WV-OH-KY
Hancock	WV	Pittsburgh-New Castle-Weirton, PA-OH-WV
Harrison	WV	
Kanawha	WV	Charleston-Huntington-Ashland, WV-OH-KY
Marion	WV	Morgantown-Fairmont, WV
Marshall	WV	Wheeling, WV-OH
Monongalia	WV	Morgantown-Fairmont, WV
Ohio	WV	Wheeling, WV-OH
Raleigh	WV	Beckley, WV
Wood	WV	Parkersburg-Marietta-Vienna, WV-OH
Albany	WY	
Park	WY	
Sheridan	WY	

Notes:

1. Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2006 NAAQS.
2. MSA and CSA are terms used by the U.S. Office of Management and Budget for statistical purposes. MSA stands for Metropolitan Statistical Area. CSA stands for Combined Statistical Area, which may include multiples and individual counties.

Top 25 Cleanest Counties for Year-Round Particle Pollution (Annual $PM_{2.5}$)[1]

2014 Rank[2]	County	ST	Design Value[3]
1	Lake	CA	3.8
2	Custer	SD	3.9
3	Yavapai	AZ	4.2
3	Jackson	SD	4.3
3	Essex	NY	4.3
5	Billings	ND	4.4
7	Park	WY	4.6
8	Hancock	ME	4.7
8	San Juan	NM	4.7
10	Laramie	WY	4.8
10	Natrona	WY	4.8
12	Albany	WY	4.9
12	Santa Fe	NM	4.9
14	Ashland	WI	5.1
14	Forest	WI	5.1
16	Coconino	AZ	5.3
16	Teton	WY	5.3
18	Vilas	WI	5.4
19	San Benito	CA	5.5
19	Litchfield	CT	5.5
21	Anchorage Municipality	AK	5.6
22	Sweetwater	WY	5.7
22	Palm Beach	FL	5.7
24	Pima	AZ	5.8
25	Mercer	ND	5.9
25	Missaukee	MI	5.9

Notes:

1. This list represents counties with the lowest levels of monitored long term $PM_{2.5}$ air pollution.
2. Counties are ranked by Design Value.
3. The Design Value is the calculated concentration of a pollutant based on the form of the Annual $PM_{2.5}$ National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the current (2012) standard. (U.S. EPA).

Cleanest Counties for Ozone Air Pollution[1]

County	State	Metropolitan Statistical Area
Fairbanks North Star Borough	AK	Fairbanks, AK
Yukon-Koyukuk Census Area	AK	
DeKalb	AL	
Elmore	AL	Montgomery, AL
Etowah	AL	Gadsden, AL
Houston	AL	Dothan-Enterprise-Ozark, AL
Montgomery	AL	Montgomery, AL
Tuscaloosa	AL	Tuscaloosa, AL
Colusa	CA	
Glenn	CA	
Humboldt	CA	
Marin	CA	San Jose-San Francisco-Oakland, CA
Mendocino	CA	
Monterey	CA	Salinas, CA
San Francisco	CA	San Jose-San Francisco-Oakland, CA
San Mateo	CA	San Jose-San Francisco-Oakland, CA
Santa Cruz	CA	San Jose-San Francisco-Oakland, CA
Siskiyou	CA	
Sonoma	CA	San Jose-San Francisco-Oakland, CA
Jackson	CO	
Moffat	CO	Steamboat Springs-Craig, CO
Alachua	FL	Gainesville-Lake City, FL
Baker	FL	Jacksonville-St. Marys-Palatka, FL-GA
Bay	FL	Panama City, FL
Collier	FL	Cape Coral-Fort Myers-Naples, FL
Columbia	FL	Gainesville-Lake City, FL
Flagler	FL	Orlando-Deltona-Daytona Beach, FL
Highlands	FL	Sebring, FL
Holmes	FL	
Indian River	FL	Miami-Fort Lauderdale-Port St. Lucie, FL
Lee	FL	Cape Coral-Fort Myers-Naples, FL
Leon	FL	Tallahassee-Bainbridge, FL-GA
Liberty	FL	
Okaloosa	FL	Crestview-Fort Walton Beach-Destin, FL
Osceola	FL	Orlando-Deltona-Daytona Beach, FL
Pasco	FL	Tampa-St. Petersburg-Clearwater, FL
Volusia	FL	Orlando-Deltona-Daytona Beach, FL
Wakulla	FL	Tallahassee-Bainbridge, FL-GA
Chatham	GA	Savannah-Hinesville-Statesboro, GA
Chattooga	GA	Rome-Summerville, GA
Coweta	GA	Atlanta—Athens-Clarke County—Sandy Springs, GA
Dawson	GA	Atlanta—Athens-Clarke County—Sandy Springs, GA
Glynn	GA	Brunswick, GA
Muscogee	GA	Columbus-Auburn-Opelika, GA-AL
Sumter	GA	
Honolulu	HI	Urban Honolulu, HI
Bremer	IA	Waterloo-Cedar Falls, IA
Montgomery	IA	
Polk	IA	Des Moines-Ames-West Des Moines, IA
Story	IA	Des Moines-Ames-West Des Moines, IA
Warren	IA	Des Moines-Ames-West Des Moines, IA
Butte	ID	Idaho Falls-Rexburg-Blackfoot, ID
Rock Island	IL	Davenport-Moline, IA-IL
Winnebago	IL	Rockford-Freeport-Rochelle, IL
Hancock	IN	Indianapolis-Carmel-Muncie, IN
Orleans Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Ouachita Parish	LA	Monroe-Ruston-Bastrop, LA
Androscoggin	ME	Portland-Lewiston-South Portland, ME
Aroostook	ME	
Kennebec	ME	
Oxford	ME	
Sagadahoc	ME	Portland-Lewiston-South Portland, ME
Becker	MN	
Crow Wing	MN	
Goodhue	MN	Minneapolis-St. Paul, MN-WI
Lake	MN	
Lyon	MN	
Mille Lacs	MN	Minneapolis-St. Paul, MN-WI
Olmsted	MN	Rochester-Austin, MN
St. Louis	MN	Duluth, MN-WI
Stearns	MN	Minneapolis-St. Paul, MN-WI
Wright	MN	Minneapolis-St. Paul, MN-WI
Lauderdale	MS	
Yalobusha	MS	
Flathead	MT	
Lewis and Clark	MT	
Missoula	MT	Missoula, MT
Powder River	MT	
Richland	MT	

Note:
1. This list represents counties with no monitored ozone air pollution in unhealthful ranges using the Air Quality Index based on 2008 NAAQS.

Cleanest Counties for Ozone Air Pollution[1] (cont.)

County	State	Metropolitan Statistical Area
Rosebud	MT	
Carteret	NC	New Bern-Morehead City, NC
Macon	NC	
Swain	NC	
Billings	ND	
Burke	ND	
Burleigh	ND	Bismarck, ND
Cass	ND	Fargo-Wahpeton, ND-MN
Dunn	ND	
McKenzie	ND	
Mercer	ND	
Oliver	ND	Bismarck, ND
Lancaster	NE	Lincoln-Beatrice, NE
Belknap	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Cheshire	NH	
Grafton	NH	
Merrimack	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Lea	NM	
Luna	NM	
Sandoval	NM	Albuquerque-Santa Fe-Las Vegas, NM
Santa Fe	NM	Albuquerque-Santa Fe-Las Vegas, NM
Carson City	NV	Reno-Carson City-Fernley, NV
Churchill	NV	
Franklin	NY	
Herkimer	NY	Utica-Rome, NY
Saratoga	NY	Albany-Schenectady, NY
Steuben	NY	Elmira-Corning, NY
Tompkins	NY	Ithaca-Cortland, NY
Noble	OH	
Clackamas	OR	Portland-Vancouver-Salem, OR-WA
Columbia	OR	Portland-Vancouver-Salem, OR-WA
Deschutes	OR	Bend-Redmond-Prineville, OR
Jackson	OR	Medford-Grants Pass, OR
Lane	OR	Eugene, OR
Marion	OR	Portland-Vancouver-Salem, OR-WA
Umatilla	OR	
Washington	OR	Portland-Vancouver-Salem, OR-WA
Franklin	PA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Lycoming	PA	Williamsport-Lock Haven, PA
Monroe	PA	New York-Newark, NY-NJ-CT-PA
Aiken	SC	Augusta-Richmond County, GA-SC
Berkeley	SC	Charleston-North Charleston, SC
Charleston	SC	Charleston-North Charleston, SC
Colleton	SC	
Edgefield	SC	Augusta-Richmond County, GA-SC
Oconee	SC	Greenville-Spartanburg-Anderson, SC
Brookings	SD	
Custer	SD	Rapid City-Spearfish, SD
Jackson	SD	
Meade	SD	Rapid City-Spearfish, SD
Minnehaha	SD	Sioux Falls, SD
Union	SD	Sioux City-Vermillion, IA-SD-NE
Cameron	TX	Brownsville-Harlingen-Raymondville, TX
Hidalgo	TX	McAllen-Edinburg, TX
Cache	UT	Logan, UT-ID
Garfield	UT	
Fauquier	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Giles	VA	Blacksburg-Christiansburg-Radford, VA
Page	VA	
Rockbridge	VA	
Rockingham	VA	Harrisonburg-Staunton-Waynesboro, VA
Chittenden	VT	Burlington-South Burlington, VT
Clallam	WA	
Clark	WA	Portland-Vancouver-Salem, OR-WA
Pierce	WA	Seattle-Tacoma, WA
Skagit	WA	Seattle-Tacoma, WA
Spokane	WA	Spokane-Spokane Valley-Coeur d'Alene, WA-ID
Whatcom	WA	Bellingham, WA
Ashland	WI	
Eau Claire	WI	Eau Claire-Menomonie, WI
La Crosse	WI	La Crosse-Onalaska, WI-MN
Marathon	WI	Wausau-Stevens Point-Wisconsin Rapids, WI
Taylor	WI	
Vilas	WI	
Big Horn	WY	
Carbon	WY	
Laramie	WY	Cheyenne, WY
Sweetwater	WY	
Teton	WY	
Uinta	WY	

Note:

1. This list represents counties with no monitored ozone air pollution in unhealthful ranges using the Air Quality Index based on 2008 NAAQS.

Two types of air pollution dominate in the U.S.: ozone and particle pollution.[1] These two pollutants threaten the health and the lives of millions of Americans. Thanks to the Clean Air Act, the U.S. has far less of both pollutants now than in the past. Still, more than 138.5 million people live in counties where monitors show unhealthy levels of one or both—meaning the air a family breathes could shorten life or cause lung cancer.

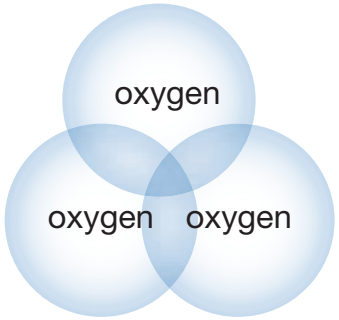
So what are ozone and particle pollution?

Ozone Pollution

It may be hard to imagine that pollution could be invisible, but ozone is. The most widespread pollutant in the U.S. is also one of the most dangerous.

Scientists have studied the effects of ozone on health for decades. Hundreds of research studies have confirmed that ozone harms people at levels currently found in the United States. In the last few years, we've learned that it can also be deadly.

What Is Ozone?



Ozone (O_3) is a gas molecule composed of three oxygen atoms. Often called "smog," ozone is harmful to breathe. Ozone aggressively attacks lung tissue by reacting chemically with it.

The ozone layer found high in the upper atmosphere (the stratosphere) shields us from much of the sun's ultraviolet radiation. However, ozone air pollution at ground level where we can breathe it (in the troposphere) causes serious health problems.

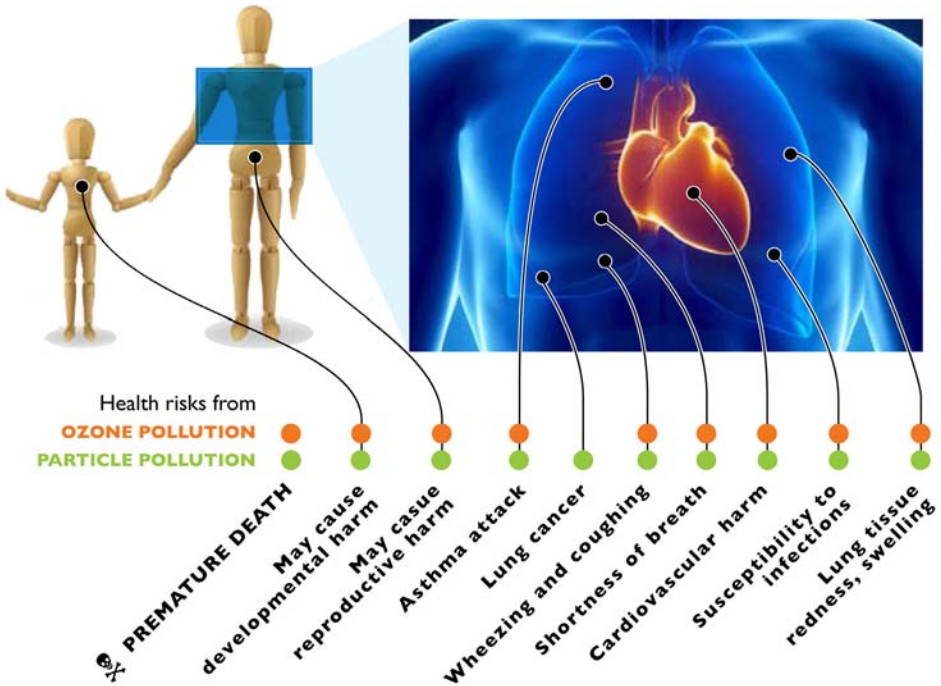
Where Does Ozone Come From?

Ozone develops in the atmosphere from gases that come out of tailpipes, smokestacks and many other sources. When these gases come in contact with sunlight, they react and form ozone smog.

The essential raw ingredients for ozone come from nitrogen oxides (NO_x), hydrocarbons, also called volatile organic compounds (VOCs) and carbon monoxide (CO). They are produced primarily when fossil fuels like gasoline, oil or coal are burned or when some chemicals, like solvents, evaporate. NO_x is emitted from power plants, motor vehicles and other sources of high-heat combustion. VOCs are emitted from motor vehicles, chemical plants, refineries, factories, gas stations, paint and other sources. CO is also primarily emitted from motor vehicles.[2]

If the ingredients are present under the right conditions, they

Air pollution remains a major danger to the health of children and adults.



react to form ozone. And because the reaction takes place in the atmosphere, the ozone often shows up downwind of the sources of the original gases. In addition, winds can carry ozone far from where it began.

You may have wondered why "ozone action day" warnings are sometimes followed by recommendations to avoid activities such as mowing your lawn or driving your car. Lawn mower exhaust and gasoline vapors are VOCs that could turn into ozone in the heat and sun.

Who is at risk from breathing ozone?

Anyone who spends time outdoors where ozone pollution levels are high may be at risk. Five groups of people are especially vulnerable to the effects of breathing ozone:

- children and teens[3];
- anyone 65 and older[4];
- people who work or exercise outdoors[5];
- people with existing lung diseases, such as asthma and chronic obstructive pulmonary disease (also known as COPD, which includes emphysema and chronic bronchitis)[6]; and
- people with cardiovascular disease.[7]

In addition, some evidence suggests that other groups—including women, people who suffer from obesity and people with low incomes—may also face higher risk from ozone.[8] More research is needed to confirm these findings.

The impact on your health can depend on many factors, however. For example, the risks would be greater if ozone levels are higher, if you are breathing faster because you're working outdoors or if you spend more time outdoors.

Lifeguards in Galveston, Texas, provided evidence of the impact of even short-term exposure to ozone on healthy, active adults in a study published in 2008. Testing the breathing capacity of these outdoor workers several times a day, researchers found that many lifeguards had greater obstruction in their airways when ozone levels were high. Because of this research, Galveston became the first city in the nation to install an air quality warning flag system on the beach.[9]

How Ozone Pollution Harms Your Health

Premature death. Breathing ozone can shorten your life. Strong evidence exists of the deadly impact of ozone in large studies conducted in cities across the U.S., in Europe and in Asia. Researchers repeatedly found that the risk of premature death increased with higher levels of ozone.[10] Newer research has confirmed that ozone increased the risk of premature death even when other pollutants also exist.[11]

Even low levels of ozone may be deadly. A large study of 48 U.S. cities looked at the association between ozone and all-cause mortality during the summer months. Ozone concentrations by city in the summer months ranged from 16 percent to 80 percent lower than the U.S. Environmental Protection Agency (EPA) currently considers safe. Researchers found that ozone at those lower levels was associated with deaths from cardiovascular disease, strokes, and respiratory causes.[12]

Immediate breathing problems. Many areas in the United States produce enough ozone during the summer months to cause health problems that can be felt right away. Immediate problems—in addition to increased risk of premature death—include:

- shortness of breath, wheezing and coughing;
- asthma attacks;
- increased risk of respiratory infections;
- increased susceptibility to pulmonary inflammation; and
- increased need for people with lung diseases, like asthma or chronic obstructive pulmonary disease (COPD), to receive medical treatment and to go to the hospital.[13]

Cardiovascular effects. Inhaling ozone may affect the heart as well as the lungs. A 2006 study linked exposures to high ozone levels for as little as one hour to a particular type of cardiac arrhythmia that itself increases the risk of premature death and stroke.[14] A French study found that exposure to elevated ozone levels for one to two days increased the risk of heart attacks for middle-aged

adults without heart disease.[15] Several studies around the world have found increased risk of hospital admissions or emergency department visits for cardiovascular disease.[16]

Long-term exposure risks. New studies warn of serious effects from breathing ozone over longer periods. With more long-term data, scientists are finding that long-term exposure—that is, for periods longer than eight hours, including days, months or years—may increase the risk of early death.

- Examining the records from a long-term national database, researchers found a higher risk of death from respiratory diseases associated with increases in ozone.[17]
- New York researchers looking at hospital records for children's asthma found that the risk of admission to hospitals for asthma increased with chronic exposure to ozone. Younger children and children from low income families were more likely than other children to need hospital admissions even during the same time periods.[18]
- California researchers analyzing data from their long-term Southern California Children's Health Study found that some children with certain genes were more likely to develop asthma as adolescents in response to the variations in ozone levels in their communities.[19]
- Studies link lower birth weight and decreased lung function in newborns to ozone levels in their community.[20] This research provides increasing evidence that ozone may harm newborns.

Breathing other pollutants in the air may make your lungs more responsive to ozone—and breathing ozone may increase your body's response to other pollutants. For example, research warns that breathing sulfur dioxide and nitrogen oxide—two pollutants common in the eastern U.S.—can make the lungs react more strongly than to just breathing ozone alone. Breathing ozone may also increase the response to allergens in people with allergies. A large study published in 2009 found that children were more likely to suffer from hay fever and respiratory allergies when ozone and $PM_{2.5}$ levels were high.[21]

EPA finds ozone causes harm. The EPA released their most recent review of the current research on ozone pollution in February 2013.[22] The EPA had engaged a panel of expert scientists, the Clean Air Scientific Advisory Committee, to help them assess the evidence; in particular, they examined research published between 2006 and 2012. The EPA concluded that ozone pollution posed multiple, serious threats to health. Their findings are highlighted in the box below.

EPA Concludes Ozone Pollution Poses Serious Health Threats

- Causes respiratory harm (e.g. worsened asthma, worsened COPD, inflammation)
- Likely to cause early death (both short-term and long-term exposure)
- Likely to cause cardiovascular harm (e.g. heart attacks, strokes, heart disease, congestive heart failure)
- May cause harm to the central nervous system
- May cause reproductive and developmental harm

—U.S. Environmental Protection Agency, *Integrated Science Assessment for Ozone and Related Photochemical Oxidants*, 2013. EPA/600/R-10/076F.

Particle Pollution

Ever look at dirty truck exhaust?

The dirty, smoky part of that stream of exhaust is made of particle pollution. Overwhelming evidence shows that particle pollution—like that coming from that exhaust smoke—can kill. Particle pollution can increase the risk of heart disease, lung cancer and asthma attacks and can interfere with the growth and work of the lungs.

What Is Particle Pollution?

Particle pollution refers to a mix of very tiny solid and liquid particles that are in the air we breathe. But nothing about particle pollution is simple. And it is so dangerous it can shorten your life.

Size matters. Particles themselves are different sizes. Some are one-tenth the diameter of a strand of hair. Many are even tinier; some are so small they can only be seen with an electron microscope. Because of their size, you can't see the individual particles. You can only see the haze that forms when millions of particles blur the spread of sunlight.

The differences in size make a big difference in how they affect us. Our natural defenses help us to cough or sneeze larger particles out of our bodies. But those defenses don't keep out smaller particles, those that are smaller than 10 microns (or micrometers) in diameter, or about one-seventh the diameter of a single human hair. These particles get trapped in the lungs, while the smallest are so minute that they can pass through the lungs into the bloodstream, just like the essential oxygen molecules we need to survive.

Researchers categorize particles according to size, grouping them as coarse, fine and ultrafine. Coarse particles fall between 2.5 microns and 10 microns in diameter and are called $PM_{10-2.5}$. Fine particles are 2.5 microns in diameter or smaller and are called $PM_{2.5}$. Ultrafine particles are smaller than 0.1 micron in diameter[23] and are small enough to pass through the lung tissue into the blood stream, circulating like the oxygen molecules themselves. No matter what the size, particles can harm your health.

"A mixture of mixtures." Because particles are formed in so many different ways, they can be composed of many different compounds. Although we often think of particles as solids, not all are. Some are completely liquid; some are solids suspended in liquids. As the EPA puts it, particles are really "a mixture of mixtures."[24]

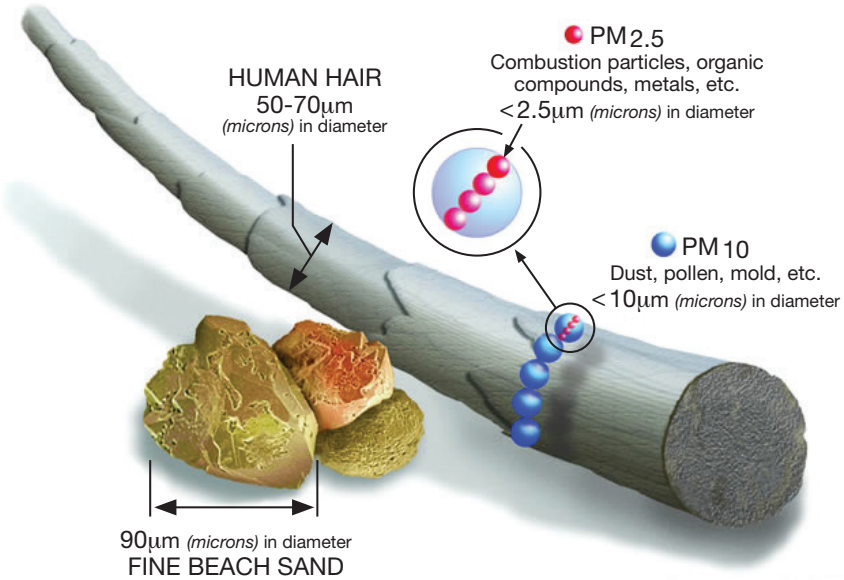


Image courtesy of the U.S. EPA

The mixtures differ between the eastern and western United States and in different times of the year. For example, the Midwest, Southeast and Northeast states have more sulfate particles than the West on average, largely due to the high levels of sulfur dioxide emitted by large, coal-fired power plants. By contrast, nitrate particles from motor vehicle exhaust form a larger proportion of the unhealthful mix in the winter in the Northeast, Southern California, the Northwest, and North Central U.S.[25]

Who Is at Risk?

Anyone who lives where particle pollution levels are high is at risk. Some people face higher risk, however. People at the greatest risk from particle pollution exposure include:

- Infants, children and teens[26];
- People over 65 years of age[27];
- People with lung disease such as asthma and chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis and emphysema;
- People with heart disease[28] or diabetes[29];
- People with low incomes[30]; and
- People who work or are active outdoors.[31]

Diabetics face increased risk at least in part because of their higher risk for cardiovascular disease.[32] A 2010 study examined prevalence of diagnosed diabetes in relation to fine particle pollution in 2004-2005. The evidence suggested that air pollution is a risk factor for diabetes.[33]

What Can Particles Do to Your Health?

Particle pollution can be very dangerous to breathe. Breathing particle pollution may trigger illness, hospitalization and premature death, risks that are showing up in new studies that validate earlier research.

Thanks to steps taken to reduce particle pollution, good news is growing from researchers who study the drop in year-round levels of particle pollution.

- Looking at air quality in 545 counties in the U.S. between 2000 and 2007, researchers found that people had approximately four months added to their life expectancy on average due to cleaner air. Women and people who lived in urban and densely populated counties benefited the most.[34]
- Another long-term study of six U.S. cities tracked from 1974 to 2009 added more evidence of the benefits. Their findings suggest that cleaning up particle pollution had almost immediate health benefits. They estimated that the U.S. could prevent approximately 34,000 premature deaths a year if the nation could lower annual levels of particle pollution by 1 $\mu g/m^3$.[35]

These studies add to the growing research that cleaning up air pollution improves life and health.[36] Other researchers estimated that reductions in air pollution can be expected to produce rapid improvements in public health, with fewer deaths occurring within the first two years after reductions.[37]

Researchers are exploring possible differences in health effects of the three sizes of particles and particles from different sources, such as diesel particles from trucks and buses or sulfates from coal-fired power plants. So far, the evidence remains clear that particles of all sizes from all sources can be dangerous.[38]

Short-Term Exposure Can Be Deadly

First and foremost, short-term exposure to particle pollution can kill. Peaks or spikes in particle pollution can last for hours to days. Deaths can occur on the very day that particle levels are high, or within one to two months afterward. Particle pollution does not just make people die a few days earlier than they might otherwise—these are deaths that would not have occurred if the air were cleaner.[39]

Particle pollution also diminishes lung function, causes greater use of asthma medications and increased rates of school absenteeism, emergency room visits and hospital admissions. Other adverse effects can be coughing, wheezing, cardiac arrhythmias and heart attacks. According to the findings from some of the latest studies, short-term increases in particle pollution have been linked to:

- death from respiratory and cardiovascular causes, including strokes[40,41,42,43];
- increased mortality in infants and young children[44];
- increased numbers of heart attacks, especially among the elderly and in people with heart conditions[45];
- inflammation of lung tissue in young, healthy adults[46];
- increased hospitalization for cardiovascular disease, including strokes and congestive heart failure[47,48,49];
- increased emergency room visits for patients suffering from acute respiratory ailments[50];
- increased hospitalization for asthma among children[51,52,53]; and
- increased severity of asthma attacks in children.[54]

Again, the impact of even short-term exposure to particle pollution on healthy adults showed up in the Galveston lifeguard study. In addition to the harmful effects of ozone pollution, lifeguards had reduced lung volume at the end of the day when fine particle levels were high.[55]

Year-Round Exposure

Breathing high levels of particle pollution day in and day out also can be deadly, as landmark studies in the 1990s conclusively showed[56] and as other studies confirmed.[57] Chronic exposure to particle pollution can shorten life by one to three years.[58]

In late 2013, the International Agency for Research on Cancer, part of the World Health Organization, concluded that particle pollution could cause lung cancer. The IARC reviewed the most recent research and reported that the risk of lung cancer increases as the particle levels rise.[59]

Year-round exposure to particle pollution has also been linked to:

- increased hospitalization for asthma attacks for children living near roads with heavy truck or trailer traffic[60,61];
- slowed lung function growth in children and teenagers[62,63];
- significant damage to the small airways of the lungs[64];
- increased risk of death from cardiovascular disease[65]; and
- increased risk of lower birth weight and infant mortality.[66]

Research into the health risks of 65,000 women over age 50 found that those who lived in areas with higher levels of particle pollution faced a much greater risk of dying from heart disease than had been previously estimated. Even women who lived

within the same city faced differing risks depending on the annual levels of pollution in their neighborhood.[67]

The EPA completed their most recent review of the current research on particle pollution in December 2009.[68] The EPA had engaged a panel of expert scientists, the Clean Air Scientific Advisory Committee, to help them assess the evidence. The EPA concluded that particle pollution caused multiple, serious threats to health. Their findings are highlighted in the box below.

EPA Concludes Fine Particle Pollution Poses Serious Health Threats

- Causes early death (both short-term and long-term exposure)
- Causes cardiovascular harm (e.g. heart attacks, strokes, heart disease, congestive heart failure)
- Likely to cause respiratory harm (e.g. worsened asthma, worsened COPD, inflammation)
- May cause cancer
- May cause reproductive and developmental harm

—U.S. Environmental Protection Agency, Integrated Science Assessment for Particulate Matter, December 2009. EPA 600/R-08/139F.

Where Does Particle Pollution Come From?

Particle pollution is produced through two separate processes—mechanical and chemical.

Mechanical processes break down bigger bits into smaller bits with the material remaining essentially the same, only becoming smaller. Mechanical processes primarily create coarse particles.[69] Dust storms, construction and demolition, mining operations, and agriculture are among the activities that produce coarse particles. Tire, brake pad and road wear can also create coarse particles. Bacteria, pollen, mold, and plant and animal debris are also included as coarse particles.[70]

By contrast, chemical processes in the atmosphere create most of the tiniest fine and ultrafine particles. Combustion sources burn fuels and emit gases. These gases can vaporize and then condense to become a particle of the same chemical compound. Or, they can react with other gases or particles in the atmosphere to form a particle of a different chemical compound. Particles formed by this latter process come from the reaction of elemental carbon (soot), heavy metals, sulfur dioxide (SO_2), nitrogen oxides (NO_x) and volatile organic compounds with water and other compounds in the atmosphere.[71] Burning fossil fuels in factories, power plants, steel mills, smelters, diesel- and gasoline-powered motor vehicles (cars and trucks) and equipment generate a large part of the raw materials for fine particles. So does burning wood in residential fireplaces and wood stoves or burning agricultural fields or forests.

Focusing on Children's Health

Children face special risks from air pollution because their lungs are growing and because they are so active.

Just like the arms and legs, the largest portion of a child's lungs will grow long after he or she is born. Eighty percent of their tiny air sacs develop after birth. Those sacs, called the alveoli, are where the life-sustaining transfer of oxygen to the blood takes place. The lungs and their alveoli aren't fully grown until children become adults.[72] In addition, the body's defenses that help adults fight off infections are still developing in young bodies.[73] Children have more respiratory infections than adults, which also seems to increase their susceptibility to air pollution.[74]

Furthermore, children don't behave like adults, and their behavior also affects their vulnerability. They are outside for longer periods and are usually more active when outdoors. Consequently, they inhale more polluted outdoor air than adults typically do.[75]

Air Pollution Increases Risk of Underdeveloped Lungs

The Southern California Children's Health study looked at the long-term effects of particle pollution on teenagers. Tracking 1,759 children who were between ages 10 and 18 from 1993 to 2001, researchers found that those who grew up in more polluted areas face the increased risk of having underdeveloped lungs, which may never recover to their full capacity. The average drop in lung function was 20 percent below what was expected for the child's age, similar to the impact of growing up in a home with parents who smoked.[76]

Community health studies are pointing to less obvious, but serious effects from year-round exposure to ozone, especially for children. Scientists followed 500 Yale University students and

determined that living just four years in a region with high levels of ozone and related co-pollutants was associated with diminished lung function and frequent reports of respiratory symptoms.[77] A much larger study of 3,300 school children in Southern California found reduced lung function in girls with asthma and boys who spent more time outdoors in areas with high levels of ozone.[78]

Cleaning Up Pollution Can Reduce Risk to Children

There is also real-world evidence that reducing air pollution can help protect children.

A just-published follow-up to that Southern California Children's Health study showed that reducing pollution could improve children's health. This time they tracked a different group of 863 children living in the same area, but growing up between 2007 and 2011, when the air in Southern California was much cleaner. They compared these children to those who had been part of their earlier studies when the air was dirtier. Children growing up in the cleaner air had much greater lung function, a benefit that may help them throughout their lives. As the researchers noted, their study suggested that "all children have the potential to benefit from improvements in air quality." [79]

In Switzerland, particle pollution dropped during a period in the 1990s. Researchers there tracked 9,000 children over a nine-year period, following their respiratory symptoms. After taking other factors such as family characteristics and indoor air pollution into account, the researchers noted that during the years with less pollution, the children had fewer episodes of chronic cough, bronchitis, common cold, and conjunctivitis symptoms.[80]

Disparities in the Impact of Air Pollution

The burden of air pollution is not evenly shared. Poorer people and some racial and ethnic groups are among those who often face higher exposure to pollutants and who may experience greater responses to such pollution. Many studies have explored the differences in harm from air pollution to racial or ethnic groups and people who are in a low socioeconomic position, have less education, or live nearer to major sources,[81] including a workshop the American Lung Association held in 2001 that focused on urban air pollution and health inequities.[82]

Many studies have looked at differences in the impact on premature death. Results have varied widely, particularly for effects between racial groups. Some studies have found no differences among races,[83] while others found greater responsiveness for Whites and Hispanics, but not African Americans,[84] or for African Americans but not other races or ethnic groups.[85] Other researchers have found greater risk for African Americans from air toxics, including those pollutants that also come from traffic sources.[86]

Socioeconomic position has been more consistently associated with greater harm from air pollution. Recent studies show evidence of that link. Low socioeconomic status consistently increased the risk of premature death from fine particle pollution among 13.2 million Medicare recipients studied in the largest examination of particle pollution mortality nationwide.[87] In the 2008 study that found greater risk for premature death for African Americans, researchers also found greater risk for people living in areas with higher unemployment or higher use of public transportation.[88] A 2008 study of Washington, DC found that while poor air quality and worsened asthma went hand-in-hand in areas where Medicaid enrollment was high, the areas with the highest Medicaid enrollment did not always have the strongest association of high air pollution and asthma attacks.[89] However, two other recent studies in France have found no association with lower income and asthma attacks.[90]

Scientists have speculated that there are three broad reasons why disparities may exist. First, groups may face greater exposure to pollution because of factors ranging from racism to class bias to housing market dynamics and land costs. For example, pollution sources may be located near disadvantaged communities, increasing exposure to harmful pollutants. Second, low social position may make some groups more susceptible to health threats because of factors related to their disadvantage. Lack of access to health care, grocery stores and good jobs, poorer job opportunities, dirtier workplaces or higher traffic exposure are among the factors that could handicap groups and increase the risk of harm. Finally, existing health conditions, behaviors, or traits may predispose some groups to greater risk. For example, diabetics are

among the groups most at risk from air pollutants, and the elderly, African Americans, Mexican Americans and people living near a central city have higher incidence of diabetes.[91]

Communities of color also may be more likely to live in counties with higher levels of pollution. Non-Hispanic Blacks and Hispanics were more likely to live in counties that had worse problems with particle pollution, researchers found in a 2011 analysis. Non-Hispanic Blacks were also more likely to live in counties with worse ozone pollution. Income groups, by contrast, differed little in these exposures. However, since few rural counties have monitors, the primarily older, non-Hispanic white residents of those counties lack information about the air quality in their communities.[92]

Unemployed people, those with low income or low education and non-Hispanic Blacks were found to be more likely to live in areas with higher exposures to particle pollution in a 2012 study. However, the different racial/ethnic and income groups were breathing often very different kinds of particles; the different composition and structure of these particles may have different health impacts.[93]

Highways May Be Especially Dangerous for Breathing

Being in heavy traffic, or living near a road, may be even more dangerous than being in other places in a community. Growing evidence shows that the vehicle emissions coming directly from those highways may be higher than in the community as a whole, increasing the risk of harm to people who live or work near busy roads.

The number of people living "next to a busy road" may include 30 to 45 percent of the urban population in North America, according to the most recent review of the evidence. In January 2010, the Health Effects Institute published a major review of the evidence by a panel of expert scientists. The panel looked at over 700 studies from around the world, examining the health effects. They concluded that traffic pollution causes asthma attacks in children, and may cause a wide range of other effects including: the onset of childhood asthma, impaired lung function, premature death and death from cardiovascular diseases, and cardiovascular morbidity. The area most affected, they concluded, was roughly 0.2 mile to 0.3 mile (300 to 500 meters) from the highway.[94]

Children and teenagers are among the most vulnerable—though not the only ones at risk. A Danish study found that long-term exposure to traffic air pollution may increase the risk of developing chronic obstructive pulmonary disease (COPD). They found that those most at risk were people who already had asthma or diabetes.[95] Studies have found increased risk of premature death from living near a major highway or an urban road.[96] Another study found an increase in risk of heart attacks from being in traffic, whether driving or taking public transportation.[97] Urban women in a Boston study experienced decreased lung function associated with traffic-related pollution.[98]

How to Protect Yourself from Ozone and Particle Pollution

To minimize your exposure to ozone and particle pollution:

- Pay attention to forecasts for high air pollution days to know when to take precautions;
- Avoid exercising near high-traffic areas;
- Avoid exercising outdoors when pollution levels are high, or substitute an activity that requires less exertion;
- Do not let anyone smoke indoors and support measures to make all places smokefree; and
- Reduce the use of fireplaces and wood-burning stoves.

Bottom line: Help yourself and everyone else breathe easier. Support national, state and local efforts to clean up sources of pollution. Your life and the life of someone you love may depend on it.

1. Ozone and particle pollution are the most widespread, but they aren't the only serious air pollutants. Others include carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide, as well as scores of toxins such as mercury, arsenic, benzene, formaldehyde, and acid gases. However, the monitoring networks are not as widespread nationwide for the other pollutants.
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Statistical Methodology: The Air Quality Data

Data Sources

The data on air quality throughout the United States were obtained from the U.S. Environmental Protection Agency's Air Quality System (AQS), formerly called Aerometric Information Retrieval System (AIRS) database. The American Lung Association contracted with Dr. Allen S. Lefohn, A.S.L. & Associates, Helena, Montana, to characterize the hourly averaged ozone concentration information and the 24-hour averaged $PM_{2.5}$ concentration information for the 3-year period for 2011-2013 for each monitoring site.

Design values for the annual $PM_{2.5}$ concentrations by county for the period 2011-2013 as posted on August 28, 2014 at EPA's website at http://www.epa.gov/air/airtrends/values.html. On December 18, 2014, EPA updated this information at http://www.epa.gov/pmdesignations/2012standards/regs.htm.

Ozone Data Analysis

The 2011, 2012, and 2013 AQS hourly ozone data were used to calculate the daily 8-hour maximum concentration for each ozone-monitoring site. The hourly averaged ozone data were downloaded on July 3, 2014. The data were considered for a 3-year period for the same reason that the EPA uses three years of data to determine compliance with the ozone standard: to prevent a situation in any single year, where anomalies of weather or other factors create air pollution levels, which inaccurately reflect the normal conditions. The highest 8-hour daily maximum concentration in each county for 2011, 2012, and 2013, based on the EPA-defined ozone season, was identified.

The current national ambient air quality standard for ozone is 0.075 ppm measured over eight hours. The EPA's Air Quality Index reflects the 0.075 ppm standard. A.S.L. & Associates prepared a table by county that summarized, for each of the three years, the number of days the ozone level was within the ranges identified by the EPA based on the EPA Air Quality Index:

Air Quality Index for Ozone

8-hour Ozone Concentration	Air Quality Index Levels
0.000 – 0.059 ppm	Good (Green)
0.060 – 0.075 ppm	Moderate (Yellow)
0.076 – 0.095 ppm	Unhealthy for Sensitive Groups (Orange)
0.096 – 0.115 ppm	Unhealthy (Red)
0.116 – 0.374 ppm	Very Unhealthy (Purple)
>0.374 ppm	Hazardous (Maroon)

The goal of this report was to identify the number of days that 8-hour daily maximum concentrations occurred within the defined ranges, not just those days that would fall under the requirements for attaining the national ambient air quality standards. Therefore, no data-capture criteria were applied to eliminate monitoring sites or to require a number of valid days for the ozone season. All valid days of data within the ozone season were used in the analysis. However, for computing an 8-hour average, at least 75 percent of the hourly concentrations (i.e., 6-8 hours) had to be available for the 8-hour period. In addition, an 8-hour daily maximum average was identified if valid 8-hour averages were available for at least 75 percent of possible hours in the day (i.e., at least 18 of the possible 24 8-hour averages). Because the EPA includes days with inadequate data if the standard value is exceeded, our data capture methodology included the site's 8-hour value if at least one valid 8-hr period were available and it was 76 ppb or higher.

Following receipt of the above information, the American Lung Association identified the number of days each county, with at least one ozone monitor, experienced air quality designated as orange (Unhealthy for Sensitive Groups), red (Unhealthy), or purple (Very Unhealthy).

Short-term Particle Pollution Data Analysis

A.S.L. & Associates identified the maximum daily 24-hour AQS $PM_{2.5}$ concentration for each county in 2011, 2012, and 2013 with monitoring information. The 24-hour $PM_{2.5}$ data were downloaded on August 14, 2014. In addition, hourly averaged $PM_{2.5}$ concentration data were characterized into 24-hour average $PM_{2.5}$ values by the EPA and provided to A.S.L. & Associates. Using these results, A.S.L. & Associates prepared a table by county that summarized, for each of the three years, the number of days the maximum of the daily $PM_{2.5}$ concentration was within the ranges identified by the EPA based on the EPA Air Quality Index, as adopted by the EPA on December 14, 2012:

Air Quality Index for Particle Pollution

Concentration	Index Levels
0.0 mg/m^3 to 12.0 mg/m^3	Good (Green)
12.1 mg/m^3 to 35.4 mg/m^3	Moderate (Yellow)
35.5 mg/m^3 to 55.4 mg/m^3	Unhealthy for Sensitive Groups (Orange)
55.5 mg/m^3 to 150.4 mg/m^3	Unhealthy (Red)
150.5 mg/m^3 to 250.4 mg/m^3	Very Unhealthy (Purple)
greater than or equal to 250.5 mg/m^3	Hazardous (Maroon)

All previous data collected for 24-hour average $PM_{2.5}$ were characterized using the AQI thresholds listed above.

The goal of this report was to identify the number of days that the maximum in each county of the daily $PM_{2.5}$ concentration occurred within the defined ranges, not just those days that would fall under the requirements for attaining the national ambient air quality standards. Therefore, no data-capture criteria were used to eliminate monitoring sites. Both 24-hour averaged PM data, as well as hourly averaged PM data averaged over 24 hours were used. Included in the analysis are data collected using only FRM and FEM methods, which reported hourly and 24-hour averaged data. As instructed by the Lung Association, A.S.L. & Associates included the exceptional and natural events that were identified in the database and identified for the Lung Association the dates and monitoring sites that experienced such events. Some data have been flagged by the state or local air pollution control agency to indicate that they had raised issues with EPA about those data.

Following receipt of the above information, the American Lung Association identified the number of days each county, with at least one $PM_{2.5}$ monitor, experienced air quality designated as orange (Unhealthy for Sensitive Groups), red (Unhealthy), purple (Very Unhealthy) or maroon (Hazardous).

Description of County Grading System

Ozone and short-term particle pollution (24-hour $PM_{2.5}$)

The grades for ozone and short-term particle pollution (24-hour $PM_{2.5}$) were based on a weighted average for each county. To determine the weighted average, the Lung Association followed these steps:

1. First, assigned weighting factors to each category of the Air Quality Index. The number of orange days experienced by each county received a factor of 1; red days, a factor of 1.5; purple days, a factor of 2; and maroon days, a factor of 2.5. This allowed days where the air pollution levels were higher to receive greater weight.
2. Next, multiplied the total number of days within each category by their assigned factor, then summed all the categories to calculate a total.
3. Finally, divided the total by three to determine the weighted average, since the monitoring data were collected over a three-year period.

The weighted average determined each county's grades for ozone and 24-hour $PM_{2.5}$.

- All counties with a weighted average of zero (corresponding to no exceedances of the standard over the three-year period) were given a grade of "A."
- For ozone, an "F" grade was set to generally correlate with the number of unhealthy air days that would place a county in nonattainment for the ozone standard.

- For short-term particle pollution, fewer unhealthy air days are required for an F than for nonattainment under the $PM_{2.5}$ standard. The national air quality standard is set to allow two percent of the days during the three years to exceed 35 µg/m³ (called a "98th percentile" form) before violating the standard. That would be roughly 21 unhealthy days in three years. The grading used in this report would allow only about one percent of the days to be over 35 µg/m³ (called a "99th percentile" form) of the $PM_{2.5}$. The American Lung Association supports using the tighter limits in a 99th percentile form as a more appropriate standard that is intended to protect the public from short-term spikes in pollution.

Grading System

Grade	Weighted Average	Approximate Number of Allowable Orange/Red/Purple/Maroon days
A	0.0	None
B	0.3 to 0.9	1 to 2 orange days with no red
C	1.0 to 2.0	3 to 6 days over the standard: 3 to 5 orange with no more than 1 red OR 6 orange with no red
D	2.1 to 3.2	7 to 9 days over the standard: 7 total (including up to 2 red) to 9 orange with no red
F	3.3 or higher	9 days or more over the standard: 10 orange days or 9 total including at least 1 or more red, purple or maroon

Weighted averages allow comparisons to be drawn based on severity of air pollution. For example, if one county had nine orange days and no red days, it would earn a weighted average of 3.0 and a D grade. However, another county which had only eight orange days but also two red days, which signify days with more serious air pollution, would receive an F. That second county would have a weighted average of 3.7.

Note that this system differs significantly from the methodology the EPA uses to determine violations of both the ozone and the 24-hour $PM_{2.5}$ standards. The EPA determines whether a county violates the standard based on the 4th maximum daily 8-hour ozone reading each year averaged over three years. Multiple days of unhealthy air beyond the highest four in each year are not considered. By contrast, the system used in this report recognizes when a community's air quality repeatedly results in unhealthy air throughout the three years. Consequently, some counties will receive grades of "F" in this report, showing repeated instances of unhealthy air, while still meeting the EPA's 2008 ozone standard. The American Lung Association's position is that the evidence shows that the 2008 ozone standard fails to protect public health.

Counties were ranked by weighted average. Metropolitan areas were ranked by the highest weighted average among the counties within a given Metropolitan Statistical Area as of 2013 as defined by the White House Office of Management and Budget (OMB).

Year-round Particle Pollution (Annual $PM_{2.5}$)

Since no comparable Air Quality Index exists for year-round particle pollution (annual $PM_{2.5}$), the grading was based on the 2012 National Ambient Air Quality Standard for annual $PM_{2.5}$ of 12 µg/m³. Counties that EPA listed as being at or below 12 µg/m³ were given grades of "Pass." Counties EPA listed as being at or above 12.1 µg/m³ were given grades of "Fail." Where insufficient data existed for EPA to determine a design value, those counties received a grade of "Incomplete."

In December 2014, EPA officially recognized that data collected in all Illinois counties, most Tennessee counties, and many counties in Georgia were processed in certain laboratories where quality control issues meant that available data could not be considered for development of an official design value. For short-term and annual particle pollution, those counties received a grade of "Incomplete."

Design value is the calculated concentration of a pollutant based on the form of the national ambient air quality standard and is used by EPA to determine whether or not the air quality in a county meets the standard. Counties were ranked by design value. Metropolitan areas were ranked by the highest design value among the counties within a given Metropolitan Statistical Area as of 2013 as defined by the OMB.

The Lung Association received critical assistance from members of the National Association of Clean Air Administrators, formerly known as the State and Territorial Air Pollution Control Adminis-

trators and the Association of Local Air Pollution Control Administrators. With their assistance, all state and local agencies were provided the opportunity to review and comment on the data in draft tabular form. The Lung Association reviewed all discrepancies with the agencies and, if needed, with Dr. Lefohn at A.S.L. & Associates. Questions about the annual PM design values were discussed with EPA; however, the Lung Association made final decisions to grade counties as "Incomplete" where EPA considered $PM_{2.5}$ data to have inadequate quality assurance. The American Lung Association wishes to express its continued appreciation to the state and local air directors for their willingness to assist in ensuring that the characterized data used in this report are correct.

Calculations of Populations-at-Risk

Presently county-specific measurements of the number of persons with chronic conditions are not generally available. In order to assess the magnitude of chronic conditions at the state and county levels, we have employed a synthetic estimation technique originally developed by the U.S. Census Bureau. This method uses age-specific national and state estimates of self-reported conditions to project disease prevalence to the county level. The exception to this is poverty, for which estimates are available at the county level.

Population Estimates

The U.S. Census Bureau estimated data on the total population of each county in the United States for 2013. The Census Bureau also estimated the age-specific breakdown of the population and how many individuals were living in poverty by county. These estimates are the best information on population demographics available between decennial censuses.

Poverty estimates came from the Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program. The program does not use direct counts or estimates from sample surveys, as these methods would not provide sufficient data for all counties. Instead, a model based on estimates of income or poverty from the Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS) is used to develop estimates for all states and counties.

Prevalence Estimates

Chronic Obstructive Pulmonary Disease, Cardiovascular Disease, Asthma and Diabetes. In 2013, the Behavioral Risk Factor Surveillance System (BRFSS) survey found that approximately 21.6 million (9.0 percent) of adults residing in the United States and 9.2 percent of children from thirty-five states and Washington, D.C. reported currently having asthma. Among adults in the United States in 2013, 15.7 million (6.5 percent) had ever been diagnosed with chronic obstructive pulmonary disease (COPD), 21.6 million (8.9 percent) had ever been diagnosed with cardiovascular disease, and 24.8 million (10.2 percent) had ever been diagnosed with diabetes.

The prevalence estimate for pediatric asthma is calculated for those younger than 18 years. Local area prevalence of pediatric asthma is estimated by applying 2013 state prevalence rates, or if not available, the national rate from the BRFSS to pediatric county-level resident populations obtained from the U.S. Census Bureau web site. Pediatric asthma data from the 2013 BRFSS were available for thirty-five states and Washington D.C., from the 2012 BRFSS for four states, from the 2011 BRFSS for one state, and national data was used for the eleven states[1] that had no data available. Data from earlier years were not used due to changes in the 2011 survey methodology.

The prevalence estimate for COPD, cardiovascular disease, adult asthma and diabetes is calculated for those aged 18-44 years, 45-64 years and 65 years and older. Local area prevalence for these diseases is estimated by applying age-specific state prevalence rates from the 2013 BRFSS to age-specific county-level resident populations obtained from the U.S. Census Bureau web site. Cardiovascular disease included ever having been diagnosed with a heart attack, angina or coronary heart disease, or stroke.

Limitations of Estimates. Since the statistics presented by the BRFSS and SAIPE are based on a sample, they will differ (due to random sampling variability) from figures that would be derived from a complete census or case registry of people in the U.S. with these diseases. The results are also subject to reporting, non-

1 2012: Illinois, Kentucky, North Dakota, and Wyoming. 2011: Iowa. National: Alaska, Arkansas, Colorado, Delaware, Florida, Idaho, Minnesota, North Carolina, South Carolina, South Dakota, and Virginia.

response and processing errors. These types of errors are kept to a minimum by methods built into the survey.

Additionally, a major limitation of the BRFSS is that the information collected represents self-reports of medically diagnosed conditions, which may underestimate disease prevalence since not all individuals with these conditions have been properly diagnosed. However, the BRFSS is the best available source for information on the magnitude of chronic disease at the state level. The conditions covered in the survey may vary considerably in the accuracy and completeness with which they are reported.

Local estimates of chronic diseases are scaled in direct proportion to the base population of the county and its age distribution. No adjustments are made for other factors that may affect local prevalence (e.g. local prevalence of cigarette smokers or occupational exposures) since the health surveys that obtain such data are rarely conducted on the county level. Because the estimates do not account for geographic differences in the prevalence of chronic and acute diseases, the sum of the estimates for each of the counties in the United States may not exactly reflect the national or state estimates derived from the BRFSS.

References

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Population Estimates Branch, U.S. Census Bureau. Annual Estimates of the Resident Population by Selected Age Groups and Sex for Counties: April 1, 2010 to July 1, 2013.

Office of Management and Budget. Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas, and Guidance on Uses of the Delineations of These Areas. OMB Bulletin 13-01 February 28, 2013.

A full explanation of the sources of data and methodology is in **Methodology**.

Notes for all state data tables

1. **Total Population** is based on 2013 U.S. Census and represents the at-risk populations in counties with ozone or $PM_{2.5}$ pollution monitors; it does not represent the entire state's sensitive populations.
2. Those **18 & under** and **65 & over** are vulnerable to ozone and $PM_{2.5}$. Do not use them as population denominators for disease estimates—that will lead to incorrect estimates.
3. **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2013 based on the state rates when available or national rates when not (Behavioral Risk Factor Surveillance System, or BRFSS), applied to county population estimates (U.S. Census).
4. **Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2013 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
5. **COPD** estimates are for adults 18 and over who had ever been diagnosed with chronic obstructive pulmonary disease, which includes chronic bronchitis and emphysema, based on state rates (BRFSS) applied to county population estimates (U.S. Census).
6. **Cardiovascular disease** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, stroke, and heart attack.
7. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime based on state rates (BRFSS) applied to county population estimates (U.S. Census).
8. **Poverty** estimates include all ages and come from the U.S. Census Bureau's Small Area Income and Poverty Estimates program. The estimates are derived from a model using estimates of income or poverty from the Annual Social and Economic Supplement and the Current Population Survey, 2013.
9. Adding across rows does not produce valid estimates. Adding the at-risk categories (asthma, COPD, poverty, etc.) will double-count people who fall into more than one category.

Notes for all state grades tables.

1. Not all counties have monitors for either ozone or particle pollution. If a county does not have a monitor, that county's name is not on the list in these tables. The decision about monitors in the county is made by the state and the U.S. Environmental Protection Agency, not by the American Lung Association.
2. **INC** (Incomplete) indicates that monitoring is underway for that pollutant in that county, but that the data are incomplete for all three years. Those counties are not graded or received an Incomplete. For particle pollution, some states collected data, but experienced laboratory quality issues that meant the data could not be used for assessing pollution levels.
3. **DNC** (Data Not Collected) indicates that data on that particular pollutant is not collected in that county.
4. The **Weighted Average (Wgt. Avg)** was derived by adding the three years of individual level data (2011-2013), multiplying the sums of each level by the assigned standard weights (i.e. 1=orange, 1.5=red, 2.0=purple and 2.5=maroon) and calculating the average. Grades are assigned based on the weighted averages as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.
5. The **Design Value** is the calculated concentration of a pollutant based on the form of the National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the standard. The numbers refer to micrograms per cubic meter, or $\mu g/m^3$. Design values for the annual $PM_{2.5}$ concentrations by county for the period 2011-2013 are as posted on August 28, 2014 at EPA's website at http://www.epa.gov/air/airtrends/values.html. The 2011-2013 design values were compared to the 2012 National Ambient Air Quality Standard for Annual $PM_{2.5}$, particularly to the EPA's assessment of data quality required, as discussed on EPA's website at http://www.epa.gov/pmdesignations/2012standards/regs.htm. Many design values are missing because state data did not meet quality requirements.
6. The annual average National Ambient Air Quality Standard for $PM_{2.5}$ is 12 $\mu g/m^3$ as of December 14, 2012. Counties with design values of 12 or lower received a grade of "Pass." Counties with design values of 12.1 or higher received a grade of "Fail."

American Lung Association in Alabama

www.lung.org/alabama

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Baldwin	195,540	43,844	35,461	5,225	12,997	16,342	20,842	22,416	27,429
Clay	13,486	2,918	2,569	348	907	1,154	1,486	1,594	2,590
Colbert	54,520	11,849	9,889	1,412	3,656	4,592	5,843	6,291	8,794
DeKalb	71,013	17,607	10,766	2,098	4,560	5,566	6,849	7,461	14,044
Elmore	80,902	18,784	10,881	2,239	5,293	6,319	7,529	8,305	10,071
Etowah	103,931	23,138	17,512	2,757	6,912	8,570	10,730	11,622	19,938
Houston	103,668	24,931	16,178	2,971	6,724	8,233	10,174	11,064	18,527
Jefferson	659,479	152,972	91,691	18,230	43,172	51,777	62,145	68,350	122,167
Madison	346,892	78,810	46,098	9,392	22,898	27,539	32,723	36,242	47,136
Mobile	414,079	99,917	58,394	11,907	26,794	32,292	38,994	42,796	82,625
Montgomery	226,659	54,923	29,319	6,545	14,589	17,174	20,321	22,413	48,080
Morgan	119,787	27,774	18,549	3,310	7,873	9,685	11,924	13,015	20,479
Russell	59,585	15,020	7,288	1,790	3,785	4,436	5,200	5,759	14,070
Shelby	204,180	50,447	25,333	6,012	13,116	15,644	18,414	20,459	16,664
Sumter	13,361	2,652	2,118	316	912	1,101	1,348	1,468	4,756
Talladega	81,096	18,142	12,720	2,162	5,387	6,631	8,168	8,914	15,399
Tuscaloosa	200,821	42,268	22,931	5,037	13,357	14,985	17,034	18,945	32,728
Walker	65,998	14,648	11,688	1,746	4,401	5,524	6,999	7,553	14,293
Totals	**3,014,997**	**700,644**	**429,385**	**83,496**	**197,332**	**237,563**	**286,725**	**314,667**	**519,790**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Baldwin	2	0	0	0.7	B
Clay	DNC	DNC	DNC	DNC	DNC
Colbert	2	0	0	0.7	B
DeKalb	0	0	0	0.0	A
Elmore	0	0	0	0.0	A
Etowah	0	0	0	0.0	A
Houston	0	0	0	0.0	A
Jefferson	29	1	0	10.2	F
Madison	6	0	0	2.0	C
Mobile	3	0	0	1.0	C
Montgomery	0	0	0	0.0	A
Morgan	3	0	0	1.0	C
Russell	1	0	0	0.3	B
Shelby	8	0	0	2.7	D
Sumter	INC	INC	INC	INC	INC
Talladega	DNC	DNC	DNC	DNC	DNC
Tuscaloosa	0	0	0	0.0	A
Walker	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Baldwin	0	0	0	0.0	A	9.2	PASS
Clay	0	0	0	0.0	A	9.2	PASS
Colbert	0	0	0	0.0	A	9.3	PASS
DeKalb	0	0	0	0.0	A	9.8	PASS
Elmore	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Etowah	0	0	0	0.0	A	10.1	PASS
Houston	0	0	0	0.0	A	9.1	PASS
Jefferson	2	0	0	0.7	B	11.9	PASS
Madison	0	0	0	0.0	A	9.7	PASS
Mobile	0	0	0	0.0	A	9.0	PASS
Montgomery	0	0	0	0.0	A	10.4	PASS
Morgan	0	0	0	0.0	A	9.3	PASS
Russell	0	0	0	0.0	A	11.2	PASS
Shelby	0	0	0	0.0	A	9.8	PASS
Sumter	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Talladega	0	0	0	0.0	A	10.6	PASS
Tuscaloosa	1	0	0	0.3	B	9.7	PASS
Walker	INC	INC	INC	INC	INC	INC	INC

American Lung Association in Alaska

www.lung.org/alaska

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Anchorage Municipality	300,950	75,586	25,541	6,646	21,023	11,885	14,423	14,756	22,753
Denali Borough	1,867	386	161	34	138	85	107	110	100
Fairbanks North Star Borough	100,436	24,790	7,558	2,180	7,074	3,810	4,402	4,592	8,497
Juneau City and Borough	32,660	7,379	3,242	649	2,352	1,422	1,821	1,831	2,394
Kenai Peninsula Borough	57,147	13,120	7,700	1,154	4,058	2,666	3,746	3,594	5,623
Matanuska-Susitna Borough	95,192	26,359	8,697	2,318	6,406	3,834	4,876	4,911	8,795
Totals	**588,252**	**147,620**	**52,899**	**12,981**	**41,051**	**23,702**	**29,375**	**29,794**	**48,162**

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
Borough	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Anchorage Municipality	INC	INC	INC	INC	INC	0	0	0	0.0	A	5.6	PASS
Denali Borough	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fairbanks North Star Borough	0	0	0	0.0	A	20	15	2	15.5	F	11.2	PASS
Juneau City and Borough	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	6.5	PASS
Kenai Peninsula Borough	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	INC	INC
Matanuska-Susitna Borough	INC	INC	INC	INC	INC	9	0	0	3.0	D	6.2	PASS

American Lung Association in Arizona

www.lung.org/arizona

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Apache	71,934	21,286	9,310	2,322	4,508	3,576	4,758	5,412	27,489
Cochise	129,473	29,162	24,687	3,181	8,946	7,488	10,439	11,588	23,177
Coconino	136,539	30,470	14,031	3,323	9,343	6,928	8,605	9,747	29,461
Gila	53,053	10,823	13,683	1,180	3,806	3,442	5,104	5,642	11,744
La Paz	20,324	3,530	7,224	385	1,513	1,470	2,286	2,431	4,643
Maricopa	4,009,412	1,016,299	538,073	110,843	265,248	207,731	272,789	306,866	696,086
Mohave	203,030	38,896	52,584	4,242	14,776	13,305	19,660	21,706	42,044
Navajo	107,322	30,347	16,212	3,310	6,866	5,592	7,621	8,609	33,422
Pima	996,554	220,044	171,126	23,999	69,010	56,208	76,506	85,062	187,646
Pinal	389,350	97,394	66,369	10,622	25,919	21,182	28,903	31,924	60,575
Santa Cruz	46,768	13,504	7,147	1,473	2,967	2,426	3,316	3,739	10,528
Yavapai	215,133	38,208	58,882	4,167	15,967	14,570	21,747	24,050	34,732
Yuma	201,201	53,663	33,881	5,853	13,048	10,596	14,363	15,653	37,000
Totals	**6,580,093**	**1,603,626**	**1,013,209**	**174,900**	**441,916**	**354,514**	**476,096**	**532,429**	**1,198,547**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Apache	DNC	DNC	DNC	DNC	DNC
Cochise	2	0	0	0.7	B
Coconino	5	0	0	1.7	C
Gila	12	0	0	4.0	F
La Paz	2	0	0	0.7	B
Maricopa	59	0	0	19.7	F
Mohave	DNC	DNC	DNC	DNC	DNC
Navajo	1	0	0	0.3	B
Pima	5	0	0	1.7	C
Pinal	19	0	0	6.3	F
Santa Cruz	DNC	DNC	DNC	DNC	DNC
Yavapai	1	0	0	0.3	B
Yuma	14	0	0	4.7	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Apache	INC	INC	INC	INC	INC	INC	INC
Cochise	0	0	0	0.0	A	6.7	PASS
Coconino	0	0	0	0.0	A	5.3	PASS
Gila	DNC	DNC	DNC	DNC	DNC	DNC	DNC
La Paz	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Maricopa	11	8	0	7.7	F	11.5	PASS
Mohave	0	0	0	0.0	A	INC	INC
Navajo	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pima	0	0	0	0.0	A	5.8	PASS
Pinal	5	2	0	2.7	D	9.3	PASS
Santa Cruz	3	1	0	1.5	C	9.4	PASS
Yavapai	0	0	0	0.0	A	4.2	PASS
Yuma	1	0	0	0.3	B	7.8	PASS

American Lung Association in Arkansas

www.lung.org/arkansas

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Arkansas	18,777	4,343	3,189	382	1,206	1,355	1,815	1,744	3,650
Ashley	21,283	5,026	3,774	442	1,360	1,536	2,074	1,982	4,607
Clark	22,743	4,430	3,553	390	1,502	1,549	2,017	1,954	4,542
Crittenden	49,746	13,998	5,864	1,231	2,941	3,130	3,993	3,949	11,579
Faulkner	119,580	28,919	13,063	2,543	7,358	7,324	9,096	9,080	17,175
Garland	97,173	20,204	20,673	1,776	6,491	7,505	10,399	9,781	21,098
Jackson	17,615	3,605	2,895	317	1,163	1,277	1,689	1,633	4,266
Newton	8,064	1,616	1,860	142	548	653	917	857	1,878
Phillips	20,399	5,541	3,225	487	1,240	1,388	1,853	1,784	7,380
Polk	20,406	4,782	4,283	420	1,321	1,543	2,146	2,016	4,921
Pope	62,547	14,283	8,740	1,256	3,968	4,174	5,392	5,272	11,743
Pulaski	391,284	93,446	50,985	8,216	24,493	25,942	33,265	32,742	66,197
Sebastian	127,342	31,503	17,910	2,770	7,917	8,530	11,096	10,832	27,648
Union	40,694	9,654	6,652	849	2,589	2,898	3,862	3,723	8,434
Van Buren	16,932	3,374	4,096	297	1,154	1,376	1,949	1,811	3,155
Washington	216,410	54,939	22,734	4,830	13,070	12,831	15,852	15,850	43,559
White	78,483	18,665	11,647	1,641	4,935	5,259	6,876	6,675	12,831
Totals	**1,329,478**	**318,328**	**185,143**	**27,989**	**83,255**	**88,270**	**114,289**	**111,684**	**254,663**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Arkansas	DNC	DNC	DNC	DNC	DNC
Ashley	DNC	DNC	DNC	DNC	DNC
Clark	1	0	0	0.3	B
Crittenden	15	0	0	5.0	F
Faulkner	DNC	DNC	DNC	DNC	DNC
Garland	DNC	DNC	DNC	DNC	DNC
Jackson	DNC	DNC	DNC	DNC	DNC
Newton	2	0	0	0.7	B
Phillips	DNC	DNC	DNC	DNC	DNC
Polk	7	0	0	2.3	D
Pope	DNC	DNC	DNC	DNC	DNC
Pulaski	21	0	0	7.0	F
Sebastian	DNC	DNC	DNC	DNC	DNC
Union	DNC	DNC	DNC	DNC	DNC
Van Buren	INC	INC	INC	INC	INC
Washington	9	0	0	3.0	D
White	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Arkansas	0	0	0	0.0	A	10.1	PASS
Ashley	0	0	0	0.0	A	10.1	PASS
Clark	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Crittenden	1	0	0	0.3	B	10.6	PASS
Faulkner	INC	INC	INC	INC	INC	INC	INC
Garland	0	0	0	0.0	A	10.5	PASS
Jackson	0	0	0	0.0	A	9.6	PASS
Newton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Phillips	INC	INC	INC	INC	INC	INC	INC
Polk	0	0	0	0.0	A	10.5	PASS
Pope	INC	INC	INC	INC	INC	INC	INC
Pulaski	2	0	0	0.7	B	11.7	PASS
Sebastian	INC	INC	INC	INC	INC	INC	INC
Union	0	0	0	0.0	A	10.7	PASS
Van Buren	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washington	0	0	0	0.0	A	10.2	PASS
White	INC	INC	INC	INC	INC	INC	INC

American Lung Association in California
www.lung.org/california

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Alameda	1,578,891	343,177	191,838	30,402	107,985	56,443	81,383	123,422	201,303
Amador	36,519	5,678	8,829	503	2,781	1,782	2,807	4,078	4,746
Butte	222,090	45,154	36,998	4,000	15,488	8,648	13,001	19,085	46,621
Calaveras	44,515	8,018	10,800	710	3,309	2,161	3,420	4,971	6,617
Colusa	21,358	6,019	2,725	533	1,345	728	1,070	1,604	2,749
Contra Costa	1,094,205	260,619	151,134	23,088	73,658	40,713	60,040	90,505	116,977
El Dorado	181,737	38,761	31,203	3,434	12,858	7,672	11,621	17,428	20,575
Fresno	955,272	278,110	103,705	24,637	58,765	30,120	43,282	65,253	268,773
Glenn	27,940	7,571	4,069	671	1,795	1,007	1,505	2,238	5,253
Humboldt	134,493	26,161	19,906	2,318	9,499	5,174	7,636	11,404	28,159
Imperial	176,584	50,940	20,339	4,513	10,926	5,688	8,239	12,374	38,067
Inyo	18,467	3,888	3,782	344	1,307	807	1,254	1,834	2,839
Kern	864,124	256,286	83,355	22,704	52,702	26,422	37,419	57,022	189,029
Kings	150,960	41,854	13,265	3,708	9,403	4,549	6,334	9,707	28,877
Lake	63,860	13,008	12,669	1,152	4,564	2,799	4,319	6,361	14,680
Los Angeles	10,017,068	2,322,711	1,187,071	205,766	670,227	347,183	499,827	755,975	1,872,964
Madera	152,389	42,859	19,064	3,797	9,561	5,096	7,460	11,157	33,974
Marin	258,365	53,188	48,867	4,712	18,428	11,188	17,156	25,425	21,784
Mariposa	17,755	2,996	4,211	265	1,335	859	1,352	1,971	2,875
Mendocino	87,192	18,891	15,827	1,674	6,079	3,602	5,501	8,110	17,947
Merced	263,228	79,906	26,885	7,079	15,883	8,043	11,487	17,367	63,843
Monterey	428,826	113,578	49,729	10,062	27,404	14,183	20,470	30,818	71,922
Napa	140,326	31,280	23,096	2,771	9,638	5,511	8,305	12,295	13,141
Nevada	98,200	17,604	22,087	1,560	7,263	4,597	7,195	10,506	12,478
Orange	3,114,363	727,016	397,165	64,405	209,171	111,471	162,288	244,921	416,204

(continued)

	AT-RISK GROUPS								
				Lung Diseases					
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Placer	367,309	85,595	63,282	7,583	24,995	14,606	22,204	32,760	30,287
Plumas	18,859	3,263	4,525	289	1,413	916	1,445	2,104	2,917
Riverside	2,292,507	615,555	294,281	54,531	146,427	78,238	114,669	171,404	392,513
Sacramento	1,462,131	360,895	181,076	31,971	96,329	51,022	74,142	111,850	272,592
San Benito	57,600	15,825	6,259	1,402	3,670	1,930	2,774	4,246	7,260
San Bernardino	2,088,371	578,417	208,565	51,241	131,342	66,473	94,315	144,112	392,242
San Diego	3,211,252	726,397	396,543	64,351	216,251	112,491	162,647	244,856	476,184
San Francisco	837,442	112,255	118,910	9,945	62,847	32,531	47,169	70,474	113,217
San Joaquin	704,379	198,720	80,542	17,604	44,161	23,160	33,502	50,634	137,451
San Luis Obispo	276,443	50,724	46,711	4,494	19,832	11,137	16,721	24,673	39,140
San Mateo	747,373	162,100	107,247	14,360	51,576	28,395	41,921	62,945	58,932
Santa Barbara	435,697	98,432	59,518	8,720	29,278	15,446	22,636	33,600	67,725
Santa Clara	1,862,041	435,695	222,803	38,598	124,653	65,241	94,147	142,695	191,898
Santa Cruz	269,419	55,179	34,494	4,888	18,783	9,962	14,442	21,888	38,447
Shasta	178,980	38,814	33,572	3,438	12,467	7,435	11,411	16,741	34,746
Siskiyou	43,799	8,896	9,619	788	3,139	1,983	3,106	4,523	8,826
Solano	424,788	98,930	55,134	8,764	28,695	15,524	22,672	34,327	53,441
Sonoma	495,025	103,636	79,183	9,181	34,673	19,722	29,534	44,065	60,216
Stanislaus	525,491	145,255	61,652	12,868	33,197	17,455	25,308	38,162	113,074
Sutter	95,350	25,365	13,276	2,247	6,135	3,363	4,985	7,416	16,288
Tehama	63,057	15,149	11,006	1,342	4,255	2,506	3,822	5,629	11,148
Trinity	13,448	2,327	3,102	206	1,009	649	1,018	1,492	2,914
Tulare	454,143	144,482	45,908	12,799	26,839	13,630	19,496	29,455	133,050
Tuolumne	53,874	9,096	12,284	806	4,012	2,513	3,935	5,714	7,307
Ventura	839,620	206,064	110,178	18,255	55,744	30,260	44,348	66,883	99,227
Yolo	204,593	44,799	22,766	3,969	13,760	6,824	9,692	14,599	35,367
Totals	**38,171,718**	**9,137,138**	**4,771,055**	**809,448**	**2,536,856**	**1,339,857**	**1,946,434**	**2,933,079**	**6,298,806**

American Lung Association in California

www.lung.org/california

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Alameda	6	0	0	2.0	C
Amador	9	0	0	3.0	D
Butte	13	0	0	4.3	F
Calaveras	8	0	0	2.7	D
Colusa	0	0	0	0.0	A
Contra Costa	6	0	0	2.0	C
El Dorado	57	1	0	19.5	F
Fresno	172	20	1	68.0	F
Glenn	0	0	0	0.0	A
Humboldt	0	0	0	0.0	A
Imperial	47	1	0	16.2	F
Inyo	4	0	0	1.3	C
Kern	191	12	0	69.7	F
Kings	66	3	0	23.5	F
Lake	1	0	0	0.3	B
Los Angeles	194	20	3	76.7	F
Madera	88	5	0	31.8	F
Marin	0	0	0	0.0	A
Mariposa	30	0	0	10.0	F
Mendocino	0	0	0	0.0	A
Merced	43	0	0	14.3	F
Monterey	0	0	0	0.0	A
Napa	1	0	0	0.3	B
Nevada	21	0	0	7.0	F
Orange	10	0	0	3.3	F
Placer	45	0	0	15.0	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Alameda	8	0	0	2.7	D	10.0	PASS
Amador	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Butte	8	0	0	2.7	D	10.1	PASS
Calaveras	1	0	0	0.3	B	8.4	PASS
Colusa	2	3	1	2.8	D	7.1	PASS
Contra Costa	4	0	0	1.3	C	7.4	PASS
El Dorado	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fresno	87	36	0	47.0	F	16.4	FAIL
Glenn	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Humboldt	0	0	0	0.0	A	6.2	PASS
Imperial	4	2	0	2.3	D	14.3	FAIL
Inyo	8	13	1	9.8	F	7.5	PASS
Kern	69	39	1	43.2	F	17.3	FAIL
Kings	85	25	0	40.8	F	17.0	FAIL
Lake	0	0	0	0.0	A	3.8	PASS
Los Angeles	70	7	0	26.8	F	13.0	FAIL
Madera	58	19	0	28.8	F	18.1	FAIL
Marin	3	0	0	1.0	C	9.5	PASS
Mariposa	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mendocino	0	0	0	0.0	A	INC	INC
Merced	47	5	0	18.2	F	13.3	FAIL
Monterey	0	0	0	0.0	A	6.1	PASS
Napa	INC	INC	INC	INC	INC	INC	INC
Nevada	1	0	0	0.3	B	7.0	PASS
Orange	16	0	0	5.3	F	10.7	PASS
Placer	5	5	0	4.2	F	7.5	PASS

(continued)

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Plumas	DNC	DNC	DNC	DNC	DNC	18	1	0	6.5	F	12.8	FAIL
Riverside	231	40	0	97.0	F	84	11	0	33.5	F	15.1	FAIL
Sacramento	80	8	0	30.7	F	20	0	0	6.7	F	10.4	PASS
San Benito	1	0	0	0.3	B	0	0	0	0.0	A	5.5	PASS
San Bernardino	239	72	3	117.7	F	7	1	0	2.8	D	12.6	FAIL
San Diego	27	0	0	9.0	F	3	2	0	2.0	C	10.8	PASS
San Francisco	0	0	0	0.0	A	5	0	0	1.7	C	9.2	PASS
San Joaquin	25	1	0	8.8	F	43	14	0	21.3	F	13.8	FAIL
San Luis Obispo	20	0	0	6.7	F	6	0	0	2.0	C	11.3	PASS
San Mateo	0	0	0	0.0	A	4	0	0	1.3	C	9.3	PASS
Santa Barbara	5	0	0	1.7	C	0	0	0	0.0	A	9.5	PASS
Santa Clara	2	0	0	0.7	B	11	1	0	4.2	F	10.5	PASS
Santa Cruz	0	0	0	0.0	A	21	0	0	7.0	F	6.3	PASS
Shasta	4	0	0	1.3	C	0	0	0	0.0	A	6.2	PASS
Siskiyou	0	0	0	0.0	A	2	0	0	0.7	B	6.3	PASS
Solano	2	0	0	0.7	B	16	0	0	5.3	F	9.6	PASS
Sonoma	0	0	0	0.0	A	0	0	0	0.0	A	8.4	PASS
Stanislaus	64	2	0	22.3	F	81	22	0	38.0	F	15.7	FAIL
Sutter	11	0	0	3.7	F	8	1	0	3.2	D	7.7	PASS
Tehama	9	0	0	3.0	D	4	0	0	1.3	C	8.1	PASS
Trinity	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Tulare	233	10	0	82.7	F	23	7	0	11.2	F	16.6	FAIL
Tuolumne	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ventura	28	0	0	9.3	F	1	0	0	0.3	B	9.1	PASS
Yolo	3	0	0	1.0	C	1	0	0	0.3	B	7.2	PASS

American Lung Association in Colorado

www.lung.org/colorado

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Adams	469,193	131,056	43,719	11,523	29,788	14,087	17,852	19,636	61,226
Arapahoe	607,070	149,650	69,854	13,158	40,007	20,449	26,566	28,878	73,871
Boulder	310,048	63,562	36,205	5,589	21,621	10,758	13,905	15,131	40,438
Chaffee	18,510	2,961	4,062	260	1,333	859	1,219	1,256	2,219
Clear Creek	9,031	1,363	1,526	120	656	405	544	586	813
Denver	649,495	136,515	69,575	12,003	45,388	20,927	26,813	29,092	118,670
Douglas	305,963	88,520	28,397	7,783	18,961	9,661	12,198	13,602	11,004
Elbert	23,733	5,469	3,109	481	1,562	939	1,226	1,352	1,580
El Paso	655,044	165,643	72,798	14,564	42,919	21,438	27,767	30,173	72,360
Garfield	57,302	15,097	5,803	1,327	3,692	1,855	2,366	2,609	7,008
Gunnison	15,507	2,843	1,683	250	1,116	528	672	736	2,010
Jackson	1,365	252	285	22	95	62	88	91	214
Jefferson	551,798	117,185	78,326	10,303	37,656	21,088	28,059	30,191	49,495
La Plata	53,284	10,384	7,236	913	3,733	2,008	2,647	2,857	6,356
Larimer	315,988	65,099	42,528	5,724	21,966	11,353	15,046	16,086	42,547
Mesa	147,554	33,521	24,126	2,947	9,893	5,665	7,784	8,157	22,046
Moffat	13,103	3,376	1,619	297	844	461	606	658	1,487
Montezuma	25,642	5,795	4,746	510	1,704	1,067	1,489	1,554	4,844
Park	16,121	2,726	2,421	240	1,141	711	936	1,029	1,644
Pitkin	17,379	2,889	2,558	254	1,255	703	931	1,006	1,264
Pueblo	161,451	37,901	26,743	3,332	10,707	6,205	8,556	8,949	31,539
Rio Blanco	6,807	1,678	912	148	447	241	321	344	699
San Miguel	7,678	1,488	751	131	540	271	339	381	909
Weld	269,785	72,795	29,288	6,400	17,272	8,639	11,187	12,161	34,706
Totals	**4,708,851**	**1,117,768**	**558,270**	**98,279**	**314,295**	**160,380**	**209,117**	**226,517**	**588,949**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Adams	13	0	0	4.3	F	1	0	0	0.3	B	INC	INC
Arapahoe	21	0	0	7.0	F	0	0	0	0.0	A	INC	INC
Boulder	13	0	0	4.3	F	1	0	0	0.3	B	INC	INC
Chaffee	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clear Creek	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Denver	9	0	0	3.0	D	3	0	0	1.0	C	INC	INC
Douglas	32	3	0	12.2	F	0	0	0	0.0	A	INC	INC
El Paso	10	0	0	3.3	F	0	0	0	0.0	A	INC	INC
Elbert	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Garfield	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Gunnison	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jackson	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	48	2	0	17.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
La Plata	7	0	0	2.3	D	0	0	0	0.0	A	INC	INC
Larimer	45	0	0	15.0	F	0	0	0	0.0	A	INC	INC
Mesa	1	0	0	0.3	B	4	0	0	1.3	C	INC	INC
Moffat	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montezuma	1	0	0	0.3	B	0	0	0	0.0	A	6.0	PASS
Park	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pitkin	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pueblo	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	INC	INC
Rio Blanco	10	2	0	4.3	F	1	0	0	0.3	B	9.6	PASS
San Miguel	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Weld	12	0	0	4.0	F	1	0	0	0.3	B	INC	INC

American Lung Association in Connecticut

www.lung.org/connecticut

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Fairfield	939,904	224,358	133,684	22,052	70,241	41,397	57,941	58,546	88,010
Hartford	898,272	197,126	138,268	19,375	68,834	40,982	57,825	57,967	105,605
Litchfield	186,924	37,400	33,357	3,676	14,442	9,417	13,712	13,630	13,320
Middlesex	165,562	32,673	28,449	3,211	12,917	8,144	11,732	11,689	11,735
New Haven	862,287	183,970	132,031	18,082	66,704	39,336	55,309	55,494	106,771
New London	274,150	56,536	42,639	5,557	21,353	12,724	17,944	18,011	24,564
Tolland	151,377	28,840	20,466	2,835	12,136	6,744	9,200	9,397	8,744
Windham	117,604	24,663	16,777	2,424	9,138	5,316	7,392	7,499	14,639
Totals	**3,596,080**	**785,566**	**545,671**	**77,211**	**275,763**	**164,060**	**231,055**	**232,232**	**373,388**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Fairfield	52	3	0	18.8	F
Hartford	13	0	0	4.3	F
Litchfield	6	0	0	2.0	C
Middlesex	22	2	0	8.3	F
New Haven	27	6	0	12.0	F
New London	22	1	0	7.8	F
Tolland	13	1	0	4.8	F
Windham	4	0	0	1.3	C

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Fairfield	0	1	0	0.5	B	9.3	PASS
Hartford	2	0	0	0.7	B	8.6	PASS
Litchfield	0	0	0	0.0	A	5.5	PASS
Middlesex	DNC	DNC	DNC	DNC	DNC	DNC	DNC
New Haven	3	0	0	1.0	C	9.3	PASS
New London	0	0	0	0.0	A	8.0	PASS
Tolland	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Windham	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Delaware

www.lung.org/delaware

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Kent	169,416	40,327	25,528	3,546	13,720	7,577	11,888	13,962	22,162
New Castle	549,684	122,770	73,542	10,794	45,694	24,504	37,217	44,874	63,555
Sussex	206,649	40,461	48,414	3,558	17,047	11,219	19,372	21,344	30,057
Totals	**925,749**	**203,558**	**147,484**	**17,898**	**76,461**	**43,299**	**68,477**	**80,179**	**115,774**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Kent	17	1	0	6.2	F
New Castle	23	2	0	8.7	F
Sussex	20	1	0	7.2	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Kent	0	0	0	0.0	A	8.4	PASS
New Castle	6	0	0	2.0	C	10.0	PASS
Sussex	0	0	0	0.0	A	8.5	PASS

American Lung Association in the District of Columbia

www.lung.org/districtofcolumbia

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
District of Columbia	646,449	111,474	73,422	15,056	63,739	30,439	40,460	40,019	115,096
Totals	**646,449**	**111,474**	**73,422**	**15,056**	**63,739**	**30,439**	**40,460**	**40,019**	**115,096**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
District of Columbia	21	1	0	7.5	F	3	0	0	1.0	C	9.8	PASS

American Lung Association in Florida

www.lung.org/florida

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Alachua	253,451	45,681	30,398	4,016	17,058	12,529	16,916	17,757	62,056
Baker	27,013	6,774	3,364	596	1,680	1,357	1,895	1,998	4,621
Bay	174,987	37,691	27,782	3,314	11,391	9,737	13,902	14,551	30,719
Brevard	550,823	104,242	121,688	9,165	37,132	35,601	52,848	54,805	81,663
Broward	1,838,844	401,143	276,135	35,270	119,348	100,609	142,830	149,830	276,804
Citrus	139,271	21,176	48,099	1,862	9,770	10,968	17,091	17,412	23,632
Collier	339,642	62,842	98,062	5,525	22,820	23,658	36,125	36,896	45,016
Columbia	67,543	14,611	11,422	1,285	4,391	3,833	5,515	5,758	11,780
Duval	885,855	203,639	109,473	17,905	56,536	44,827	62,160	65,533	148,217
Escambia	305,817	64,366	47,340	5,659	19,978	16,680	23,641	24,722	50,580
Flagler	99,956	18,536	27,374	1,630	6,743	6,943	10,558	10,837	14,322
Highlands	97,616	17,520	32,765	1,540	6,587	7,262	11,292	11,458	19,322
Hillsborough	1,291,578	302,201	165,237	26,571	81,932	65,451	91,088	95,848	213,320
Holmes	19,717	4,009	3,655	352	1,302	1,162	1,686	1,755	4,903
Indian River	141,994	25,562	41,528	2,248	9,630	10,135	15,519	15,881	19,777
Lake	308,034	61,853	79,174	5,438	20,341	20,359	30,732	31,543	43,917
Lee	661,115	125,056	169,650	10,995	44,303	44,072	66,395	68,199	106,446
Leon	281,845	54,163	30,640	4,762	18,702	13,473	18,021	18,977	58,109
Liberty	8,349	1,673	961	147	553	426	583	617	1,758
Manatee	342,106	68,048	85,677	5,983	22,681	22,564	33,970	34,941	54,016
Marion	337,362	63,599	92,353	5,592	22,618	23,116	35,114	35,979	64,258
Martin	151,263	25,896	43,610	2,277	10,384	10,866	16,599	17,019	19,866
Miami-Dade	2,617,176	545,353	390,852	47,950	171,487	141,710	199,994	209,484	541,443
Okaloosa	193,811	43,080	28,439	3,788	12,476	10,311	14,552	15,242	25,155
Orange	1,225,267	280,615	128,453	24,673	78,064	58,373	79,065	83,637	217,956

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Osceola	298,504	75,876	36,716	6,671	18,419	14,589	20,244	21,296	61,012
Palm Beach	1,372,171	270,555	308,542	23,788	91,083	86,231	127,865	131,951	202,396
Pasco	475,502	97,950	105,441	8,612	31,267	29,771	44,188	45,658	63,271
Pinellas	929,048	160,207	209,712	14,086	63,883	61,099	90,661	93,970	137,942
Polk	623,009	143,279	119,700	12,598	39,658	35,861	52,366	54,257	117,893
St. Lucie	286,832	60,961	63,165	5,360	18,699	17,785	26,394	27,263	53,893
Santa Rosa	161,096	36,693	22,629	3,226	10,339	8,621	12,178	12,810	21,291
Sarasota	390,429	59,526	129,960	5,234	27,340	30,014	46,521	47,415	49,989
Seminole	436,041	94,729	60,317	8,329	28,340	23,326	32,801	34,514	55,555
Volusia	500,800	91,286	114,217	8,026	33,964	32,520	48,319	49,980	81,107
Wakulla	31,022	6,515	3,956	573	2,038	1,648	2,299	2,430	4,361
Totals	**17,864,889**	**3,696,906**	**3,268,486**	**325,048**	**1,172,936**	**1,037,488**	**1,501,926**	**1,562,219**	**2,988,366**

American Lung Association in Florida

www.lung.org/florida

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Alachua	0	0	0	0.0	A
Baker	0	0	0	0.0	A
Bay	0	0	0	0.0	A
Brevard	1	0	0	0.3	B
Broward	1	0	0	0.3	B
Citrus	DNC	DNC	DNC	DNC	DNC
Collier	0	0	0	0.0	A
Columbia	0	0	0	0.0	A
Duval	1	0	0	0.3	B
Escambia	2	0	0	0.7	B
Flagler	0	0	0	0.0	A
Highlands	0	0	0	0.0	A
Hillsborough	10	0	0	3.3	F
Holmes	0	0	0	0.0	A
Indian River	0	0	0	0.0	A
Lake	1	0	0	0.3	B
Lee	0	0	0	0.0	A
Leon	0	0	0	0.0	A
Liberty	0	0	0	0.0	A
Manatee	1	0	0	0.3	B
Marion	1	0	0	0.3	B
Martin	INC	INC	INC	INC	INC
Miami-Dade	2	0	0	0.7	B
Okaloosa	0	0	0	0.0	A
Orange	8	0	0	2.7	D
Osceola	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Alachua	0	1	0	0.5	B	7.4	PASS
Baker	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bay	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Brevard	0	0	0	0.0	A	6.1	PASS
Broward	1	0	0	0.3	B	INC	INC
Citrus	0	0	0	0.0	A	7.0	PASS
Collier	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Columbia	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Duval	5	3	0	3.2	D	7.5	PASS
Escambia	0	0	0	0.0	A	8.4	PASS
Flagler	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Highlands	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hillsborough	0	0	0	0.0	A	7.1	PASS
Holmes	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Indian River	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lake	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lee	0	0	0	0.0	A	6.5	PASS
Leon	0	0	0	0.0	A	8.9	PASS
Liberty	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Manatee	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Marion	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Martin	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Miami-Dade	1	0	0	0.3	B	7.1	PASS
Okaloosa	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Orange	0	0	0	0.0	A	6.5	PASS
Osceola	DNC	DNC	DNC	DNC	DNC	DNC	DNC

(continued)

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Palm Beach	1	0	0	0.3	B	2	1	0	1.2	C	5.7	PASS
Pasco	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pinellas	1	0	0	0.3	B	0	0	0	0.0	A	6.8	PASS
Polk	4	0	0	1.3	C	0	0	0	0.0	A	7.0	PASS
Santa Rosa	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sarasota	5	0	0	1.7	C	0	0	0	0.0	A	6.6	PASS
Seminole	2	0	0	0.7	B	0	0	0	0.0	A	7.0	PASS
St. Lucie	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Volusia	0	0	0	0.0	A	1	0	0	0.3	B	6.8	PASS
Wakulla	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Georgia

www.lung.org/georgia

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Bibb	154,721	39,198	20,880	4,219	9,645	7,747	10,014	12,928	43,376
Chatham	278,434	61,975	37,005	6,671	18,148	13,863	17,715	22,917	53,817
Chattooga	25,138	5,693	4,036	613	1,616	1,371	1,815	2,304	6,656
Clarke	121,265	21,135	11,280	2,275	8,534	5,204	6,116	8,226	40,955
Clayton	264,220	74,920	20,738	8,064	15,965	11,219	13,414	18,422	65,784
Cobb	717,190	178,268	73,052	19,187	45,232	33,903	41,890	56,203	97,520
Columbia	135,416	35,760	15,241	3,849	8,337	6,515	8,208	10,865	11,141
Coweta	133,180	34,873	15,926	3,753	8,212	6,533	8,307	10,917	18,077
Dawson	22,686	5,095	3,850	548	1,457	1,285	1,718	2,173	3,409
DeKalb	713,340	168,951	71,023	18,185	45,807	33,266	40,771	54,804	139,646
Dougherty	92,969	23,422	12,082	2,521	5,819	4,554	5,843	7,567	27,921
Douglas	136,379	37,063	13,565	3,989	8,330	6,297	7,795	10,458	24,159
Floyd	95,821	22,728	14,735	2,446	6,088	5,040	6,636	8,433	20,411
Fulton	984,293	230,889	99,102	24,851	63,441	45,656	55,958	75,036	173,866
Glynn	81,508	19,041	13,765	2,049	5,180	4,507	6,029	7,595	16,310
Gwinnett	859,304	241,803	70,398	26,026	51,964	37,576	45,296	62,056	116,604
Hall	187,745	50,831	24,648	5,471	11,443	9,082	11,724	15,117	38,385
Henry	211,128	58,279	20,875	6,273	12,813	9,752	12,079	16,219	24,408
Houston	147,658	38,278	16,747	4,120	9,165	7,028	8,842	11,670	22,511
Lowndes	112,916	28,063	11,968	3,020	7,164	4,997	6,162	8,134	27,978
Murray	39,267	10,090	4,958	1,086	2,436	1,949	2,496	3,256	8,525
Muscogee	202,824	49,878	23,512	5,368	12,847	9,570	12,019	15,785	44,883
Paulding	146,950	41,695	13,236	4,488	8,849	6,490	7,927	10,727	16,907
Pike	17,796	4,569	2,523	492	1,100	927	1,211	1,561	2,410
Richmond	202,003	48,101	24,712	5,177	12,902	9,851	12,473	16,317	53,068

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Rockdale	86,919	22,528	10,637	2,425	5,371	4,347	5,549	7,287	14,462
Sumter	31,364	7,535	4,467	811	1,990	1,593	2,070	2,653	10,728
Walker	68,198	15,547	11,075	1,673	4,371	3,755	4,984	6,323	11,540
Washington	20,676	4,667	3,192	502	1,330	1,133	1,490	1,907	5,019
Wilkinson	9,432	2,225	1,649	239	596	536	721	907	2,191
Totals	**6,300,740**	**1,583,100**	**670,877**	**170,393**	**396,151**	**295,547**	**367,275**	**488,766**	**1,142,667**

American Lung Association in Georgia

www.lung.org/georgia

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Bibb	8	0	0	2.7	D
Chatham	0	0	0	0.0	A
Chattooga	0	0	0	0.0	A
Clarke	6	0	0	2.0	C
Clayton	DNC	DNC	DNC	DNC	DNC
Cobb	14	0	0	4.7	F
Columbia	3	0	0	1.0	C
Coweta	0	0	0	0.0	A
Dawson	0	0	0	0.0	A
DeKalb	18	1	0	6.5	F
Dougherty	DNC	DNC	DNC	DNC	DNC
Douglas	8	0	0	2.7	D
Floyd	DNC	DNC	DNC	DNC	DNC
Fulton	25	2	0	9.3	F
Glynn	0	0	0	0.0	A
Gwinnett	14	0	0	4.7	F
Hall	DNC	DNC	DNC	DNC	DNC
Henry	15	0	1	5.7	F
Houston	DNC	DNC	DNC	DNC	DNC
Lowndes	DNC	DNC	DNC	DNC	DNC
Murray	4	0	0	1.3	C
Muscogee	0	0	0	0.0	A
Paulding	4	0	0	1.3	C
Pike	7	1	0	2.8	D
Richmond	5	0	0	1.7	C
Rockdale	21	2	0	8.0	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Bibb	0	0	0	0.0	A	11.8	PASS
Chatham	INC	INC	INC	INC	INC	INC	INC
Chattooga	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clarke	0	0	0	0.0	A	9.9	PASS
Clayton	0	0	0	0.0	A	11.1	PASS
Cobb	INC	INC	INC	INC	INC	INC	INC
Columbia	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Coweta	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dawson	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DeKalb	0	0	0	0.0	A	10.5	PASS
Dougherty	INC	INC	INC	INC	INC	INC	INC
Douglas	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Floyd	0	1	0	0.5	B	10.8	PASS
Fulton	INC	INC	INC	INC	INC	INC	INC
Glynn	INC	INC	INC	INC	INC	INC	INC
Gwinnett	INC	INC	INC	INC	INC	INC	INC
Hall	0	0	0	0.0	A	9.5	PASS
Henry	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Houston	0	0	0	0.0	A	9.9	PASS
Lowndes	INC	INC	INC	INC	INC	INC	INC
Murray	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Muscogee	INC	INC	INC	INC	INC	INC	INC
Paulding	INC	INC	INC	INC	INC	INC	INC
Pike	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Richmond	INC	INC	INC	INC	INC	INC	INC
Rockdale	DNC	DNC	DNC	DNC	DNC	DNC	DNC

(continued)

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Sumter	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Walker	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	10.5	PASS
Washington	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Wilkinson	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	11.2	PASS

American Lung Association in Hawaii

www.lung.org/hawaii

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Hawaii	190,821	42,291	31,979	5,408	13,903	7,170	10,848	13,131	36,553
Honolulu	983,429	213,373	152,308	27,286	72,889	35,239	51,567	62,180	91,757
Kauai	69,512	15,521	11,688	1,985	5,054	2,605	3,944	4,769	8,074
Maui	160,202	36,081	23,555	4,614	11,693	5,830	8,547	10,458	16,991
Totals	**1,403,964**	**307,266**	**219,530**	**39,293**	**103,540**	**50,843**	**74,906**	**90,538**	**153,375**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Hawaii	DNC	DNC	DNC	DNC	DNC
Honolulu	0	0	0	0.0	A
Kauai	DNC	DNC	DNC	DNC	DNC
Maui	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Hawaii	0	2	0	1.0	C	11.6	PASS
Honolulu	1	0	0	0.3	B	7.1	PASS
Kauai	0	0	0	0.0	A	INC	INC
Maui	0	0	0	0.0	A	6.1	PASS

American Lung Association in Idaho

www.lung.org/idaho

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Ada	416,464	106,074	50,316	9,326	26,447	13,179	21,319	24,833	55,271
Bannock	83,249	22,380	10,268	1,968	5,182	2,568	4,199	4,816	14,353
Benewah	9,044	2,004	1,871	176	611	382	648	714	1,477
Butte	2,642	670	519	59	171	106	180	198	450
Canyon	198,871	60,358	24,003	5,307	11,802	5,914	9,695	11,086	39,337
Cassia	23,331	7,578	3,101	666	1,348	713	1,183	1,333	3,518
Franklin	12,854	4,381	1,742	385	726	390	652	729	1,571
Kootenai	144,265	34,249	23,604	3,011	9,453	5,279	8,796	9,888	18,941
Lemhi	7,712	1,375	2,037	121	554	376	652	697	1,373
Shoshone	12,690	2,510	2,652	221	882	544	922	1,017	2,431
Totals	**911,122**	**241,579**	**120,113**	**21,241**	**57,176**	**29,450**	**48,245**	**55,311**	**138,722**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Ada	4	0	0	1.3	C
Bannock	DNC	DNC	DNC	DNC	DNC
Benewah	DNC	DNC	DNC	DNC	DNC
Butte	0	0	0	0.0	A
Canyon	DNC	DNC	DNC	DNC	DNC
Cassia	INC	INC	INC	INC	INC
Franklin	DNC	DNC	DNC	DNC	DNC
Kootenai	INC	INC	INC	INC	INC
Lemhi	DNC	DNC	DNC	DNC	DNC
Shoshone	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Ada	8	4	0	4.7	F	9.1	PASS
Bannock	2	2	0	1.7	C	7.7	PASS
Benewah	1	1	0	0.8	B	9.9	PASS
Butte	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Canyon	3	2	0	2.0	C	10.8	PASS
Cassia	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Franklin	29	16	0	17.7	F	8.0	PASS
Kootenai	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lemhi	39	23	10	31.2	F	12.0	PASS
Shoshone	40	1	0	13.8	F	12.8	FAIL

American Lung Association in Illinois

www.lung.org/illinois

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Adams	67,130	15,187	12,272	1,415	3,952	2,864	5,018	5,805	10,300
Champaign	204,897	39,180	22,171	3,652	12,289	7,121	11,392	13,291	40,848
Clark	16,182	3,691	2,976	344	953	698	1,225	1,419	2,180
Cook	5,240,700	1,198,194	664,394	111,672	304,359	194,009	322,771	377,388	918,295
DuPage	932,126	221,861	121,034	20,677	54,041	35,805	60,299	70,874	64,734
Effingham	34,307	8,226	5,562	767	1,986	1,400	2,424	2,820	3,737
Hamilton	8,368	1,903	1,672	177	494	371	659	761	1,232
Jersey	22,641	4,934	3,875	460	1,351	963	1,673	1,946	2,284
Jo Daviess	22,407	4,479	5,267	417	1,378	1,097	1,985	2,284	2,274
Kane	523,643	144,699	58,856	13,486	28,689	18,333	30,435	35,810	56,348
Lake	703,019	181,473	82,950	16,913	39,690	25,882	43,257	51,011	64,721
McHenry	307,409	78,233	35,745	7,291	17,506	11,485	19,209	22,724	21,631
McLean	174,647	38,657	19,103	3,603	10,171	6,124	9,941	11,650	22,640
Macon	109,278	24,316	19,094	2,266	6,464	4,615	8,035	9,318	19,074
Macoupin	46,880	10,211	8,583	952	2,798	2,038	3,571	4,141	6,366
Madison	267,225	59,447	40,934	5,540	15,778	10,796	18,470	21,534	36,105
Peoria	188,429	44,807	27,613	4,176	10,857	7,292	12,402	14,434	31,181
Randolph	32,890	6,355	5,572	592	2,016	1,406	2,424	2,818	4,050
Rock Island	147,258	32,924	25,357	3,069	8,687	6,157	10,694	12,400	22,561
St. Clair	266,955	64,908	36,136	6,049	15,338	10,223	17,286	20,243	47,870
Sangamon	199,145	46,012	29,917	4,288	11,653	8,001	13,693	15,993	29,693
Will	682,829	185,841	73,306	17,320	37,688	23,917	39,531	46,669	57,514
Winnebago	290,666	70,131	44,267	6,536	16,766	11,567	19,849	23,138	46,602
Totals	**10,489,031**	**2,485,669**	**1,346,656**	**231,665**	**604,904**	**392,165**	**656,244**	**768,471**	**1,512,240**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Adams	2	0	0	0.7	B
Champaign	8	0	0	2.7	D
Clark	1	0	0	0.3	B
Cook	30	6	0	13.0	F
DuPage	3	0	0	1.0	C
Effingham	2	0	0	0.7	B
Hamilton	13	0	0	4.3	F
Jersey	18	2	0	7.0	F
Jo Daviess	2	0	0	0.7	B
Kane	4	0	0	1.3	C
Lake	24	2	0	9.0	F
Macon	6	0	0	2.0	C
Macoupin	4	0	0	1.3	C
Madison	39	4	0	15.0	F
McHenry	5	1	0	2.2	D
McLean	7	0	0	2.3	D
Peoria	8	0	0	2.7	D
Randolph	13	0	0	4.3	F
Rock Island	0	0	0	0.0	A
Sangamon	10	0	0	3.3	F
St. Clair	19	0	0	6.3	F
Will	2	0	0	0.7	B
Winnebago	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Adams	INC	INC	INC	INC	INC	INC	INC
Champaign	INC	INC	INC	INC	INC	INC	INC
Clark	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cook	INC	INC	INC	INC	INC	INC	INC
DuPage	INC	INC	INC	INC	INC	INC	INC
Effingham	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hamilton	INC	INC	INC	INC	INC	INC	INC
Jersey	INC	INC	INC	INC	INC	INC	INC
Jo Daviess	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kane	INC	INC	INC	INC	INC	INC	INC
Lake	INC	INC	INC	INC	INC	INC	INC
Macon	INC	INC	INC	INC	INC	INC	INC
Macoupin	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Madison	INC	INC	INC	INC	INC	INC	INC
McHenry	INC	INC	INC	INC	INC	INC	INC
McLean	INC	INC	INC	INC	INC	INC	INC
Peoria	INC	INC	INC	INC	INC	INC	INC
Randolph	INC	INC	INC	INC	INC	INC	INC
Rock Island	INC	INC	INC	INC	INC	INC	INC
Sangamon	INC	INC	INC	INC	INC	INC	INC
St. Clair	INC	INC	INC	INC	INC	INC	INC
Will	INC	INC	INC	INC	INC	INC	INC
Winnebago	INC	INC	INC	INC	INC	INC	INC

American Lung Association in Indiana
www.lung.org/indiana

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Allen	363,014	95,816	46,421	7,645	27,525	20,952	25,109	28,521	60,464
Bartholomew	79,587	19,340	11,705	1,543	6,203	4,849	5,941	6,673	9,113
Boone	60,477	16,416	7,503	1,310	4,552	3,577	4,266	4,882	4,352
Carroll	20,086	4,740	3,447	378	1,583	1,330	1,674	1,864	2,170
Clark	112,938	26,181	15,741	2,089	8,942	6,941	8,386	9,499	13,047
Delaware	117,484	22,491	18,412	1,795	9,745	7,254	8,907	9,925	24,942
Dubois	42,361	10,357	6,562	826	3,305	2,720	3,361	3,779	3,711
Elkhart	200,563	56,068	26,148	4,474	14,881	11,413	13,788	15,594	30,324
Floyd	76,244	17,750	10,595	1,416	6,038	4,777	5,766	6,552	9,776
Gibson	33,612	7,902	5,432	630	2,651	2,169	2,698	3,018	3,915
Greene	32,781	7,519	5,782	600	2,606	2,196	2,776	3,084	4,420
Hamilton	296,693	86,113	29,439	6,871	21,733	16,039	18,462	21,453	16,329
Hancock	71,575	17,774	10,357	1,418	5,555	4,481	5,470	6,185	4,617
Hendricks	153,879	40,500	18,263	3,231	11,694	8,862	10,466	11,998	9,494
Henry	49,044	10,319	8,642	823	3,993	3,315	4,171	4,639	7,774
Howard	82,760	18,967	14,659	1,513	6,575	5,495	6,956	7,711	12,862
Huntington	36,791	8,289	5,765	661	2,939	2,366	2,919	3,277	4,614
Jackson	43,466	10,479	6,626	836	3,399	2,709	3,339	3,745	5,512
Johnson	145,535	37,498	19,502	2,992	11,131	8,576	10,353	11,722	16,804
Knox	37,954	7,968	6,255	636	3,085	2,443	3,038	3,385	5,614
Lake	491,456	121,666	69,694	9,707	38,130	30,067	36,587	41,334	86,320
LaPorte	111,281	24,618	17,024	1,964	8,936	7,139	8,757	9,857	17,678
Madison	130,482	29,139	21,654	2,325	10,436	8,415	10,507	11,702	24,267
Marion	928,281	231,174	102,824	18,445	71,750	51,686	60,060	69,103	193,459
Monroe	141,888	22,772	15,647	1,817	12,182	7,747	8,791	10,075	30,427

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Morgan	69,782	16,850	10,088	1,344	5,470	4,450	5,420	6,144	8,769
Perry	19,558	4,112	3,166	328	1,592	1,286	1,591	1,783	2,529
Porter	166,557	38,491	23,042	3,071	13,214	10,368	12,500	14,200	19,043
Posey	25,486	5,806	4,035	463	2,034	1,698	2,096	2,362	2,421
St. Joseph	266,709	64,099	37,521	5,114	20,862	16,076	19,511	22,013	51,374
Shelby	44,729	10,620	6,698	847	3,522	2,862	3,508	3,960	5,536
Spencer	20,944	4,803	3,617	383	1,667	1,416	1,780	1,987	2,170
Tippecanoe	180,174	37,088	18,298	2,959	14,648	9,400	10,615	12,224	32,401
Vanderburgh	181,398	39,771	27,076	3,173	14,584	11,356	13,868	15,603	32,670
Vigo	108,291	22,619	15,375	1,805	8,806	6,568	7,929	8,937	23,603
Wabash	32,358	7,102	6,164	567	2,600	2,190	2,809	3,090	4,328
Warrick	61,049	15,246	9,370	1,216	4,728	3,872	4,784	5,376	4,766
Whitley	33,294	7,878	5,147	629	2,625	2,154	2,655	2,989	2,925
Totals	**5,070,561**	**1,226,341**	**673,696**	**97,847**	**395,923**	**301,213**	**361,614**	**410,242**	**794,540**

American Lung Association in Indiana

www.lung.org/indiana

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	**Orange**	**Red**	**Purple**	**Wgt. Avg**	**Grade**	**Orange**	**Red**	**Purple**	**Wgt. Avg**	**Grade**	**Design Value**	**Pass/ Fail**
Allen	7	1	0	2.8	D	2	0	0	0.7	B	9.9	PASS
Bartholomew	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Boone	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carroll	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clark	16	0	0	5.3	F	1	0	0	0.3	B	12.1	FAIL
Delaware	3	0	0	1.0	C	0	0	0	0.0	A	10.2	PASS
Dubois	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	11.4	PASS
Elkhart	4	1	0	1.8	C	7	0	0	2.3	D	10.4	PASS
Floyd	16	2	0	6.3	F	3	0	0	1.0	C	10.7	PASS
Gibson	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Greene	18	0	0	6.0	F	INC	INC	INC	INC	INC	INC	INC
Hamilton	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hancock	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hendricks	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Henry	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.7	PASS
Howard	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Huntington	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jackson	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Johnson	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Knox	12	0	0	4.0	F	INC	INC	INC	INC	INC	INC	INC
Lake	9	1	0	3.5	F	6	2	0	3.0	D	11.6	PASS
LaPorte	22	3	1	9.5	F	0	0	0	0.0	A	9.6	PASS
Madison	2	0	0	0.7	B	3	0	0	1.0	C	10.1	PASS
Marion	15	0	0	5.0	F	14	0	0	4.7	F	11.9	PASS
Monroe	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.9	PASS

(continued)

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Morgan	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Perry	14	0	0	4.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Porter	6	3	0	3.5	F	1	3	0	1.8	C	10.4	PASS
Posey	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Shelby	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Spencer	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	11.1	PASS
St. Joseph	10	0	1	4.0	F	3	1	0	1.5	C	10.0	PASS
Tippecanoe	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	9.9	PASS
Vanderburgh	13	0	0	4.3	F	1	0	0	0.3	B	11.3	PASS
Vigo	4	0	0	1.3	C	4	0	0	1.3	C	11.1	PASS
Wabash	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Warrick	13	0	0	4.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Whitley	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	9.6	PASS

American Lung Association in Iowa

www.lung.org/iowa

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Black Hawk	132,546	28,368	19,299	1,633	8,146	6,265	8,541	8,993	21,215
Bremer	24,624	5,396	4,475	311	1,490	1,249	1,810	1,864	1,482
Clinton	48,420	11,133	8,625	641	2,870	2,490	3,631	3,748	6,610
Delaware	17,534	4,181	3,095	241	1,024	906	1,327	1,370	1,755
Harrison	14,431	3,280	2,699	189	855	761	1,124	1,156	1,505
Johnson	139,155	28,074	13,327	1,616	8,822	5,841	7,060	7,763	20,945
Lee	35,682	7,664	6,477	441	2,156	1,875	2,735	2,823	5,534
Linn	216,111	51,696	30,268	2,976	12,794	10,110	13,874	14,628	20,448
Montgomery	10,424	2,385	2,161	137	615	565	856	871	1,525
Muscatine	42,836	10,941	6,335	630	2,470	2,028	2,847	2,981	5,372
Palo Alto	9,185	2,008	1,969	116	551	499	757	768	949
Polk	451,677	114,163	51,646	6,571	26,410	19,736	25,880	27,775	55,095
Pottawattamie	92,728	21,960	14,226	1,264	5,477	4,517	6,358	6,650	12,317
Scott	170,385	41,150	23,835	2,369	10,038	8,019	11,041	11,642	23,656
Story	92,406	16,105	9,794	927	6,079	3,971	4,819	5,266	17,496
Tama	17,576	4,263	3,363	245	1,022	914	1,362	1,394	1,973
Van Buren	7,436	1,705	1,524	98	439	401	606	617	1,191
Warren	47,336	11,993	6,923	690	2,737	2,241	3,137	3,289	3,207
Woodbury	102,130	26,736	13,777	1,539	5,869	4,625	6,334	6,684	16,423
Totals	**1,672,622**	**393,201**	**223,818**	**22,633**	**99,862**	**77,011**	**104,099**	**110,282**	**218,698**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Black Hawk	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.9	PASS
Bremer	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clinton	4	0	0	1.3	C	1	0	0	0.3	B	10.8	PASS
Delaware	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.4	PASS
Harrison	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Johnson	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.6	PASS
Lee	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	11.0	PASS
Linn	1	0	0	0.3	B	1	0	0	0.3	B	9.7	PASS
Montgomery	0	0	0	0.0	A	0	0	0	0.0	A	8.7	PASS
Muscatine	DNC	DNC	DNC	DNC	DNC	10	1	0	3.8	F	11.4	PASS
Palo Alto	1	0	0	0.3	B	1	0	0	0.3	B	8.6	PASS
Polk	0	0	0	0.0	A	0	0	0	0.0	A	9.2	PASS
Pottawattamie	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	10.2	PASS
Scott	1	0	0	0.3	B	2	0	0	0.7	B	10.7	PASS
Story	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tama	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Van Buren	2	0	0	0.7	B	0	0	0	0.0	A	9.0	PASS
Warren	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Woodbury	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	9.4	PASS

American Lung Association in Kansas

www.lung.org/kansas

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Johnson	566,933	145,314	69,168	13,528	37,575	25,650	35,613	39,071	34,429
Leavenworth	78,185	19,020	9,579	1,771	5,276	3,584	4,962	5,453	8,040
Linn	9,516	2,256	1,934	210	633	515	794	816	1,425
Riley	75,394	13,337	5,725	1,242	5,695	2,818	3,328	3,828	14,486
Sedgwick	505,415	134,507	62,788	12,522	33,063	22,484	31,363	34,184	79,780
Shawnee	178,831	43,750	27,792	4,073	11,941	8,733	12,712	13,517	29,374
Sumner	23,591	5,940	3,942	553	1,552	1,190	1,767	1,865	3,098
Trego	2,980	568	717	53	209	180	284	288	300
Wyandotte	160,384	45,395	17,872	4,226	10,285	6,780	9,283	10,223	40,636
Totals	**1,601,229**	**410,087**	**199,517**	**38,178**	**106,228**	**71,935**	**100,107**	**109,245**	**211,568**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Johnson	14	0	0	4.7	F
Leavenworth	14	0	0	4.7	F
Linn	9	0	0	3.0	D
Riley	11	0	0	3.7	F
Sedgwick	21	0	0	7.0	F
Shawnee	12	0	0	4.0	F
Sumner	16	0	0	5.3	F
Trego	8	0	0	2.7	D
Wyandotte	13	0	0	4.3	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Johnson	0	0	0	0.0	A	8.3	PASS
Leavenworth	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Linn	0	0	0	0.0	A	8.8	PASS
Riley	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sedgwick	0	0	0	0.0	A	9.4	PASS
Shawnee	1	0	0	0.3	B	9.0	PASS
Sumner	0	0	0	0.0	A	8.5	PASS
Trego	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wyandotte	0	0	0	0.0	A	9.7	PASS

American Lung Association in Kentucky

www.lung.org/kentucky

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Bell	27,885	5,958	4,710	608	2,083	2,470	2,843	2,455	9,608
Boone	124,442	34,322	13,313	3,503	8,517	9,487	10,198	8,936	10,704
Boyd	48,886	10,310	8,609	1,052	3,670	4,391	5,096	4,393	9,440
Bullitt	76,854	18,133	10,009	1,851	5,571	6,373	7,040	6,134	7,775
Campbell	90,988	20,359	12,299	2,078	6,674	7,579	8,359	7,281	13,013
Carter	27,202	6,127	4,306	625	1,998	2,340	2,663	2,305	5,948
Christian	74,167	20,631	8,044	2,106	4,951	5,210	5,432	4,778	12,412
Daviess	98,218	23,961	15,427	2,446	7,043	8,272	9,447	8,169	14,598
Edmonson	12,062	2,420	2,260	247	917	1,105	1,293	1,112	2,524
Fayette	308,428	65,117	34,910	6,646	22,703	24,354	25,566	22,483	56,359
Franklin	49,648	10,477	7,767	1,069	3,716	4,337	4,913	4,256	8,122
Greenup	36,519	8,034	6,766	820	2,714	3,289	3,866	3,324	6,841
Hancock	8,687	2,175	1,379	222	619	735	844	729	1,328
Hardin	108,191	27,503	12,805	2,807	7,604	8,475	9,175	8,023	15,049
Henderson	46,347	10,809	7,097	1,103	3,378	3,966	4,508	3,904	8,840
Jefferson	756,832	172,744	107,053	17,631	55,207	63,157	70,283	61,104	119,846
Jessamine	50,173	12,564	6,470	1,282	3,547	4,002	4,395	3,831	7,452
Livingston	9,359	1,863	1,850	190	719	889	1,058	908	1,474
McCracken	65,373	14,273	11,659	1,457	4,864	5,845	6,814	5,869	12,659
Madison	85,590	18,148	10,696	1,852	6,302	6,869	7,347	6,434	15,778
Morgan	13,380	2,572	1,894	263	1,021	1,160	1,280	1,115	3,399
Oldham	62,364	16,471	7,074	1,681	4,371	4,992	5,458	4,770	3,524
Perry	28,010	6,065	4,125	619	2,086	2,429	2,733	2,372	7,378
Pike	63,380	13,474	9,810	1,375	4,747	5,571	6,320	5,476	14,330
Pulaski	63,907	14,621	11,022	1,492	4,689	5,610	6,512	5,614	15,851

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Simpson	17,793	4,397	2,735	449	1,272	1,495	1,705	1,475	3,221
Trigg	14,293	3,136	2,924	320	1,069	1,333	1,603	1,372	2,604
Warren	118,370	26,597	13,926	2,715	8,567	9,261	9,818	8,615	20,679
Washington	11,875	2,754	1,988	281	868	1,037	1,199	1,035	1,935
Totals	**2,499,223**	**576,015**	**342,927**	**58,791**	**181,489**	**206,033**	**227,766**	**198,272**	**412,691**

American Lung Association in Kentucky

www.lung.org/kentucky

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Bell	2	0	0	0.7	B
Boone	3	0	0	1.0	C
Boyd	5	0	0	1.7	C
Bullitt	4	1	0	1.8	C
Campbell	25	1	0	8.8	F
Carter	2	0	0	0.7	B
Christian	3	0	0	1.0	C
Daviess	17	1	0	6.2	F
Edmonson	9	0	0	3.0	D
Fayette	8	0	0	2.7	D
Franklin	DNC	DNC	DNC	DNC	DNC
Greenup	7	0	0	2.3	D
Hancock	13	1	0	4.8	F
Hardin	4	0	0	1.3	C
Henderson	16	0	0	5.3	F
Jefferson	26	4	0	10.7	F
Jessamine	6	0	0	2.0	C
Livingston	12	2	0	5.0	F
Madison	DNC	DNC	DNC	DNC	DNC
McCracken	15	2	0	6.0	F
Morgan	2	0	0	0.7	B
Oldham	25	2	0	9.3	F
Perry	1	0	0	0.3	B
Pike	1	0	0	0.3	B
Pulaski	3	0	0	1.0	C
Simpson	5	0	0	1.7	C

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Bell	0	0	0	0.0	A	10.0	PASS
Boone	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Boyd	0	0	0	0.0	A	9.9	PASS
Bullitt	INC	INC	INC	INC	INC	DNC	DNC
Campbell	0	0	0	0.0	A	9.9	PASS
Carter	0	0	0	0.0	A	8.1	PASS
Christian	0	0	0	0.0	A	10.3	PASS
Daviess	0	0	0	0.0	A	11.0	PASS
Edmonson	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fayette	0	0	0	0.0	A	9.8	PASS
Franklin	INC	INC	INC	INC	INC	DNC	DNC
Greenup	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hancock	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hardin	0	0	0	0.0	A	DNC	DNC
Henderson	0	0	0	0.0	A	10.7	PASS
Jefferson	2	0	0	0.7	B	DNC	DNC
Jessamine	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Livingston	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Madison	0	0	0	0.0	A	8.7	PASS
McCracken	0	0	0	0.0	A	DNC	DNC
Morgan	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Oldham	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Perry	INC	INC	INC	INC	INC	DNC	DNC
Pike	3	0	0	1.0	C	8.8	PASS
Pulaski	3	0	0	1.0	C	DNC	DNC
Simpson	DNC	DNC	DNC	DNC	DNC	DNC	DNC

(continued)

County	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Trigg	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Warren	8	0	0	2.7	D	0	0	0	0.0	A	DNC	DNC
Washington	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Louisiana

www.lung.org/louisiana

AT-RISK GROUPS

Lung Diseases

Parish	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Ascension Parish	114,393	31,939	11,313	2,511	6,451	5,881	8,460	8,934	12,562
Bossier Parish	123,823	31,317	15,430	2,462	7,218	6,677	9,933	10,226	17,610
Caddo Parish	254,887	62,190	36,503	4,889	14,885	14,568	22,287	22,838	54,703
Calcasieu Parish	195,296	48,634	26,346	3,823	11,352	10,990	16,636	17,146	31,752
East Baton Rouge Parish	445,227	102,149	53,345	8,030	26,883	24,267	35,574	36,768	90,205
Iberville Parish	33,367	7,124	4,457	560	2,032	1,962	2,940	3,055	7,604
Jefferson Parish	434,767	95,464	64,121	7,504	26,156	25,895	39,629	40,762	81,444
Lafayette Parish	230,845	55,260	25,361	4,344	13,759	12,426	17,996	18,813	35,317
Lafourche Parish	97,141	23,077	13,128	1,814	5,730	5,561	8,400	8,683	15,695
Livingston Parish	134,053	35,595	15,125	2,798	7,683	7,107	10,425	10,873	18,992
Orleans Parish	378,715	78,035	44,321	6,134	23,540	21,369	31,070	32,431	97,707
Ouachita Parish	156,220	40,308	20,336	3,168	9,009	8,523	12,822	13,178	35,807
Pointe Coupee Parish	22,499	5,263	3,956	414	1,308	1,404	2,240	2,277	4,501
Rapides Parish	132,723	33,797	19,198	2,657	7,621	7,569	11,643	11,932	25,418
St. Bernard Parish	43,482	11,577	4,028	910	2,510	2,216	3,135	3,319	9,416
St. Charles Parish	52,617	13,448	5,859	1,057	3,037	2,916	4,278	4,526	7,183
St. James Parish	21,752	5,267	3,127	414	1,265	1,283	1,968	2,037	3,476
St. John the Baptist Parish	43,761	11,188	5,276	879	2,522	2,438	3,625	3,797	8,012
St. Tammany Parish	242,333	60,081	34,857	4,723	13,980	14,219	21,849	22,601	26,543
Tangipahoa Parish	125,412	31,158	15,632	2,449	7,339	6,872	10,226	10,576	27,031
Terrebonne Parish	112,749	28,907	13,888	2,272	6,509	6,201	9,241	9,606	16,817
West Baton Rouge Parish	24,573	5,930	2,905	466	1,450	1,368	2,016	2,110	3,929
Totals	**3,420,635**	**817,708**	**438,512**	**64,277**	**202,240**	**191,712**	**286,391**	**296,489**	**631,724**

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
Parish	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Ascension Parish	8	0	0	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bossier Parish	18	0	0	6.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Caddo Parish	9	0	0	3.0	D	1	1	0	0.8	B	11.6	PASS
Calcasieu Parish	4	0	0	1.3	C	0	0	0	0.0	A	8.4	PASS
East Baton Rouge Parish	15	0	0	5.0	F	2	0	0	0.7	B	9.4	PASS
Iberville Parish	16	0	0	5.3	F	0	0	0	0.0	A	9.4	PASS
Jefferson Parish	3	0	0	1.0	C	0	0	0	0.0	A	8.7	PASS
Lafayette Parish	5	0	0	1.7	C	0	0	0	0.0	A	8.5	PASS
Lafourche Parish	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Livingston Parish	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Orleans Parish	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ouachita Parish	0	0	0	0.0	A	0	0	0	0.0	A	8.9	PASS
Pointe Coupee Parish	13	0	0	4.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rapides Parish	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.1	PASS
St. Bernard Parish	6	0	0	2.0	C	0	0	0	0.0	A	9.7	PASS
St. Charles Parish	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. James Parish	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. John the Baptist Parish	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Tammany Parish	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tangipahoa Parish	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.5	PASS
Terrebonne Parish	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	7.8	PASS
West Baton Rouge Parish	2	1	0	1.2	C	1	0	0	0.3	B	9.9	PASS

American Lung Association in Maine

www.lung.org/maine

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Androscoggin	107,604	23,854	16,647	2,339	10,036	5,676	7,340	7,699	17,295
Aroostook	70,055	13,347	14,416	1,309	6,651	4,253	5,733	5,826	11,217
Cumberland	285,456	56,624	45,323	5,552	27,417	15,535	20,078	21,072	33,475
Hancock	54,845	9,645	11,345	946	5,304	3,386	4,555	4,637	7,681
Kennebec	121,164	24,110	20,769	2,364	11,540	6,853	8,975	9,331	17,386
Knox	39,550	7,350	8,575	721	3,761	2,457	3,338	3,371	5,375
Oxford	57,277	11,323	10,764	1,110	5,414	3,392	4,510	4,637	8,468
Penobscot	153,364	28,796	24,552	2,823	14,954	8,351	10,780	11,315	23,358
Piscataquis	17,124	3,062	3,929	300	1,630	1,110	1,519	1,526	2,971
Sagadahoc	35,013	6,977	6,570	684	3,308	2,053	2,730	2,805	4,219
Washington	32,190	6,082	6,887	596	3,053	1,982	2,689	2,718	5,893
York	199,431	40,106	34,552	3,932	18,917	11,337	14,882	15,446	19,554
Totals	**1,173,073**	**231,276**	**204,329**	**22,676**	**111,985**	**66,386**	**87,129**	**90,383**	**156,892**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Androscoggin	0	0	0	0.0	A
Aroostook	0	0	0	0.0	A
Cumberland	6	0	0	2.0	C
Hancock	3	0	0	1.0	C
Kennebec	0	0	0	0.0	A
Knox	4	0	0	1.3	C
Oxford	0	0	0	0.0	A
Penobscot	1	0	0	0.3	B
Piscataquis	DNC	DNC	DNC	DNC	DNC
Sagadahoc	0	0	0	0.0	A
Washington	1	0	0	0.3	B
York	10	0	0	3.3	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Androscoggin	0	0	0	0.0	A	7.5	PASS
Aroostook	0	0	0	0.0	A	6.2	PASS
Cumberland	0	0	0	0.0	A	8.5	PASS
Hancock	0	0	0	0.0	A	4.7	PASS
Kennebec	0	0	0	0.0	A	7.2	PASS
Knox	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Oxford	0	0	0	0.0	A	8.2	PASS
Penobscot	0	0	0	0.0	A	7.1	PASS
Piscataquis	INC	INC	INC	INC	INC	INC	INC
Sagadahoc	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washington	DNC	DNC	DNC	DNC	DNC	DNC	DNC
York	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Maryland

www.lung.org/maryland

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Anne Arundel	555,743	126,728	72,850	13,667	40,625	22,998	34,176	41,552	39,333
Baltimore	823,015	177,943	127,651	19,190	60,541	35,764	54,510	65,262	76,434
Calvert	90,484	22,245	11,322	2,399	6,400	3,792	5,608	6,884	6,170
Carroll	167,564	38,361	24,874	4,137	12,015	7,404	11,212	13,564	11,089
Cecil	101,913	24,171	13,612	2,607	7,303	4,295	6,409	7,803	9,906
Charles	152,864	38,479	16,274	4,150	10,911	5,959	8,617	10,663	12,119
Dorchester	32,660	6,891	6,305	743	2,357	1,562	2,464	2,906	5,702
Frederick	241,409	58,216	30,170	6,278	17,316	9,887	14,617	17,867	16,413
Garrett	29,889	6,050	5,785	652	2,184	1,438	2,266	2,673	4,677
Harford	249,215	58,088	35,031	6,264	17,915	10,644	16,002	19,389	18,177
Kent	19,944	3,350	4,819	361	1,501	1,042	1,698	1,960	2,745
Montgomery	1,016,677	239,519	135,707	25,831	73,437	41,999	62,690	76,042	70,842
Prince George's	890,081	202,000	96,006	21,784	66,188	34,642	49,951	61,599	85,855
Washington	149,588	33,322	22,983	3,594	10,891	6,490	9,886	11,854	16,960
Baltimore City	622,104	131,399	75,422	14,171	47,150	24,818	36,329	44,284	136,053
Totals	**5,143,150**	**1,166,762**	**678,811**	**125,828**	**376,735**	**212,733**	**316,433**	**384,302**	**512,475**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Anne Arundel	23	2	0	8.7	F	0	0	0	0.0	A	10.0	PASS
Baltimore	28	2	0	10.3	F	0	0	0	0.0	A	10.3	PASS
Baltimore City	10	0	0	3.3	F	3	0	0	1.0	C	10.5	PASS
Calvert	16	1	0	5.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carroll	8	0	0	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cecil	23	1	0	8.2	F	2	0	0	0.7	B	10.0	PASS
Charles	14	2	0	5.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dorchester	20	1	0	7.2	F	INC	INC	INC	INC	INC	INC	INC
Frederick	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Garrett	9	0	0	3.0	D	0	0	0	0.0	A	8.9	PASS
Harford	28	6	0	12.3	F	0	0	0	0.0	A	10.3	PASS
Kent	25	3	0	9.8	F	1	0	0	0.3	B	10.2	PASS
Montgomery	7	0	0	2.3	D	0	0	0	0.0	A	9.7	PASS
Prince George's	34	1	0	11.8	F	0	1	0	0.5	B	10.1	PASS
Washington	6	0	0	2.0	C	4	0	0	1.3	C	10.5	PASS

American Lung Association in Massachusetts
www.lung.org/massachusetts

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Barnstable	214,990	34,804	58,320	2,747	19,649	12,730	18,380	19,630	20,255
Berkshire	129,585	23,675	26,297	1,869	11,796	6,713	9,268	10,242	15,886
Bristol	552,780	118,088	84,875	9,321	49,227	25,056	33,288	37,786	75,775
Dukes	17,256	3,225	3,250	255	1,563	886	1,206	1,356	1,533
Essex	762,550	169,500	116,146	13,379	67,044	34,514	45,828	52,160	86,424
Hampden	467,319	106,218	70,228	8,384	40,960	20,625	27,408	31,040	81,069
Hampshire	159,596	25,115	22,649	1,982	15,445	7,115	9,266	10,565	18,012
Middlesex	1,552,802	321,875	214,739	25,407	140,550	67,478	88,160	100,966	129,965
Norfolk	687,802	150,382	105,980	11,870	60,765	31,257	41,564	47,218	46,490
Plymouth	501,915	114,995	79,088	9,077	43,523	23,160	30,915	35,171	39,080
Suffolk	755,503	130,919	82,198	10,334	73,008	29,248	36,763	42,388	144,672
Worcester	809,106	179,816	111,765	14,194	71,498	35,508	46,412	53,469	102,014
Totals	**6,611,204**	**1,378,612**	**975,535**	**108,819**	**595,028**	**294,290**	**388,458**	**441,991**	**761,175**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Barnstable	8	0	0	2.7	D
Berkshire	2	0	0	0.7	B
Bristol	14	0	0	4.7	F
Dukes	12	2	0	5.0	F
Essex	7	0	0	2.3	D
Hampden	5	0	0	1.7	C
Hampshire	6	0	0	2.0	C
Middlesex	2	0	0	0.7	B
Norfolk	3	0	0	1.0	C
Plymouth	DNC	DNC	DNC	DNC	DNC
Suffolk	4	0	0	1.3	C
Worcester	4	0	0	1.3	C

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Barnstable	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Berkshire	0	0	0	0.0	A	8.3	PASS
Bristol	0	0	0	0.0	A	7.3	PASS
Dukes	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Essex	0	0	0	0.0	A	7.6	PASS
Hampden	0	0	0	0.0	A	8.9	PASS
Hampshire	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Middlesex	INC	INC	INC	INC	INC	INC	INC
Norfolk	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Plymouth	0	0	0	0.0	A	7.5	PASS
Suffolk	1	0	0	0.3	B	9.5	PASS
Worcester	0	0	0	0.0	A	8.3	PASS

American Lung Association in Michigan

www.lung.org/michigan

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Allegan	112,531	28,252	16,554	3,093	9,662	7,552	9,023	8,952	14,837
Bay	106,832	22,752	18,984	2,491	9,589	7,692	9,482	9,265	17,834
Benzie	17,428	3,360	4,103	368	1,581	1,398	1,826	1,741	2,255
Berrien	155,252	35,257	27,063	3,860	13,687	10,968	13,518	13,209	25,588
Cass	51,910	11,343	9,665	1,242	4,609	3,819	4,758	4,633	8,837
Chippewa	38,696	7,491	6,115	820	3,589	2,673	3,200	3,159	5,566
Clinton	76,739	17,859	11,388	1,955	6,759	5,207	6,204	6,157	7,436
Genesee	415,376	98,506	63,259	10,783	36,350	27,988	33,590	33,203	88,844
Huron	32,224	6,325	7,384	692	2,914	2,560	3,324	3,178	4,992
Ingham	282,234	57,516	32,654	6,296	26,194	17,278	19,417	19,636	59,177
Kalamazoo	256,725	56,885	33,838	6,227	23,156	16,113	18,700	18,667	43,882
Kent	621,700	157,831	74,183	17,278	53,744	38,100	43,668	43,976	90,452
Lenawee	99,188	21,955	16,078	2,403	8,844	6,898	8,354	8,225	15,003
Macomb	854,769	189,168	130,511	20,708	76,398	58,693	70,158	69,493	113,152
Manistee	24,450	4,383	5,494	480	2,263	1,966	2,529	2,429	4,115
Mason	28,605	5,865	5,931	642	2,572	2,186	2,781	2,682	4,420
Missaukee	15,051	3,508	2,821	384	1,311	1,087	1,363	1,323	2,321
Monroe	150,376	34,357	22,835	3,761	13,293	10,465	12,505	12,414	18,626
Muskegon	171,008	41,193	25,239	4,509	14,908	11,392	13,595	13,472	33,828
Oakland	1,231,640	276,597	179,722	30,279	109,728	84,198	99,727	99,280	123,819
Ottawa	272,701	68,581	35,032	7,507	23,603	16,903	19,663	19,655	29,818
St. Clair	160,469	35,854	25,890	3,925	14,244	11,401	13,781	13,611	25,058
Schoolcraft	8,247	1,539	1,913	168	754	675	874	838	1,460
Tuscola	54,263	11,773	9,613	1,289	4,841	3,938	4,852	4,748	8,826
Washtenaw	354,240	70,616	40,875	7,730	33,042	22,050	24,741	25,072	55,001

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases			Cardio-vascular Disease	Diabetes	Poverty
				Pediatric Asthma	Adult Asthma	COPD			
Wayne	1,775,273	430,808	240,410	47,160	154,989	114,912	134,751	134,506	440,885
Wexford	32,645	7,650	5,666	837	2,849	2,302	2,839	2,775	6,357
Totals	**7,400,572**	**1,707,224**	**1,053,220**	**186,888**	**655,474**	**490,411**	**579,221**	**576,299**	**1,252,389**

American Lung Association in Michigan

www.lung.org/michigan

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Allegan	34	4	0	13.3	F
Bay	DNC	DNC	DNC	DNC	DNC
Benzie	16	0	0	5.3	F
Berrien	27	4	0	11.0	F
Cass	19	2	0	7.3	F
Chippewa	6	0	0	2.0	C
Clinton	11	0	0	3.7	F
Genesee	17	0	0	5.7	F
Huron	11	1	0	4.2	F
Ingham	9	0	0	3.0	D
Kalamazoo	14	1	0	5.2	F
Kent	19	0	0	6.3	F
Lenawee	17	2	0	6.7	F
Macomb	27	1	0	9.5	F
Manistee	16	0	0	5.3	F
Mason	13	0	0	4.3	F
Missaukee	7	0	0	2.3	D
Monroe	DNC	DNC	DNC	DNC	DNC
Muskegon	29	2	0	10.7	F
Oakland	18	1	0	6.5	F
Ottawa	18	0	0	6.0	F
Schoolcraft	14	0	0	4.7	F
St. Clair	10	1	0	3.8	F
Tuscola	8	0	0	2.7	D
Washtenaw	20	0	0	6.7	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Allegan	0	0	0	0.0	A	8.3	PASS
Bay	0	0	0	0.0	A	7.6	PASS
Benzie	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Berrien	0	0	0	0.0	A	8.5	PASS
Cass	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Chippewa	0	0	0	0.0	A	6.2	PASS
Clinton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Genesee	0	0	0	0.0	A	8.0	PASS
Huron	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ingham	0	0	0	0.0	A	8.3	PASS
Kalamazoo	0	0	0	0.0	A	8.9	PASS
Kent	0	0	0	0.0	A	9.4	PASS
Lenawee	0	0	0	0.0	A	8.8	PASS
Macomb	0	0	0	0.0	A	8.4	PASS
Manistee	1	0	0	0.3	B	6.7	PASS
Mason	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Missaukee	0	0	0	0.0	A	5.9	PASS
Monroe	0	0	0	0.0	A	INC	INC
Muskegon	1	0	0	0.3	B	INC	INC
Oakland	0	0	0	0.0	A	9.0	PASS
Ottawa	0	0	0	0.0	A	8.7	PASS
Schoolcraft	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Clair	0	0	0	0.0	A	9.0	PASS
Tuscola	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washtenaw	0	0	0	0.0	A	9.1	PASS

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Wayne	26	1	0	9.2	F
Wexford	3	0	0	1.0	C

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Wayne	10	0	0	3.3	F	11.3	PASS
Wexford	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Minnesota

www.lung.org/minnesota

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Anoka	339,534	83,948	38,579	7,381	19,640	10,596	16,070	18,115	25,532
Becker	33,231	8,171	6,252	718	1,909	1,195	2,060	2,173	4,413
Carlton	35,460	8,146	5,658	716	2,089	1,227	2,013	2,176	4,086
Cass	28,555	6,070	6,682	534	1,704	1,148	2,070	2,139	4,329
Crow Wing	63,208	14,121	12,734	1,242	3,739	2,355	4,101	4,297	7,053
Dakota	408,509	102,928	47,591	9,050	23,481	12,709	19,410	21,775	33,987
Goodhue	46,464	10,805	8,373	950	2,719	1,673	2,837	3,020	4,253
Hennepin	1,198,778	268,028	146,134	23,566	71,714	37,602	57,337	63,847	143,427
Lake	10,777	2,008	2,581	177	665	446	803	831	1,178
Lyon	25,487	6,255	3,644	550	1,478	813	1,301	1,412	3,159
Mille Lacs	25,833	6,296	4,523	554	1,492	901	1,522	1,619	3,056
Olmsted	149,226	37,191	20,329	3,270	8,606	4,743	7,513	8,225	12,153
Ramsey	526,714	122,864	66,894	10,803	31,118	16,388	25,310	27,931	82,805
St. Louis	200,540	38,604	33,831	3,394	12,402	7,182	11,807	12,702	31,806
Scott	137,232	39,845	12,258	3,503	7,510	3,827	5,548	6,382	8,032
Stearns	152,092	34,696	19,997	3,051	9,046	4,777	7,428	8,159	18,417
Washington	246,603	62,733	30,328	5,516	14,101	7,849	12,173	13,589	14,085
Wright	128,470	37,234	14,032	3,274	7,021	3,731	5,672	6,355	8,993
Totals	**3,756,713**	**889,943**	**480,420**	**78,248**	**220,435**	**119,163**	**184,978**	**204,745**	**410,764**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Anoka	3	1	0	1.5	C
Becker	0	0	0	0.0	A
Carlton	1	0	0	0.3	B
Cass	DNC	DNC	DNC	DNC	DNC
Crow Wing	0	0	0	0.0	A
Dakota	DNC	DNC	DNC	DNC	DNC
Goodhue	0	0	0	0.0	A
Hennepin	INC	INC	INC	INC	INC
Lake	0	0	0	0.0	A
Lyon	0	0	0	0.0	A
Mille Lacs	0	0	0	0.0	A
Olmsted	0	0	0	0.0	A
Ramsey	DNC	DNC	DNC	DNC	DNC
Scott	1	0	0	0.3	B
St. Louis	0	0	0	0.0	A
Stearns	0	0	0	0.0	A
Washington	1	0	0	0.3	B
Wright	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Anoka	1	0	0	0.3	B	8.2	PASS
Becker	INC	INC	INC	INC	INC	INC	INC
Carlton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cass	INC	INC	INC	INC	INC	INC	INC
Crow Wing	INC	INC	INC	INC	INC	INC	INC
Dakota	0	0	0	0.0	A	8.4	PASS
Goodhue	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hennepin	1	0	0	0.3	B	8.8	PASS
Lake	INC	INC	INC	INC	INC	INC	INC
Lyon	0	0	0	0.0	A	INC	INC
Mille Lacs	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Olmsted	0	0	0	0.0	A	8.4	PASS
Ramsey	1	0	0	0.3	B	9.8	PASS
Scott	0	0	0	0.0	A	8.5	PASS
St. Louis	1	0	0	0.3	B	6.1	PASS
Stearns	2	0	0	0.7	B	7.9	PASS
Washington	INC	INC	INC	INC	INC	INC	INC
Wright	INC	INC	INC	INC	INC	INC	INC

American Lung Association in Mississippi

www.lung.org/mississippi

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Adams	32,090	6,871	5,270	805	2,086	2,301	3,074	3,449	9,078
Bolivar	34,049	8,750	4,507	1,025	2,068	2,167	2,763	3,173	12,180
DeSoto	168,240	45,710	19,243	5,353	10,009	10,368	12,896	15,035	20,116
Forrest	77,059	17,910	9,440	2,097	4,779	4,784	5,862	6,858	20,551
Grenada	21,612	5,164	3,458	605	1,358	1,491	1,990	2,232	5,377
Hancock	45,566	10,306	7,720	1,207	2,924	3,260	4,408	4,914	9,108
Harrison	196,500	47,819	25,225	5,600	12,156	12,702	16,048	18,536	43,428
Hinds	244,899	62,598	28,609	7,330	14,866	15,315	18,995	22,166	70,594
Jackson	140,450	34,413	19,392	4,030	8,720	9,334	12,060	13,776	22,820
Jones	68,961	17,735	10,464	2,077	4,214	4,559	6,024	6,788	14,586
Lauderdale	80,254	19,419	11,863	2,274	4,998	5,364	7,010	7,947	20,020
Lee	85,340	22,234	11,910	2,604	5,180	5,530	7,172	8,166	15,100
Yalobusha	12,373	2,870	2,223	336	788	883	1,211	1,339	3,283
Totals	**1,207,393**	**301,799**	**159,324**	**35,340**	**74,145**	**78,056**	**99,513**	**114,380**	**266,241**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Adams	INC	INC	INC	INC	INC
Bolivar	7	0	0	2.3	D
DeSoto	6	0	0	2.0	C
Forrest	DNC	DNC	DNC	DNC	DNC
Grenada	DNC	DNC	DNC	DNC	DNC
Hancock	1	0	0	0.3	B
Harrison	3	0	0	1.0	C
Hinds	4	0	0	1.3	C
Jackson	2	0	0	0.7	B
Jones	DNC	DNC	DNC	DNC	DNC
Lauderdale	0	0	0	0.0	A
Lee	1	0	0	0.3	B
Yalobusha	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Adams	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bolivar	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DeSoto	0	0	0	0.0	A	9.6	PASS
Forrest	1	0	0	0.3	B	11.0	PASS
Grenada	0	0	0	0.0	A	9.3	PASS
Hancock	0	0	0	0.0	A	8.9	PASS
Harrison	0	0	0	0.0	A	9.6	PASS
Hinds	1	0	0	0.3	B	10.4	PASS
Jackson	0	0	0	0.0	A	9.2	PASS
Jones	INC	INC	INC	INC	INC	INC	INC
Lauderdale	INC	INC	INC	INC	INC	INC	INC
Lee	INC	INC	INC	INC	INC	INC	INC
Yalobusha	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Missouri
www.lung.org/missouri

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Andrew	17,445	4,035	2,978	310	1,439	1,084	1,513	1,371	1,730
Boone	170,773	35,148	17,238	2,699	15,091	8,582	10,807	10,615	31,884
Buchanan	89,631	20,713	12,809	1,591	7,499	5,130	6,933	6,444	15,117
Callaway	44,359	9,662	6,114	742	3,790	2,583	3,461	3,236	5,588
Cass	100,641	25,563	15,105	1,963	8,121	5,830	7,995	7,346	9,078
Cedar	13,913	3,193	3,336	245	1,108	946	1,408	1,219	3,491
Clay	230,473	58,144	28,536	4,465	18,902	12,523	16,594	15,650	22,703
Clinton	20,571	5,039	3,390	387	1,669	1,249	1,739	1,580	2,303
Greene	283,870	59,837	42,429	4,595	24,333	16,181	21,924	20,360	55,046
Jackson	679,996	163,494	90,297	12,555	56,446	37,992	50,809	47,590	114,942
Jasper	116,398	29,498	15,949	2,265	9,463	6,378	8,598	8,009	20,814
Jefferson	221,396	53,591	28,250	4,115	18,392	12,658	16,846	15,821	25,187
Lincoln	53,860	14,442	6,467	1,109	4,327	2,938	3,892	3,668	6,310
Monroe	8,774	1,980	1,773	152	717	579	833	739	1,361
Perry	19,072	4,630	3,119	356	1,553	1,146	1,592	1,449	2,382
St. Charles	373,495	92,400	47,721	7,095	30,787	20,915	27,854	26,157	23,343
Ste. Genevieve	17,778	3,950	3,021	303	1,486	1,135	1,580	1,435	2,141
St. Louis	1,001,444	225,686	161,009	17,330	83,698	60,812	83,863	76,743	106,520
Taney	53,575	11,556	10,245	887	4,467	3,377	4,799	4,299	10,200
St. Louis City	318,416	64,790	35,576	4,975	28,089	17,268	22,214	21,436	83,767
Totals	**3,835,880**	**887,351**	**535,362**	**68,139**	**321,376**	**219,306**	**295,253**	**275,166**	**543,907**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Andrew	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Boone	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Buchanan	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	INC	INC
Callaway	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cass	12	0	0	4.0	F	0	0	0	0.0	A	10.7	PASS
Cedar	17	0	0	5.7	F	0	0	0	0.0	A	10.2	PASS
Clay	33	1	0	11.5	F	0	0	0	0.0	A	9.2	PASS
Clinton	26	0	0	8.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greene	9	0	0	3.0	D	0	0	0	0.0	A	9.9	PASS
Jackson	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	9.9	PASS
Jasper	20	0	0	6.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	19	2	0	7.3	F	0	0	0	0.0	A	9.8	PASS
Lincoln	21	0	0	7.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Monroe	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Perry	17	0	0	5.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Charles	37	2	0	13.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Louis	38	0	0	12.7	F	2	0	0	0.7	B	10.9	PASS
St. Louis City	25	1	0	8.8	F	2	0	0	0.7	B	11.1	PASS
Ste. Genevieve	7	1	0	2.8	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Taney	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Montana

www.lung.org/montana

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Fergus	11,501	2,299	2,621	189	788	668	954	813	1,609
Flathead	93,068	21,008	15,330	1,728	6,227	4,746	6,404	5,690	15,378
Gallatin	94,720	19,582	10,203	1,611	6,502	4,166	5,039	4,647	12,780
Lewis and Clark	65,338	14,323	10,136	1,178	4,414	3,284	4,369	3,913	8,026
Lincoln	19,460	3,614	4,594	297	1,360	1,178	1,697	1,456	3,388
Missoula	111,807	21,728	14,635	1,788	7,779	5,266	6,624	5,989	18,908
Phillips	4,179	927	860	76	280	233	329	285	747
Powder River	1,748	300	416	25	124	107	154	132	212
Ravalli	40,823	8,450	8,950	695	2,778	2,339	3,330	2,860	8,008
Richland	11,214	2,707	1,484	223	737	524	678	616	866
Rosebud	9,329	2,701	1,211	222	575	417	546	495	1,797
Sanders	11,363	2,057	2,886	169	796	707	1,033	876	2,457
Silver Bow	34,523	7,154	5,856	589	2,359	1,781	2,394	2,112	6,709
Totals	**509,073**	**106,850**	**79,182**	**8,791**	**34,720**	**25,415**	**33,550**	**29,884**	**80,885**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Fergus	INC	INC	INC	INC	INC
Flathead	0	0	0	0.0	A
Gallatin	DNC	DNC	DNC	DNC	DNC
Lewis and Clark	0	0	0	0.0	A
Lincoln	DNC	DNC	DNC	DNC	DNC
Missoula	0	0	0	0.0	A
Phillips	INC	INC	INC	INC	INC
Powder River	0	0	0	0.0	A
Ravalli	DNC	DNC	DNC	DNC	DNC
Richland	0	0	0	0.0	A
Rosebud	0	0	0	0.0	A
Sanders	DNC	DNC	DNC	DNC	DNC
Silver Bow	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Fergus	INC	INC	INC	INC	INC	INC	INC
Flathead	4	0	0	1.3	C	INC	INC
Gallatin	INC	INC	INC	INC	INC	INC	INC
Lewis and Clark	9	1	0	3.5	F	8.3	PASS
Lincoln	1	0	0	0.3	B	11.4	PASS
Missoula	14	7	0	8.2	F	10.9	PASS
Phillips	INC	INC	INC	INC	INC	INC	INC
Powder River	0	0	0	0.0	A	INC	INC
Ravalli	24	26	4	23.7	F	11.2	PASS
Richland	0	0	0	0.0	A	7.6	PASS
Rosebud	3	0	0	1.0	C	INC	INC
Sanders	INC	INC	INC	INC	INC	INC	INC
Silver Bow	18	6	0	9.0	F	10.2	PASS

American Lung Association in Nebraska

www.lung.org/nebraska

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Douglas	537,256	138,770	60,365	9,125	29,289	19,722	29,780	33,277	80,032
Hall	60,720	16,382	8,463	1,077	3,251	2,367	3,728	4,060	8,887
Knox	8,565	2,070	2,031	136	472	425	734	757	1,257
Lancaster	297,036	68,607	34,882	4,511	16,789	11,109	16,781	18,598	41,799
Sarpy	169,331	48,124	16,609	3,164	8,917	5,870	8,713	9,869	10,560
Scotts Bluff	36,848	9,035	6,313	594	2,034	1,582	2,573	2,746	5,490
Washington	20,223	4,826	3,145	317	1,128	874	1,394	1,527	1,512
Totals	**1,129,979**	**287,814**	**131,808**	**18,925**	**61,881**	**41,950**	**63,704**	**70,835**	**149,537**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Douglas	4	0	0	1.3	C
Hall	DNC	DNC	DNC	DNC	DNC
Knox	3	0	0	1.0	C
Lancaster	0	0	0	0.0	A
Sarpy	DNC	DNC	DNC	DNC	DNC
Scotts Bluff	INC	INC	INC	INC	INC
Washington	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Douglas	2	0	0	0.7	B	10.3	PASS
Hall	0	0	0	0.0	A	7.4	PASS
Knox	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lancaster	0	0	0	0.0	A	8.4	PASS
Sarpy	3	0	0	1.0	C	11.0	PASS
Scotts Bluff	0	0	0	0.0	A	INC	INC
Washington	1	0	0	0.3	B	8.9	PASS

American Lung Association in Nevada

www.lung.org/nevada

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Churchill	24,063	5,747	4,131	452	1,388	1,336	1,802	1,928	3,288
Clark	2,027,868	489,627	260,156	38,488	116,641	100,210	130,734	143,409	325,684
Douglas	47,118	8,736	11,157	687	2,911	3,163	4,406	4,623	4,792
Lyon	51,557	11,849	9,759	931	3,016	3,030	4,143	4,418	8,037
Washoe	433,731	98,728	60,818	7,761	25,462	22,560	29,797	32,622	64,443
White Pine	10,057	2,161	1,528	170	601	546	728	794	1,185
Carson City	54,080	11,249	10,048	884	3,247	3,187	4,325	4,617	7,860
Totals	**2,648,474**	**628,097**	**357,597**	**49,372**	**153,265**	**134,032**	**175,935**	**192,410**	**415,289**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Carson City	0	0	0	0.0	A
Churchill	0	0	0	0.0	A
Clark	61	0	0	20.3	F
Douglas	DNC	DNC	DNC	DNC	DNC
Lyon	3	0	0	1.0	C
Washoe	4	0	0	1.3	C
White Pine	7	0	0	2.3	D

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Carson City	INC	INC	INC	INC	INC	INC	INC
Churchill	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clark	5	1	0	2.2	D	8.8	PASS
Douglas	INC	INC	INC	INC	INC	INC	INC
Lyon	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washoe	13	4	0	6.3	F	7.6	PASS
White Pine	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in New Hampshire

www.lung.org/newhampshire

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Belknap	60,179	11,831	11,486	1,253	5,282	3,701	4,249	4,862	5,510
Cheshire	76,610	14,468	12,718	1,532	6,804	4,438	4,934	5,713	8,214
Coos	31,997	5,645	6,820	598	2,875	2,069	2,425	2,743	4,530
Grafton	89,629	15,569	15,600	1,648	8,106	5,285	5,922	6,815	9,184
Hillsborough	403,985	89,404	54,248	9,466	34,509	21,780	23,256	27,614	36,867
Merrimack	146,849	29,823	22,646	3,158	12,820	8,395	9,196	10,780	12,755
Rockingham	299,134	63,166	43,851	6,688	25,858	17,080	18,506	21,915	17,506
Totals	**1,108,383**	**229,906**	**167,369**	**24,342**	**96,253**	**62,750**	**68,488**	**80,442**	**94,566**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Belknap	0	0	0	0.0	A
Cheshire	0	0	0	0.0	A
Coos	2	0	0	0.7	B
Grafton	0	0	0	0.0	A
Hillsborough	4	0	0	1.3	C
Merrimack	0	0	0	0.0	A
Rockingham	5	0	0	1.7	C

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Belknap	0	0	0	0.0	A	6.0	PASS
Cheshire	8	0	0	2.7	D	9.1	PASS
Coos	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Grafton	0	0	0	0.0	A	6.6	PASS
Hillsborough	0	0	0	0.0	A	7.7	PASS
Merrimack	0	0	0	0.0	A	8.2	PASS
Rockingham	0	0	0	0.0	A	INC	INC

American Lung Association in New Jersey

www.lung.org/newjersey

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Atlantic	275,862	61,824	42,434	5,361	19,294	12,891	18,179	20,179	46,281
Bergen	925,328	202,419	146,297	17,551	65,133	43,842	62,126	68,871	73,719
Camden	512,854	120,761	71,350	10,471	35,416	22,893	31,644	35,277	74,058
Cumberland	157,332	37,493	21,071	3,251	10,833	6,805	9,325	10,360	29,231
Essex	789,565	191,819	96,414	16,632	54,128	33,598	45,166	50,710	136,161
Gloucester	290,265	67,580	39,858	5,860	20,120	13,131	18,091	20,287	26,775
Hudson	660,282	134,229	70,405	11,638	47,803	27,120	34,837	39,108	126,653
Hunterdon	126,250	27,464	18,718	2,381	8,912	6,250	8,732	9,915	5,068
Mercer	370,414	81,519	49,975	7,068	26,123	16,562	22,623	25,280	41,296
Middlesex	828,919	184,382	109,050	15,987	58,310	36,584	49,712	55,569	75,437
Monmouth	629,672	142,247	95,621	12,334	43,945	29,960	42,159	47,184	48,548
Morris	499,397	112,965	75,366	9,795	34,845	23,592	33,152	37,061	23,871
Ocean	583,414	136,935	126,586	11,873	39,838	29,223	45,004	48,043	60,439
Passaic	505,672	123,563	65,244	10,714	34,562	21,739	29,602	33,065	82,368
Union	548,256	131,432	70,940	11,396	37,703	23,982	32,650	36,623	61,990
Warren	107,379	23,675	16,472	2,053	7,546	5,152	7,255	8,118	9,194
Totals	**7,810,861**	**1,780,307**	**1,115,801**	**154,363**	**544,513**	**353,321**	**490,256**	**545,649**	**921,089**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Atlantic	8	0	0	2.7	D
Bergen	15	0	0	5.0	F
Camden	24	4	0	10.0	F
Cumberland	12	0	0	4.0	F
Essex	16	0	0	5.3	F
Gloucester	27	1	0	9.5	F
Hudson	9	0	0	3.0	D
Hunterdon	14	0	0	4.7	F
Mercer	22	0	0	7.3	F
Middlesex	22	0	0	7.3	F
Monmouth	20	1	0	7.2	F
Morris	12	0	0	4.0	F
Ocean	20	1	0	7.2	F
PASSaic	5	0	0	1.7	C
Union	DNC	DNC	DNC	DNC	DNC
Warren	2	0	0	0.7	B

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Atlantic	0	0	0	0.0	A	8.7	PASS
Bergen	0	0	0	0.0	A	9.1	PASS
Camden	1	0	0	0.3	B	9.3	PASS
Cumberland	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Essex	0	0	0	0.0	A	9.4	PASS
Gloucester	0	0	0	0.0	A	9.3	PASS
Hudson	2	0	0	0.7	B	11.1	PASS
Hunterdon	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mercer	0	0	0	0.0	A	9.4	PASS
Middlesex	0	0	0	0.0	A	8.2	PASS
Monmouth	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Morris	0	0	0	0.0	A	8.4	PASS
Ocean	0	0	0	0.0	A	8.3	PASS
PASSaic	0	0	0	0.0	A	9.3	PASS
Union	4	0	0	1.3	C	11.2	PASS
Warren	1	0	0	0.3	B	9.1	PASS

American Lung Association in New Mexico

www.lung.org/newmexico

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Bernalillo	674,221	156,601	91,920	12,871	47,777	29,716	37,869	53,583	124,381
Chaves	65,823	18,034	9,562	1,482	4,404	2,827	3,686	5,121	13,616
Doña Ana	213,460	55,306	28,943	4,546	14,567	8,941	11,418	15,913	56,536
Eddy	55,471	14,453	7,790	1,188	3,786	2,417	3,124	4,396	8,301
Grant	29,328	6,156	6,884	506	2,125	1,571	2,222	2,924	6,427
Lea	68,062	20,393	7,223	1,676	4,403	2,603	3,212	4,623	9,729
Luna	24,659	6,310	5,086	519	1,682	1,192	1,660	2,188	7,517
Rio Arriba	40,072	9,736	6,347	800	2,800	1,861	2,455	3,428	9,874
Sandoval	136,575	34,301	19,473	2,819	9,449	6,106	7,911	11,189	20,774
San Juan	126,503	35,105	15,612	2,885	8,442	5,219	6,607	9,418	27,265
Santa Fe	147,423	29,275	27,128	2,406	10,900	7,518	10,114	13,988	26,209
Valencia	76,284	19,166	11,171	1,575	5,275	3,435	4,473	6,302	17,450
Totals	**1,657,881**	**404,836**	**237,139**	**33,274**	**115,610**	**73,405**	**94,750**	**133,070**	**328,079**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Bernalillo	9	0	0	3.0	D
Chaves	DNC	DNC	DNC	DNC	DNC
Doña Ana	20	0	0	6.7	F
Eddy	5	0	0	1.7	C
Grant	2	0	0	0.7	B
Lea	0	0	0	0.0	A
Luna	0	0	0	0.0	A
Rio Arriba	INC	INC	INC	INC	INC
San Juan	3	0	0	1.0	C
Sandoval	0	0	0	0.0	A
Santa Fe	0	0	0	0.0	A
Valencia	1	0	0	0.3	B

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Bernalillo	7	1	0	2.8	D	6.7	PASS
Chaves	INC	INC	INC	INC	INC	INC	INC
Doña Ana	0	1	0	0.5	B	6.3	PASS
Eddy	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Grant	INC	INC	INC	INC	INC	INC	INC
Lea	2	0	0	0.7	B	8.4	PASS
Luna	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rio Arriba	DNC	DNC	DNC	DNC	DNC	DNC	DNC
San Juan	0	0	0	0.0	A	4.7	PASS
Sandoval	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Santa Fe	1	0	0	0.3	B	4.9	PASS
Valencia	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in New York

www.lung.org/newyork

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Albany	306,945	58,420	45,881	5,271	24,166	14,016	22,212	25,927	39,857
Bronx	1,418,733	365,548	157,983	32,981	103,193	55,583	84,762	100,430	423,904
Chautauqua	133,080	28,059	23,511	2,532	10,121	6,381	10,495	12,093	24,313
Chemung	88,506	19,258	14,739	1,738	6,687	4,155	6,773	7,844	14,218
Dutchess	296,916	60,965	44,686	5,500	22,873	13,888	22,214	26,077	26,524
Erie	919,866	191,021	150,285	17,235	70,500	43,084	69,787	80,958	134,858
Essex	38,762	6,783	7,955	612	3,064	2,032	3,410	3,902	4,269
Franklin	51,688	10,257	7,467	925	4,028	2,363	3,738	4,389	10,187
Hamilton	4,773	739	1,232	67	381	284	497	562	574
Herkimer	64,181	13,576	11,809	1,225	4,865	3,138	5,204	5,985	10,312
Jefferson	119,504	29,705	14,161	2,680	8,798	4,670	7,150	8,386	17,772
Kings	2,592,149	605,067	310,211	54,591	194,593	104,572	160,212	188,674	597,129
Madison	72,382	14,881	11,189	1,343	5,570	3,396	5,455	6,383	9,434
Monroe	749,606	162,356	112,935	14,648	56,978	33,869	54,149	63,138	112,828
Nassau	1,352,146	301,901	218,183	27,238	101,453	63,269	102,815	119,645	86,249
New York	1,626,159	238,910	231,057	21,555	135,743	72,478	111,885	130,319	298,968
Niagara	214,249	44,016	36,408	3,971	16,422	10,368	16,940	19,673	28,900
Oneida	233,585	49,845	39,952	4,497	17,732	11,039	18,054	20,847	38,853
Onondaga	468,387	103,276	70,136	9,318	35,412	21,198	33,915	39,611	69,016
Orange	375,592	98,615	45,731	8,897	26,989	15,661	24,460	29,024	49,520
Oswego	121,165	26,477	16,982	2,389	9,199	5,480	8,682	10,235	21,585
Putnam	99,645	21,869	14,240	1,973	7,532	4,708	7,524	8,927	5,709
Queens	2,296,175	469,620	308,207	42,371	178,200	100,321	156,417	183,911	350,774
Rensselaer	159,918	32,700	23,594	2,950	12,353	7,335	11,667	13,676	21,555
Richmond	472,621	106,407	66,728	9,600	35,580	21,049	33,386	39,209	61,332

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases			Cardio-vascular Disease	Diabetes	Poverty
				Pediatric Asthma	Adult Asthma	COPD			
Rockland	320,903	89,131	46,730	8,042	22,441	13,600	21,938	25,496	46,874
Saratoga	223,865	47,964	34,175	4,327	17,032	10,457	16,806	19,697	17,347
Schenectady	155,333	34,331	23,943	3,097	11,720	7,107	11,434	13,329	21,582
Steuben	98,650	22,138	16,879	1,997	7,372	4,693	7,708	8,922	15,164
Suffolk	1,499,738	339,298	223,515	30,613	112,424	68,582	110,012	128,937	110,070
Tompkins	103,617	16,256	12,302	1,467	8,598	4,312	6,437	7,581	17,085
Ulster	180,998	34,083	30,467	3,075	14,191	8,861	14,398	16,765	22,049
Wayne	92,473	20,764	14,802	1,873	6,921	4,387	7,135	8,339	10,425
Westchester	968,802	224,333	149,600	20,240	72,049	44,067	71,124	82,862	92,933
Totals	**17,921,112**	**3,888,569**	**2,537,675**	**350,839**	**1,365,182**	**790,403**	**1,248,794**	**1,461,753**	**2,812,169**

American Lung Association in New York

www.lung.org/newyork

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Albany	3	0	0	1.0	C
Bronx	10	0	0	3.3	F
Chautauqua	15	1	0	5.5	F
Chemung	INC	INC	INC	INC	INC
Dutchess	3	1	0	1.5	C
Erie	8	0	0	2.7	D
Essex	4	0	0	1.3	C
Franklin	0	0	0	0.0	A
Hamilton	2	0	0	0.7	B
Herkimer	0	0	0	0.0	A
Jefferson	7	0	0	2.3	D
Kings	DNC	DNC	DNC	DNC	DNC
Madison	INC	INC	INC	INC	INC
Monroe	2	0	0	0.7	B
Nassau	DNC	DNC	DNC	DNC	DNC
New York	9	0	0	3.0	D
Niagara	8	0	0	2.7	D
Oneida	INC	INC	INC	INC	INC
Onondaga	2	0	0	0.7	B
Orange	2	0	0	0.7	B
Oswego	2	0	0	0.7	B
Putnam	2	0	0	0.7	B
Queens	15	1	0	5.5	F
Rensselaer	INC	INC	INC	INC	INC
Richmond	17	0	0	5.7	F
Rockland	7	0	0	2.3	D

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Albany	1	0	0	0.3	B	7.8	PASS
Bronx	0	0	0	0.0	A	9.6	PASS
Chautauqua	0	0	0	0.0	A	INC	INC
Chemung	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dutchess	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Erie	0	0	0	0.0	A	9.0	PASS
Essex	0	0	0	0.0	A	4.3	PASS
Franklin	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hamilton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Herkimer	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kings	0	0	0	0.0	A	9.7	PASS
Madison	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Monroe	0	0	0	0.0	A	INC	INC
Nassau	INC	INC	INC	INC	INC	INC	INC
New York	0	0	0	0.0	A	10.8	PASS
Niagara	0	0	0	0.0	A	INC	INC
Oneida	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Onondaga	0	0	0	0.0	A	7.2	PASS
Orange	0	0	0	0.0	A	7.8	PASS
Oswego	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Putnam	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Queens	0	0	0	0.0	A	8.7	PASS
Rensselaer	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Richmond	0	0	0	0.0	A	9.0	PASS
Rockland	DNC	DNC	DNC	DNC	DNC	DNC	DNC

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Saratoga	0	0	0	0.0	A
Schenectady	INC	INC	INC	INC	INC
Steuben	0	0	0	0.0	A
Suffolk	24	3	0	9.5	F
Tompkins	0	0	0	0.0	A
Ulster	INC	INC	INC	INC	INC
Wayne	2	0	0	0.7	B
Westchester	9	1	0	3.5	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Saratoga	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Schenectady	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Steuben	0	0	0	0.0	A	6.5	PASS
Suffolk	0	0	0	0.0	A	8.1	PASS
Tompkins	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ulster	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wayne	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Westchester	INC	INC	INC	INC	INC	INC	INC

American Lung Association in North Carolina

www.lung.org/northcarolina

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Alamance	154,378	35,359	24,271	3,109	10,018	9,009	12,428	13,970	29,741
Alexander	36,930	7,919	6,509	696	2,443	2,285	3,215	3,603	4,984
Avery	17,713	2,847	3,494	250	1,246	1,162	1,649	1,826	3,116
Buncombe	247,912	48,821	43,383	4,293	16,734	15,320	21,413	23,924	37,794
Caldwell	81,990	17,559	14,112	1,544	5,434	5,069	7,102	7,992	14,798
Carteret	68,434	12,737	14,368	1,120	4,682	4,595	6,651	7,379	10,268
Caswell	23,190	4,466	4,333	393	1,580	1,509	2,138	2,403	5,588
Catawba	154,810	35,801	24,586	3,148	10,036	9,153	12,672	14,295	25,169
Chatham	66,817	13,766	15,151	1,210	4,443	4,491	6,638	7,282	10,308
Cumberland	325,871	84,793	33,955	7,455	20,301	16,195	20,748	23,734	57,018
Davidson	163,420	37,332	26,645	3,282	10,638	9,813	13,651	15,402	31,093
Davie	41,554	9,227	7,733	811	2,724	2,622	3,739	4,184	5,705
Duplin	60,084	15,029	9,230	1,321	3,795	3,430	4,738	5,334	15,012
Durham	288,133	63,557	30,639	5,588	18,928	15,044	19,176	22,017	46,789
Edgecombe	55,574	13,063	9,091	1,149	3,585	3,312	4,618	5,201	14,832
Forsyth	361,220	86,055	50,834	7,566	23,206	20,347	27,542	31,237	71,772
Franklin	62,260	14,533	9,119	1,278	4,037	3,636	4,963	5,657	11,128
Gaston	209,420	48,866	30,804	4,297	13,551	12,090	16,497	18,711	39,489
Graham	8,736	1,859	1,885	163	576	573	840	923	2,125
Granville	58,275	12,546	8,581	1,103	3,870	3,473	4,725	5,397	8,310
Guilford	506,610	115,801	68,039	10,182	32,945	28,246	37,771	42,911	94,530
Haywood	59,183	11,028	13,631	970	4,032	4,054	5,980	6,559	11,952
Jackson	40,919	7,145	6,937	628	2,828	2,480	3,418	3,793	8,997
Johnston	177,967	47,820	21,020	4,205	11,013	9,410	12,436	14,303	29,171
Lenoir	58,914	13,654	10,263	1,201	3,813	3,588	5,061	5,675	12,654

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Lincoln	79,740	17,780	12,183	1,563	5,242	4,777	6,559	7,471	11,548
McDowell	44,961	9,458	8,055	832	2,989	2,805	3,956	4,429	9,527
Macon	33,857	6,342	8,758	558	2,294	2,396	3,624	3,925	6,838
Martin	23,699	4,931	4,732	434	1,581	1,550	2,234	2,490	5,321
Mecklenburg	990,977	245,520	96,367	21,587	62,978	50,020	63,295	73,290	150,572
Mitchell	15,328	2,829	3,480	249	1,048	1,050	1,544	1,698	2,770
Montgomery	27,571	6,447	4,909	567	1,776	1,672	2,369	2,643	5,858
New Hanover	213,267	41,844	32,576	3,679	14,397	12,467	16,929	18,986	39,124
Person	39,276	8,741	6,586	769	2,578	2,406	3,362	3,797	7,127
Pitt	174,263	38,423	19,001	3,378	11,428	9,045	11,560	13,193	42,483
Robeson	134,841	35,138	16,908	3,089	8,413	7,191	9,573	10,915	40,008
Rockingham	91,878	19,303	16,556	1,697	6,120	5,800	8,194	9,203	19,236
Rowan	138,323	31,697	22,106	2,787	8,986	8,180	11,330	12,761	25,159
Swain	14,058	3,196	2,547	281	912	856	1,214	1,349	3,210
Union	212,756	61,808	23,313	5,434	12,802	10,929	14,350	16,627	21,677
Wake	974,289	246,175	94,146	21,645	61,624	49,476	62,745	72,977	103,650
Watauga	52,372	7,019	7,157	617	3,796	3,022	3,937	4,408	12,683
Wayne	124,583	30,150	17,503	2,651	7,959	6,964	9,428	10,676	25,219
Yancey	17,566	3,416	4,018	300	1,185	1,191	1,759	1,928	3,701
Totals	**6,733,919**	**1,581,800**	**889,514**	**139,079**	**434,565**	**372,705**	**497,768**	**566,476**	**1,138,054**

American Lung Association in North Carolina

www.lung.org/northcarolina

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Alamance	DNC	DNC	DNC	DNC	DNC
Alexander	1	0	0	0.3	B
Avery	2	0	0	0.7	B
Buncombe	2	0	0	0.7	B
Caldwell	1	0	0	0.3	B
Carteret	0	0	0	0.0	A
Caswell	5	0	0	1.7	C
Catawba	DNC	DNC	DNC	DNC	DNC
Chatham	1	0	0	0.3	B
Cumberland	6	0	0	2.0	C
Davidson	DNC	DNC	DNC	DNC	DNC
Davie	6	0	0	2.0	C
Duplin	DNC	DNC	DNC	DNC	DNC
Durham	3	0	0	1.0	C
Edgecombe	2	0	0	0.7	B
Forsyth	14	0	0	4.7	F
Franklin	2	0	0	0.7	B
Gaston	DNC	DNC	DNC	DNC	DNC
Graham	3	0	0	1.0	C
Granville	3	0	0	1.0	C
Guilford	8	0	0	2.7	D
Haywood	5	0	0	1.7	C
Jackson	5	0	0	1.7	C
Johnston	3	1	0	1.5	C
Lenoir	1	0	0	0.3	B

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Alamance	1	0	0	0.3	B	8.9	PASS
Alexander	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Avery	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Buncombe	0	0	0	0.0	A	8.6	PASS
Caldwell	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carteret	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Caswell	0	0	0	0.0	A	8.3	PASS
Catawba	0	0	0	0.0	A	9.5	PASS
Chatham	0	0	0	0.0	A	7.6	PASS
Cumberland	0	0	0	0.0	A	9.1	PASS
Davidson	0	0	0	0.0	A	10.1	PASS
Davie	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Duplin	1	0	0	0.3	B	8.1	PASS
Durham	0	0	0	0.0	A	8.4	PASS
Edgecombe	0	0	0	0.0	A	8.3	PASS
Forsyth	0	0	0	0.0	A	8.9	PASS
Franklin	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Gaston	0	0	0	0.0	A	9.4	PASS
Graham	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Granville	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Guilford	0	0	0	0.0	A	8.7	PASS
Haywood	0	0	0	0.0	A	9.1	PASS
Jackson	0	0	0	0.0	A	8.3	PASS
Johnston	1	0	0	0.3	B	8.1	PASS
Lenoir	1	1	0	0.8	B	8.3	PASS

(continued)

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Lincoln	10	0	0	3.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Macon	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Martin	1	0	0	0.3	B	0	0	0	0.0	A	7.7	PASS
McDowell	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.0	PASS
Mecklenburg	26	0	0	8.7	F	0	0	0	0.0	A	9.8	PASS
Mitchell	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.5	PASS
Montgomery	1	0	0	0.3	B	0	0	0	0.0	A	8.5	PASS
New Hanover	1	0	0	0.3	B	1	0	0	0.3	B	7.3	PASS
Person	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pitt	3	1	0	1.5	C	0	0	0	0.0	A	7.8	PASS
Robeson	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.9	PASS
Rockingham	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rowan	20	1	0	7.2	F	0	0	0	0.0	A	9.4	PASS
Swain	0	0	0	0.0	A	0	0	0	0.0	A	8.8	PASS
Union	4	1	0	1.8	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wake	10	0	0	3.3	F	0	1	0	0.5	B	10.1	PASS
Watauga	DNC	DNC	DNC	DNC	DNC	0	1	0	0.5	B	7.6	PASS
Wayne	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.0	PASS
Yancey	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in North Dakota

www.lung.org/northdakota

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Billings	874	149	152	10	60	37	66	70	71
Burke	2,306	537	414	35	145	94	170	178	218
Burleigh	88,457	20,032	12,523	1,303	5,705	3,234	5,476	5,980	7,088
Cass	162,829	35,684	17,108	2,322	10,827	5,213	8,087	9,368	20,724
Dunn	4,162	927	598	60	267	160	273	300	394
McKenzie	9,314	2,612	918	170	563	296	469	546	913
Mercer	8,592	1,883	1,463	123	545	362	644	689	601
Oliver	1,874	432	324	28	117	80	143	153	194
Williams	29,595	7,298	3,025	475	1,881	962	1,510	1,759	2,271
Totals	**308,003**	**69,554**	**36,525**	**4,525**	**20,109**	**10,439**	**16,838**	**19,042**	**32,474**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Billings	0	0	0	0.0	A
Burke	0	0	0	0.0	A
Burleigh	0	0	0	0.0	A
Cass	0	0	0	0.0	A
Dunn	0	0	0	0.0	A
McKenzie	0	0	0	0.0	A
Mercer	0	0	0	0.0	A
Oliver	0	0	0	0.0	A
Williams	INC	INC	INC	INC	INC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Billings	0	0	0	0.0	A	4.4	PASS
Burke	0	0	0	0.0	A	6.8	PASS
Burleigh	0	0	0	0.0	A	6.2	PASS
Cass	0	0	0	0.0	A	7.0	PASS
Dunn	0	0	0	0.0	A	INC	INC
McKenzie	0	0	0	0.0	A	6.5	PASS
Mercer	0	0	0	0.0	A	5.9	PASS
Oliver	0	0	0	0.0	A	INC	INC
Williams	INC	INC	INC	INC	INC	INC	INC

American Lung Association in Ohio

www.lung.org/ohio

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Allen	105,298	24,683	16,432	2,401	7,826	6,732	8,290	8,389	15,963
Ashtabula	99,811	22,692	16,831	2,207	7,448	6,688	8,402	8,449	18,129
Athens	64,681	9,844	7,103	957	5,457	3,792	4,079	4,324	17,112
Butler	371,272	90,516	47,573	8,804	27,488	22,452	26,395	27,170	47,855
Clark	136,167	31,354	23,848	3,050	10,108	9,095	11,537	11,557	24,381
Clermont	200,218	49,129	26,918	4,778	14,731	12,534	14,985	15,346	19,151
Clinton	41,945	10,154	6,218	988	3,089	2,665	3,255	3,306	7,047
Cuyahoga	1,263,154	274,640	204,413	26,713	95,840	83,463	103,263	104,358	237,268
Delaware	184,979	51,699	20,443	5,028	13,077	10,680	12,321	12,785	10,290
Fayette	28,800	6,867	4,668	668	2,123	1,869	2,331	2,349	5,020
Franklin	1,212,263	287,437	128,685	27,957	91,415	69,018	76,879	80,654	210,322
Geauga	93,972	23,033	16,408	2,240	6,812	6,423	8,213	8,217	6,944
Greene	163,204	34,089	24,628	3,316	12,583	10,528	12,732	12,966	19,773
Hamilton	804,520	187,530	111,965	18,240	60,236	50,042	59,823	61,195	146,764
Jefferson	67,964	13,310	13,035	1,295	5,254	4,833	6,210	6,194	12,079
Knox	60,810	14,147	9,700	1,376	4,526	3,912	4,841	4,890	8,307
Lake	229,857	48,953	40,131	4,761	17,450	15,802	19,942	20,024	21,402
Lawrence	61,917	14,034	10,370	1,365	4,631	4,092	5,123	5,156	12,594
Licking	168,375	40,190	24,879	3,909	12,459	10,744	13,097	13,312	18,467
Lorain	302,827	69,736	48,014	6,783	22,585	19,858	24,577	24,845	42,733
Lucas	436,393	101,142	62,084	9,837	32,699	27,336	32,848	33,539	92,013
Madison	43,277	9,246	5,925	899	3,326	2,763	3,275	3,362	4,671
Mahoning	233,869	48,409	43,915	4,708	17,838	16,334	20,945	20,905	40,786
Medina	174,915	41,952	26,088	4,080	12,898	11,360	13,919	14,131	11,524
Miami	103,439	24,092	17,529	2,343	7,662	6,854	8,631	8,669	10,330

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Montgomery	535,846	120,052	86,919	11,677	40,325	34,838	43,163	43,579	97,443
Noble	14,628	2,718	3,370	264	1,129	1,141	1,536	1,509	2,042
Portage	163,862	31,692	22,944	3,082	12,941	10,484	12,368	12,707	25,907
Preble	41,732	9,770	6,972	950	3,086	2,776	3,488	3,508	5,390
Scioto	78,153	17,301	12,764	1,683	5,902	5,094	6,316	6,374	18,263
Stark	375,432	83,018	64,778	8,075	28,238	25,229	31,786	31,920	56,543
Summit	541,824	118,531	85,661	11,529	41,069	35,709	43,965	44,518	78,879
Trumbull	206,442	43,754	38,853	4,256	15,635	14,408	18,521	18,472	37,805
Warren	219,169	57,580	27,376	5,600	15,793	13,214	15,600	16,048	15,483
Washington	61,310	12,349	11,489	1,201	4,712	4,299	5,499	5,493	9,667
Wood	129,264	26,813	17,309	2,608	10,055	7,942	9,275	9,558	15,799
Totals	**9,021,589**	**2,052,456**	**1,336,238**	**199,630**	**678,448**	**575,002**	**697,429**	**709,779**	**1,424,146**

American Lung Association in Ohio

www.lung.org/ohio

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Allen	15	0	0	5.0	F
Ashtabula	9	1	0	3.5	F
Athens	INC	INC	INC	INC	INC
Butler	30	1	0	10.5	F
Clark	12	0	0	4.0	F
Clermont	20	3	0	8.2	F
Clinton	21	1	0	7.5	F
Cuyahoga	29	1	0	10.2	F
Delaware	5	1	0	2.2	D
Fayette	6	1	0	2.5	D
Franklin	20	1	0	7.2	F
Geauga	9	2	0	4.0	F
Greene	12	0	0	4.0	F
Hamilton	32	3	0	12.2	F
Jefferson	7	0	0	2.3	D
Knox	4	1	0	1.8	C
Lake	31	1	0	10.8	F
Lawrence	4	0	0	1.3	C
Licking	9	1	0	3.5	F
Lorain	9	0	0	3.0	D
Lucas	17	0	0	5.7	F
Madison	12	0	0	4.0	F
Mahoning	6	0	0	2.0	C
Medina	2	0	0	0.7	B
Miami	6	1	0	2.5	D
Montgomery	16	0	0	5.3	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Allen	0	0	0	0.0	A	INC	INC
Ashtabula	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Athens	0	0	0	0.0	A	8.5	PASS
Butler	0	0	0	0.0	A	13.6	FAIL
Clark	0	0	0	0.0	A	10.9	PASS
Clermont	INC	INC	INC	INC	INC	INC	INC
Clinton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cuyahoga	8	0	0	2.7	D	12.5	FAIL
Delaware	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fayette	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Franklin	0	0	0	0.0	A	10.9	PASS
Geauga	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greene	0	0	0	0.0	A	10.2	PASS
Hamilton	0	0	0	0.0	A	12.3	FAIL
Jefferson	2	0	0	0.7	B	11.6	PASS
Knox	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lake	0	0	0	0.0	A	9.0	PASS
Lawrence	0	0	0	0.0	A	10.3	PASS
Licking	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lorain	0	0	0	0.0	A	9.2	PASS
Lucas	0	0	0	0.0	A	10.3	PASS
Madison	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mahoning	1	0	0	0.3	B	10.7	PASS
Medina	0	0	0	0.0	A	INC	INC
Miami	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montgomery	0	0	0	0.0	A	11.0	PASS

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Noble	0	0	0	0.0	A
Portage	2	0	0	0.7	B
Preble	8	0	0	2.7	D
Scioto	DNC	DNC	DNC	DNC	DNC
Stark	12	1	0	4.5	F
Summit	7	0	0	2.3	D
Trumbull	12	1	0	4.5	F
Warren	15	0	0	5.0	F
Washington	4	0	0	1.3	C
Wood	8	0	0	2.7	D

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Noble	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Portage	0	0	0	0.0	A	9.5	PASS
Preble	0	0	0	0.0	A	10.0	PASS
Scioto	0	0	0	0.0	A	9.6	PASS
Stark	1	0	0	0.3	B	12.1	FAIL
Summit	0	0	0	0.0	A	11.0	PASS
Trumbull	0	0	0	0.0	A	9.9	PASS
Warren	INC	INC	INC	INC	INC	INC	INC
Washington	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wood	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Oklahoma

www.lung.org/oklahoma

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Adair	22,194	5,952	3,151	657	1,467	1,300	1,712	1,835	6,695
Bryan	44,244	10,325	7,441	1,140	3,044	2,701	3,660	3,845	8,274
Caddo	29,594	7,546	4,507	833	1,988	1,770	2,357	2,507	5,815
Canadian	126,123	33,546	14,879	3,704	8,334	6,967	8,853	9,711	9,039
Carter	48,491	12,275	7,439	1,355	3,268	2,923	3,897	4,143	8,264
Cherokee	48,017	11,305	7,065	1,248	3,289	2,802	3,697	3,951	10,173
Cleveland	269,340	60,751	30,875	6,708	18,641	14,775	18,509	20,459	32,700
Comanche	124,937	30,673	13,448	3,387	8,416	6,591	8,200	9,104	23,094
Cotton	6,152	1,437	1,096	159	427	402	548	575	981
Creek	70,470	17,074	11,624	1,885	4,835	4,452	5,995	6,336	10,311
Dewey	4,844	1,228	934	136	327	315	440	455	586
Jefferson	6,432	1,518	1,228	168	445	428	592	615	1,363
Kay	45,633	11,458	8,086	1,265	3,082	2,855	3,921	4,088	8,722
Love	9,742	2,448	1,758	270	659	619	852	887	1,421
McClain	36,511	9,579	5,220	1,058	2,438	2,181	2,869	3,080	3,611
McCurtain	33,065	8,469	5,508	935	2,223	2,047	2,776	2,920	8,256
Mayes	40,804	10,045	6,803	1,109	2,782	2,562	3,463	3,650	8,036
Muskogee	70,303	17,317	10,951	1,912	4,775	4,251	5,677	6,027	13,253
Oklahoma	755,245	192,521	93,326	21,258	50,525	41,992	53,722	58,626	129,256
Osage	47,987	11,124	8,556	1,228	3,345	3,162	4,310	4,522	6,476
Ottawa	32,245	7,970	5,698	880	2,184	1,997	2,742	2,857	7,036
Pittsburg	44,703	9,977	7,876	1,102	3,135	2,881	3,919	4,112	7,662
Pottawatomie	71,158	17,395	10,933	1,921	4,839	4,269	5,686	6,046	12,878
Sequoyah	41,218	10,005	6,805	1,105	2,822	2,583	3,482	3,677	10,179
Tulsa	622,409	158,584	79,490	17,511	41,724	35,246	45,356	49,327	95,783
Totals	**2,651,861**	**660,522**	**354,697**	**72,936**	**179,018**	**152,069**	**197,237**	**213,353**	**429,864**

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Adair	11	0	0	3.7	F	0	0	0	0.0	A	INC	INC
Bryan	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Caddo	15	0	0	5.0	F	INC	INC	INC	INC	INC	INC	INC
Canadian	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carter	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cherokee	10	0	0	3.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cleveland	22	0	0	7.3	F	INC	INC	INC	INC	INC	INC	INC
Comanche	12	0	0	4.0	F	INC	INC	INC	INC	INC	INC	INC
Cotton	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Creek	26	0	0	8.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dewey	11	0	0	3.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kay	22	0	0	7.3	F	INC	INC	INC	INC	INC	INC	INC
Love	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Mayes	23	0	0	7.7	F	INC	INC	INC	INC	INC	INC	INC
McClain	17	0	0	5.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
McCurtain	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Muskogee	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Oklahoma	47	0	0	15.7	F	0	0	0	0.0	A	9.7	PASS
Osage	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ottawa	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pittsburg	11	0	0	3.7	F	4	0	0	1.3	C	10.3	PASS
Pottawatomie	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sequoyah	9	0	0	3.0	D	0	0	0	0.0	A	10.5	PASS
Tulsa	52	2	0	18.3	F	0	0	0	0.0	A	10.1	PASS

American Lung Association in Oregon

www.lung.org/oregon

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Clackamas	388,263	87,318	60,527	7,310	33,998	20,164	27,554	28,870	37,313
Columbia	49,344	11,198	8,109	937	4,292	2,608	3,603	3,764	5,766
Crook	20,815	4,053	4,918	339	1,855	1,248	1,858	1,835	3,597
Deschutes	165,954	36,256	28,945	3,035	14,623	8,819	12,353	12,613	25,103
Harney	7,146	1,465	1,545	123	632	414	605	605	1,268
Jackson	208,545	44,294	40,575	3,708	18,440	11,439	16,408	16,434	38,475
Josephine	83,306	16,420	20,239	1,375	7,403	4,992	7,497	7,321	15,955
Klamath	65,910	14,251	12,333	1,193	5,805	3,575	5,085	5,136	11,811
Lake	7,820	1,407	1,774	118	712	470	690	691	1,543
Lane	356,212	68,159	59,766	5,706	32,743	18,846	26,051	26,422	73,471
Linn	118,765	27,907	19,929	2,336	10,268	6,112	8,536	8,689	22,370
Marion	323,614	82,894	45,050	6,940	27,498	15,319	20,707	21,274	58,836
Multnomah	766,135	152,725	88,674	12,785	70,898	36,499	46,807	49,315	137,021
Umatilla	76,720	19,925	10,504	1,668	6,484	3,621	4,879	5,042	12,416
Washington	554,996	136,795	63,438	11,452	48,118	25,475	32,946	34,923	59,829
Totals	**3,193,545**	**705,067**	**466,326**	**59,025**	**283,769**	**159,600**	**215,579**	**222,936**	**504,774**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Clackamas	0	0	0	0.0	A
Columbia	0	0	0	0.0	A
Crook	DNC	DNC	DNC	DNC	DNC
Deschutes	0	0	0	0.0	A
Harney	DNC	DNC	DNC	DNC	DNC
Jackson	0	0	0	0.0	A
Josephine	DNC	DNC	DNC	DNC	DNC
Klamath	DNC	DNC	DNC	DNC	DNC
Lake	DNC	DNC	DNC	DNC	DNC
Lane	0	0	0	0.0	A
Linn	DNC	DNC	DNC	DNC	DNC
Marion	0	0	0	0.0	A
Multnomah	1	0	0	0.3	B
Umatilla	0	0	0	0.0	A
Washington	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Clackamas	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Columbia	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Crook	7	1	0	2.8	D	9.8	PASS
Deschutes	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Harney	8	0	0	2.7	D	9.5	PASS
Jackson	7	2	1	4.0	F	10.9	PASS
Josephine	1	1	0	0.8	B	8.8	PASS
Klamath	13	2	0	5.3	F	11.6	PASS
Lake	13	10	0	9.3	F	11.1	PASS
Lane	15	0	0	5.0	F	9.1	PASS
Linn	INC	INC	INC	INC	INC	INC	INC
Marion	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Multnomah	6	0	0	2.0	C	8.1	PASS
Umatilla	1	0	0	0.3	B	7.6	PASS
Washington	9	0	0	3.0	D	8.2	PASS

American Lung Association in Pennsylvania

www.lung.org/pennsylvania

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Adams	101,546	21,364	17,927	2,181	7,633	5,903	8,324	8,414	9,289
Allegheny	1,231,527	235,864	210,970	24,074	95,161	70,847	98,751	99,933	161,788
Armstrong	68,107	13,427	13,424	1,370	5,168	4,188	6,026	6,036	9,890
Beaver	170,115	33,667	32,905	3,436	12,916	10,350	14,837	14,878	18,948
Berks	413,521	95,034	64,334	9,700	30,533	22,527	31,078	31,732	56,294
Blair	126,314	25,974	23,918	2,651	9,508	7,457	10,666	10,652	19,894
Bradford	62,316	13,884	11,843	1,417	4,579	3,695	5,313	5,320	8,292
Bucks	626,976	136,493	101,543	13,931	46,932	36,014	49,962	51,344	39,831
Cambria	140,499	26,993	27,742	2,755	10,734	8,555	12,302	12,269	21,465
Centre	155,403	24,011	19,086	2,451	12,834	7,814	9,992	10,350	25,320
Chester	509,468	120,944	72,260	12,344	37,431	27,305	37,033	38,419	34,633
Clearfield	81,174	15,469	15,113	1,579	6,243	4,858	6,894	6,931	12,497
Cumberland	241,212	48,969	40,159	4,998	18,392	13,607	18,908	19,163	19,611
Dauphin	270,937	61,162	40,275	6,243	20,174	14,711	20,079	20,675	36,617
Delaware	561,973	127,010	83,515	12,963	41,833	30,268	41,306	42,428	58,964
Elk	31,479	6,303	6,294	643	2,376	1,958	2,828	2,835	3,044
Erie	280,294	61,320	43,064	6,259	21,030	15,275	20,951	21,424	47,894
Franklin	152,085	35,277	27,076	3,601	11,093	8,560	12,170	12,177	17,633
Greene	37,838	7,312	6,283	746	2,923	2,172	3,009	3,066	5,657
Indiana	87,745	16,195	14,740	1,653	6,853	4,964	6,876	6,945	12,129
Lackawanna	213,931	42,869	39,543	4,375	16,249	12,520	17,788	17,803	30,418
Lancaster	529,600	128,486	85,085	13,114	38,335	28,477	39,703	40,138	54,181
Lawrence	89,333	18,376	17,511	1,876	6,705	5,391	7,768	7,750	12,056
Lebanon	135,486	30,953	24,472	3,159	9,919	7,709	10,984	10,988	14,738
Lehigh	355,092	80,897	55,785	8,257	26,276	19,340	26,721	27,214	49,242

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Luzerne	320,103	63,103	59,879	6,441	24,396	18,930	26,941	26,971	49,721
Lycoming	116,754	23,821	20,140	2,431	8,868	6,690	9,371	9,470	15,605
Mercer	115,195	23,608	22,446	2,410	8,660	6,896	9,923	9,887	15,308
Monroe	167,148	36,247	24,292	3,700	12,611	9,330	12,654	13,190	19,512
Montgomery	812,376	180,599	130,741	18,433	60,468	45,308	62,837	64,098	54,020
Northampton	299,791	62,361	50,896	6,365	22,672	17,132	23,940	24,274	29,237
Perry	45,562	10,116	6,963	1,032	3,403	2,564	3,518	3,639	4,572
Philadelphia	1,553,165	344,564	192,737	35,168	117,491	76,450	100,061	103,719	390,541
Somerset	76,520	14,196	15,233	1,449	5,894	4,728	6,798	6,794	9,095
Tioga	42,463	8,479	8,157	865	3,219	2,525	3,618	3,607	5,345
Washington	208,206	41,504	38,563	4,236	15,830	12,468	17,712	17,853	22,123
Westmoreland	362,437	68,859	72,975	7,028	27,722	22,585	32,586	32,591	38,016
York	438,965	99,254	68,086	10,130	32,581	24,215	33,356	34,202	46,480
Totals	**11,232,656**	**2,404,964**	**1,805,975**	**245,464**	**845,644**	**624,283**	**863,582**	**879,182**	**1,479,900**

American Lung Association in Pennsylvania

www.lung.org/pennsylvania

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Adams	3	0	0	1.0	C
Allegheny	36	1	0	12.5	F
Armstrong	10	0	0	3.3	F
Beaver	9	0	0	3.0	D
Berks	9	0	0	3.0	D
Blair	10	0	0	3.3	F
Bradford	INC	INC	INC	INC	INC
Bucks	22	0	0	7.3	F
Cambria	5	0	0	1.7	C
Centre	8	0	0	2.7	D
Chester	20	0	0	6.7	F
Clearfield	2	0	0	0.7	B
Cumberland	DNC	DNC	DNC	DNC	DNC
Dauphin	9	0	0	3.0	D
Delaware	19	0	0	6.3	F
Elk	2	0	0	0.7	B
Erie	11	1	0	4.2	F
Franklin	0	0	0	0.0	A
Greene	5	0	0	1.7	C
Indiana	18	0	0	6.0	F
Lackawanna	2	0	0	0.7	B
Lancaster	21	1	0	7.5	F
Lawrence	7	0	0	2.3	D
Lebanon	14	0	0	4.7	F
Lehigh	9	0	0	3.0	D
Luzerne	1	0	0	0.3	B

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Adams	3	0	0	1.0	C	11.2	PASS
Allegheny	27	2	0	10.0	F	13.4	FAIL
Armstrong	1	0	0	0.3	B	10.8	PASS
Beaver	2	0	0	0.7	B	11.6	PASS
Berks	13	0	0	4.3	F	11.0	PASS
Blair	5	0	0	1.7	C	11.9	PASS
Bradford	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bucks	13	1	0	4.8	F	10.8	PASS
Cambria	3	0	0	1.0	C	12.3	FAIL
Centre	8	0	0	2.7	D	9.3	PASS
Chester	5	0	0	1.7	C	11.1	PASS
Clearfield	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cumberland	16	0	0	5.3	F	11.0	PASS
Dauphin	12	0	0	4.0	F	11.9	PASS
Delaware	6	0	0	2.0	C	12.4	FAIL
Elk	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Erie	1	0	0	0.3	B	11.6	PASS
Franklin	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greene	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Indiana	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lackawanna	1	0	0	0.3	B	9.0	PASS
Lancaster	15	0	0	5.0	F	12.0	PASS
Lawrence	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lebanon	11	0	0	3.7	F	12.3	FAIL
Lehigh	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Luzerne	DNC	DNC	DNC	DNC	DNC	DNC	DNC

(continued)

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Lycoming	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mercer	17	1	0	6.2	F	1	0	0	0.3	B	10.3	PASS
Monroe	0	0	0	0.0	A	0	0	0	0.0	A	7.9	PASS
Montgomery	8	0	0	2.7	D	7	0	0	2.3	D	9.8	PASS
Northampton	6	0	0	2.0	C	16	2	0	6.3	F	12.2	FAIL
Perry	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Philadelphia	32	0	0	10.7	F	6	0	0	2.0	C	11.1	PASS
Somerset	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tioga	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washington	8	0	0	2.7	D	1	0	0	0.3	B	11.0	PASS
Westmoreland	9	0	0	3.0	D	5	0	0	1.7	C	11.1	PASS
York	14	0	0	4.7	F	10	0	0	3.3	F	11.3	PASS

American Lung Association in Rhode Island

www.lung.org/rhodeisland

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Kent	165,035	32,308	28,218	3,796	15,898	10,102	12,201	13,011	13,270
Providence	628,600	133,129	88,312	15,640	59,352	35,622	40,340	43,455	111,626
Washington	126,259	23,303	21,732	2,738	12,324	7,805	9,384	9,998	11,554
Totals	**919,894**	**188,740**	**138,262**	**22,174**	**87,575**	**53,530**	**61,924**	**66,464**	**136,450**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Kent	8	0	0	2.7	D
Providence	16	0	0	5.3	F
Washington	13	1	0	4.8	F

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Kent	0	0	0	0.0	A	6.0	PASS
Providence	1	0	0	0.3	B	8.0	PASS
Washington	INC	INC	INC	INC	INC	INC	INC

American Lung Association in South Carolina

www.lung.org/southcarolina

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Abbeville	25,007	5,458	4,668	480	1,664	1,685	2,250	2,684	4,918
Aiken	164,176	36,539	27,787	3,213	10,818	10,677	13,975	16,790	29,553
Anderson	190,641	44,633	31,747	3,924	12,376	12,183	15,941	19,147	31,258
Berkeley	194,020	47,532	22,793	4,179	12,271	11,099	13,536	16,669	29,750
Charleston	372,803	75,783	52,533	6,663	25,015	22,891	28,625	34,831	63,040
Cherokee	55,885	13,434	8,287	1,181	3,582	3,442	4,402	5,334	13,348
Chesterfield	46,197	10,711	7,171	942	2,995	2,947	3,798	4,600	12,067
Colleton	37,788	8,750	6,764	769	2,467	2,502	3,323	3,977	8,956
Darlington	67,935	15,755	10,883	1,385	4,411	4,354	5,648	6,819	18,755
Edgefield	26,436	5,106	4,041	449	1,795	1,744	2,218	2,700	4,630
Florence	138,326	33,585	19,989	2,953	8,832	8,415	10,708	12,993	27,126
Greenville	474,266	112,297	65,997	9,874	30,484	28,546	35,964	43,754	74,913
Horry	289,650	56,775	56,635	4,992	19,859	19,890	26,671	31,693	54,572
Lexington	273,752	65,110	37,491	5,725	17,539	16,680	20,975	25,611	34,587
Oconee	75,045	15,452	15,728	1,359	5,101	5,251	7,170	8,471	12,484
Pickens	119,829	23,667	17,833	2,081	8,122	7,387	9,323	11,274	21,060
Richland	399,256	88,207	43,224	7,756	26,018	22,367	26,587	32,903	68,491
Spartanburg	290,969	69,324	42,632	6,095	18,694	17,847	22,748	27,586	52,982
York	239,363	59,743	30,355	5,253	15,064	14,167	17,596	21,594	29,799
Totals	**3,481,344**	**787,861**	**506,558**	**69,272**	**227,106**	**214,074**	**271,459**	**329,433**	**592,289**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Abbeville	1	0	0	0.3	B
Aiken	0	0	0	0.0	A
Anderson	6	0	0	2.0	C
Berkeley	0	0	0	0.0	A
Charleston	0	0	0	0.0	A
Cherokee	4	0	0	1.3	C
Chesterfield	1	0	0	0.3	B
Colleton	0	0	0	0.0	A
Darlington	3	0	0	1.0	C
Edgefield	0	0	0	0.0	A
Florence	DNC	DNC	DNC	DNC	DNC
Greenville	2	0	0	0.7	B
Horry	INC	INC	INC	INC	INC
Lexington	DNC	DNC	DNC	DNC	DNC
Oconee	0	0	0	0.0	A
Pickens	2	0	0	0.7	B
Richland	10	0	0	3.3	F
Spartanburg	7	0	0	2.3	D
York	1	0	0	0.3	B

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Abbeville	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Aiken	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Anderson	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Berkeley	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Charleston	5	0	0	1.7	C	8.9	PASS
Cherokee	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Chesterfield	0	0	0	0.0	A	8.4	PASS
Colleton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Darlington	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Edgefield	1	0	0	0.3	B	9.3	PASS
Florence	0	0	0	0.0	A	9.6	PASS
Greenville	2	0	0	0.7	B	10.0	PASS
Horry	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lexington	1	0	0	0.3	B	10.3	PASS
Oconee	INC	INC	INC	INC	INC	INC	INC
Pickens	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Richland	0	0	0	0.0	A	10.1	PASS
Spartanburg	0	0	0	0.0	A	9.9	PASS
York	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in South Dakota

www.lung.org/southdakota

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Brookings	32,968	6,422	3,397	565	2,092	939	1,869	1,838	4,018
Brown	37,907	8,873	6,019	780	2,301	1,319	2,892	2,665	3,870
Codington	27,853	6,785	4,268	597	1,671	953	2,085	1,931	2,774
Custer	8,468	1,481	2,012	130	557	388	900	798	884
Jackson	3,216	1,072	428	94	170	96	211	196	959
Meade	27,202	6,541	3,508	575	1,639	875	1,868	1,783	2,799
Minnehaha	179,640	44,835	21,305	3,942	10,684	5,500	11,586	11,157	19,185
Pennington	105,761	25,435	15,787	2,236	6,368	3,581	7,796	7,252	15,880
Union	14,829	3,788	2,233	333	877	510	1,121	1,044	1,036
Totals	**437,844**	**105,232**	**58,957**	**9,252**	**26,360**	**14,161**	**30,328**	**28,661**	**51,405**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Brookings	0	0	0	0.0	A
Brown	DNC	DNC	DNC	DNC	DNC
Codington	DNC	DNC	DNC	DNC	DNC
Custer	0	0	0	0.0	A
Jackson	0	0	0	0.0	A
Meade	0	0	0	0.0	A
Minnehaha	0	0	0	0.0	A
Pennington	DNC	DNC	DNC	DNC	DNC
Union	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Brookings	0	0	0	0.0	A	8.3	PASS
Brown	0	0	0	0.0	A	7.3	PASS
Codington	0	0	0	0.0	A	9.6	PASS
Custer	0	0	0	0.0	A	3.9	PASS
Jackson	0	0	0	0.0	A	4.3	PASS
Meade	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Minnehaha	0	0	0	0.0	A	8.7	PASS
Pennington	0	0	0	0.0	A	6.2	PASS
Union	1	0	0	0.3	B	9.4	PASS

American Lung Association in Tennessee

www.lung.org/tennessee

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Anderson	75,542	15,910	13,983	1,341	4,302	6,034	8,419	7,903	14,660
Blount	125,099	26,711	22,345	2,251	7,081	9,859	13,671	12,883	18,339
Claiborne	31,560	6,185	5,661	521	1,817	2,513	3,472	3,277	6,909
Davidson	658,602	142,430	71,622	12,003	35,376	43,938	55,647	55,377	112,795
DeKalb	19,164	4,340	3,245	366	1,066	1,475	2,031	1,923	4,120
Dyer	38,213	9,273	6,121	781	2,066	2,824	3,864	3,671	7,032
Hamilton	348,673	74,113	54,503	6,246	19,425	26,100	35,283	33,746	57,280
Jefferson	52,123	11,004	9,573	927	2,949	4,114	5,732	5,380	8,261
Knox	444,622	95,693	62,695	8,065	24,407	31,991	42,445	41,045	70,442
Lawrence	41,990	10,419	7,264	878	2,258	3,137	4,361	4,098	7,411
Loudon	50,448	10,162	12,053	856	2,916	4,303	6,304	5,723	7,063
McMinn	52,341	11,378	9,633	959	2,945	4,123	5,756	5,397	8,641
Madison	98,733	22,901	14,183	1,930	5,356	7,120	9,521	9,173	19,927
Maury	83,761	19,900	12,148	1,677	4,558	6,123	8,217	7,912	11,424
Meigs	11,649	2,376	2,211	200	674	952	1,333	1,250	2,260
Montgomery	184,119	50,166	15,579	4,228	8,987	10,709	13,131	13,306	26,754
Putnam	73,525	15,735	11,649	1,326	4,010	5,321	7,207	6,858	18,930
Roane	53,047	10,598	10,947	893	3,107	4,480	6,363	5,913	9,483
Rutherford	281,029	71,207	26,121	6,001	14,368	17,596	21,907	22,064	33,766
Sevier	93,570	20,037	16,046	1,689	5,286	7,301	10,049	9,518	15,280
Shelby	939,465	241,026	105,224	20,313	48,971	62,719	80,785	79,812	199,215
Sullivan	156,595	31,376	31,364	2,644	9,040	12,843	18,149	16,887	27,819
Sumner	168,888	41,301	24,065	3,481	9,106	12,217	16,371	15,780	18,386
Williamson	198,901	56,330	22,194	4,747	10,327	13,641	17,735	17,513	10,919
Wilson	121,945	29,700	17,144	2,503	6,626	8,914	11,920	11,520	13,020
Totals	**4,403,604**	**1,030,271**	**587,573**	**86,827**	**237,025**	**310,345**	**409,673**	**397,928**	**730,136**

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Anderson	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Blount	15	0	0	5.0	F	INC	INC	INC	INC	INC	INC	INC
Claiborne	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Davidson	10	0	0	3.3	F	INC	INC	INC	INC	INC	INC	INC
DeKalb	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dyer	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Hamilton	10	0	0	3.3	F	0	0	0	0.0	A	10.1	PASS
Jefferson	6	2	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Knox	6	1	1	3.2	D	INC	INC	INC	INC	INC	INC	INC
Lawrence	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Loudon	5	1	0	2.2	D	INC	INC	INC	INC	INC	INC	INC
Madison	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Maury	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
McMinn	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Meigs	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montgomery	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Putnam	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC
Roane	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	INC	INC
Rutherford	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sevier	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Shelby	31	0	1	11.0	F	INC	INC	INC	INC	INC	INC	INC
Sullivan	6	1	0	2.5	D	INC	INC	INC	INC	INC	INC	INC
Sumner	28	1	0	9.8	F	INC	INC	INC	INC	INC	INC	INC
Williamson	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wilson	6	1	0	2.5	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Texas

www.lung.org/texas

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Bell	326,843	90,801	31,106	8,227	17,137	11,967	16,208	23,240	48,151
Bexar	1,817,610	478,797	200,186	43,381	97,531	71,163	99,964	142,004	309,381
Bowie	93,487	22,466	14,070	2,035	5,218	4,084	6,171	8,463	18,647
Brazoria	330,242	89,151	34,928	8,077	17,556	13,048	18,313	26,364	37,646
Brewster	9,286	1,871	1,681	170	548	447	700	944	1,373
Cameron	417,276	133,593	50,090	12,104	20,759	15,507	22,650	31,306	133,497
Collin	854,778	235,649	79,420	21,351	44,958	32,871	44,949	65,868	67,525
Dallas	2,480,331	671,624	234,557	60,851	131,322	94,013	127,961	185,750	477,557
Denton	728,799	193,127	60,255	17,498	38,783	27,427	36,309	53,875	64,055
Ellis	155,976	42,874	17,861	3,885	8,256	6,279	9,007	12,849	20,161
El Paso	827,718	238,826	90,470	21,638	42,926	31,296	44,183	62,384	183,877
Galveston	306,782	75,985	38,011	6,884	16,868	13,007	18,870	26,819	42,814
Gillespie	25,357	4,964	7,098	450	1,537	1,405	2,467	3,116	3,254
Gregg	123,024	31,638	17,145	2,867	6,702	5,159	7,680	10,597	20,233
Harris	4,336,853	1,187,625	388,443	107,603	228,402	162,296	218,480	319,335	788,276
Harrison	66,886	16,896	9,713	1,531	3,671	2,888	4,350	6,005	12,103
Hays	176,026	42,265	16,931	3,829	9,704	6,785	9,127	13,198	24,040
Hidalgo	815,996	277,643	82,000	25,155	39,222	28,043	39,317	55,188	274,209
Hood	52,905	10,927	12,484	990	3,137	2,755	4,637	6,017	7,335
Hunt	87,048	21,027	13,219	1,905	4,854	3,864	5,870	8,086	15,181
Jefferson	252,358	59,703	33,262	5,409	14,095	10,747	15,697	21,988	53,567
Johnson	154,707	41,009	19,976	3,716	8,324	6,441	9,471	13,292	19,521
Kaufman	108,568	30,274	12,504	2,743	5,716	4,346	6,247	8,889	12,510
McLennan	241,481	59,957	31,707	5,432	13,280	9,949	14,508	20,126	48,466
Montgomery	499,137	134,673	58,518	12,202	26,616	20,330	29,286	41,699	58,358

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Navarro	48,038	12,772	7,456	1,157	2,597	2,080	3,200	4,361	10,990
Nueces	352,107	89,375	45,044	8,098	19,216	14,592	21,264	29,783	62,942
Orange	82,957	20,378	12,314	1,846	4,598	3,648	5,517	7,620	12,364
Parker	121,418	29,624	17,283	2,684	6,737	5,368	8,051	11,252	13,886
Polk	45,790	9,476	9,111	859	2,693	2,262	3,640	4,849	7,550
Randall	126,474	31,062	16,784	2,814	6,983	5,309	7,779	10,839	13,602
Rockwall	85,245	24,200	9,537	2,193	4,455	3,395	4,863	6,958	5,558
Smith	216,080	54,210	32,873	4,912	11,902	9,303	14,129	19,250	35,564
Tarrant	1,911,541	522,683	189,414	47,357	100,974	73,732	101,859	147,464	286,019
Travis	1,120,954	261,205	91,305	23,666	62,152	42,454	54,991	81,462	174,374
Victoria	90,028	23,457	12,793	2,125	4,887	3,808	5,711	7,874	14,005
Webb	262,495	90,244	21,951	8,176	12,497	8,717	11,730	16,923	79,270
Totals	**19,752,601**	**5,362,051**	**2,021,500**	**485,819**	**1,046,814**	**760,786**	**1,055,158**	**1,516,038**	**3,457,861**

American Lung Association in Texas

www.lung.org/texas

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Bell	7	0	0	2.3	D
Bexar	28	0	0	9.3	F
Bowie	DNC	DNC	DNC	DNC	DNC
Brazoria	36	3	1	14.2	F
Brewster	7	0	0	2.3	D
Cameron	0	0	0	0.0	A
Collin	46	0	0	15.3	F
Dallas	43	5	0	16.8	F
Denton	62	2	0	21.7	F
El Paso	6	0	0	2.0	C
Ellis	15	1	0	5.5	F
Galveston	9	1	0	3.5	F
Gillespie	INC	INC	INC	INC	INC
Gregg	19	0	0	6.3	F
Harris	60	8	1	24.7	F
Harrison	8	0	0	2.7	D
Hays	INC	INC	INC	INC	INC
Hidalgo	0	0	0	0.0	A
Hood	15	0	0	5.0	F
Hunt	9	0	0	3.0	D
Jefferson	20	3	0	8.2	F
Johnson	21	1	0	7.5	F
Kaufman	7	0	0	2.3	D
McLennan	8	0	0	2.7	D
Montgomery	17	0	0	5.7	F
Navarro	6	0	0	2.0	C

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Bell	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bexar	0	0	0	0.0	A	8.9	PASS
Bowie	0	0	0	0.0	A	10.6	PASS
Brazoria	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Brewster	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cameron	0	0	0	0.0	A	INC	INC
Collin	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dallas	1	0	0	0.3	B	10.8	PASS
Denton	DNC	DNC	DNC	DNC	DNC	DNC	DNC
El Paso	11	5	0	6.2	F	11.6	PASS
Ellis	0	0	0	0.0	A	9.7	PASS
Galveston	INC	INC	INC	INC	INC	INC	INC
Gillespie	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Gregg	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Harris	0	0	0	0.0	A	11.8	PASS
Harrison	0	1	0	0.5	B	10.5	PASS
Hays	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hidalgo	0	0	0	0.0	A	INC	INC
Hood	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hunt	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Johnson	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kaufman	DNC	DNC	DNC	DNC	DNC	DNC	DNC
McLennan	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montgomery	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Navarro	DNC	DNC	DNC	DNC	DNC	DNC	DNC

	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Nueces	6	0	0	2.0	C	3	0	0	1.0	C	10.2	PASS
Orange	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Parker	21	1	0	7.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Polk	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Randall	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rockwall	15	1	0	5.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Smith	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tarrant	58	7	0	22.8	F	2	0	0	0.7	B	10.6	PASS
Travis	8	0	0	2.7	D	0	0	0	0.0	A	9.6	PASS
Victoria	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Webb	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Utah

www.lung.org/utah

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Box Elder	50,794	16,703	6,121	1,025	3,113	1,494	2,470	2,766	5,227
Cache	116,909	36,460	9,753	2,237	7,169	2,905	4,439	5,033	16,042
Carbon	20,988	5,683	3,060	349	1,404	701	1,187	1,320	3,292
Daggett	1,127	266	226	16	79	44	78	85	80
Davis	322,094	108,247	28,953	6,640	19,379	8,536	13,277	15,174	26,190
Duchesne	20,308	6,956	2,187	427	1,211	557	905	1,016	2,091
Garfield	5,083	1,300	947	80	350	191	340	373	590
Salt Lake	1,079,721	308,137	101,015	18,902	69,914	30,586	47,220	54,135	134,970
San Juan	14,973	4,833	1,778	296	929	448	735	828	4,062
Tooele	60,762	21,219	4,978	1,302	3,591	1,572	2,404	2,772	5,505
Uintah	35,555	11,918	3,248	731	2,140	943	1,472	1,679	3,817
Utah	551,891	193,132	38,512	11,847	31,871	12,467	18,561	21,205	74,189
Washington	147,800	42,592	27,940	2,613	9,566	5,051	9,250	9,907	22,451
Weber	238,519	69,901	25,995	4,288	15,323	6,998	11,195	12,669	31,343
Totals	**2,666,524**	**827,347**	**254,713**	**50,751**	**166,040**	**72,493**	**113,532**	**128,964**	**329,849**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Box Elder	4	0	0	1.3	C
Cache	0	0	0	0.0	A
Carbon	1	0	0	0.3	B
Daggett	INC	INC	INC	INC	INC
Davis	3	0	0	1.0	C
Duchesne	34	13	4	20.5	F
Garfield	0	0	0	0.0	A
Salt Lake	22	0	0	7.3	F
San Juan	2	0	0	0.7	B
Tooele	3	0	0	1.0	C
Uintah	44	21	15	35.2	F
Utah	9	0	0	3.0	D
Washington	3	0	0	1.0	C
Weber	9	0	0	3.0	D

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Box Elder	5	3	0	3.2	D	8.2	PASS
Cache	31	18	0	19.3	F	9.8	PASS
Carbon	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Daggett	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Davis	10	1	0	3.8	F	8.5	PASS
Duchesne	INC	INC	INC	INC	INC	INC	INC
Garfield	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Salt Lake	44	12	0	20.7	F	9.9	PASS
San Juan	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tooele	3	0	0	1.0	C	6.4	PASS
Uintah	INC	INC	INC	INC	INC	INC	INC
Utah	26	15	0	16.2	F	9.1	PASS
Washington	0	0	0	0.0	A	INC	INC
Weber	28	7	0	12.8	F	9.8	PASS

American Lung Association in Vermont
www.lung.org/vermont

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Bennington	36,659	7,165	7,548	791	3,247	1,812	2,785	2,549	5,326
Chittenden	159,515	30,047	20,335	3,318	15,066	6,582	9,085	8,708	15,189
Rutland	60,622	11,175	11,330	1,234	5,491	2,938	4,407	4,094	7,894
Totals	**256,796**	**48,387**	**39,213**	**5,344**	**23,803**	**11,331**	**16,277**	**15,352**	**28,409**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Bennington	1	0	0	0.3	B
Chittenden	0	0	0	0.0	A
Rutland	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Bennington	0	0	0	0.0	A	6.7	PASS
Chittenden	1	0	0	0.3	B	6.9	PASS
Rutland	2	0	0	0.7	B	9.1	PASS

American Lung Association in Virginia
www.lung.org/virginia

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Albemarle	103,000	21,775	16,466	1,915	7,043	5,551	6,965	8,280	9,223
Arlington	224,906	37,510	20,430	3,298	16,228	10,289	11,422	14,519	18,767
Caroline	29,298	6,854	4,284	603	1,958	1,535	1,908	2,299	4,151
Charles City	7,130	1,171	1,428	103	523	457	594	702	865
Chesterfield	327,745	81,024	40,154	7,124	21,659	16,309	19,729	24,342	25,704
Fairfax	1,130,924	271,342	125,169	23,858	75,482	54,827	65,002	81,205	66,840
Fauquier	67,207	16,246	9,684	1,428	4,486	3,602	4,489	5,460	4,693
Frederick	81,319	19,374	11,924	1,703	5,413	4,274	5,325	6,419	6,311
Giles	16,925	3,551	3,312	312	1,159	996	1,300	1,511	2,222
Hanover	101,330	23,543	15,217	2,070	6,831	5,508	6,896	8,341	5,598
Henrico	318,611	75,092	42,698	6,602	21,244	16,111	19,700	23,953	35,788
Loudoun	349,679	104,070	26,710	9,150	21,642	14,629	16,535	21,374	13,343
Madison	13,200	2,808	2,625	247	904	791	1,037	1,208	1,652
Page	23,821	4,844	4,615	426	1,647	1,409	1,833	2,139	3,595
Prince Edward	22,802	3,795	3,482	334	1,632	1,198	1,465	1,742	4,397
Prince William	438,580	124,308	34,715	10,930	27,637	18,625	21,067	27,141	30,243
Roanoke	93,524	19,706	17,831	1,733	6,403	5,455	7,087	8,271	7,062
Rockbridge	22,307	3,932	5,254	346	1,587	1,451	1,947	2,223	2,998
Rockingham	77,741	17,693	13,576	1,556	5,211	4,314	5,533	6,506	7,331
Stafford	136,788	37,032	11,846	3,256	8,802	6,119	7,028	9,013	8,436
Wythe	29,344	5,948	5,622	523	2,030	1,727	2,241	2,618	4,391
Alexandria City	148,892	26,359	14,639	2,318	10,654	7,040	7,984	10,092	12,916
Bristol City	17,341	3,468	3,394	305	1,197	1,011	1,316	1,524	3,696
Hampton City	136,699	29,819	18,242	2,622	9,302	6,935	8,426	10,251	20,671
Lynchburg City	78,014	15,327	10,886	1,348	5,366	3,817	4,610	5,492	15,332

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Norfolk City	246,139	49,871	23,884	4,385	16,972	11,049	12,505	15,683	49,457
Roanoke City	98,465	21,571	14,412	1,897	6,691	5,164	6,389	7,690	22,615
Salem City	25,299	5,046	4,266	444	1,755	1,403	1,773	2,098	2,368
Suffolk City	85,728	21,616	10,786	1,901	5,618	4,254	5,173	6,347	9,691
Virginia Beach City	448,479	103,578	53,132	9,107	30,046	21,661	25,815	31,795	39,666
Totals	**4,901,237**	**1,158,273**	**570,683**	**101,840**	**327,120**	**237,509**	**283,095**	**350,238**	**440,022**

American Lung Association in Virginia

www.lung.org/virginia

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Albemarle	1	0	0	0.3	B
Alexandria City	11	3	0	5.2	F
Arlington	19	1	0	6.8	F
Bristol City	DNC	DNC	DNC	DNC	DNC
Caroline	5	0	0	1.7	C
Charles City	10	1	0	3.8	F
Chesterfield	5	0	0	1.7	C
Fairfax	19	5	0	8.8	F
Fauquier	0	0	0	0.0	A
Frederick	1	0	0	0.3	B
Giles	0	0	0	0.0	A
Hampton City	5	1	0	2.2	D
Hanover	9	0	0	3.0	D
Henrico	11	1	0	4.2	F
Loudoun	5	0	0	1.7	C
Lynchburg City	DNC	DNC	DNC	DNC	DNC
Madison	4	0	0	1.3	C
Norfolk City	DNC	DNC	DNC	DNC	DNC
Page	0	0	0	0.0	A
Prince Edward	1	0	0	0.3	B
Prince William	3	0	0	1.0	C
Roanoke	1	0	0	0.3	B
Roanoke City	DNC	DNC	DNC	DNC	DNC
Rockbridge	0	0	0	0.0	A
Rockingham	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Albemarle	0	0	0	0.0	A	7.9	PASS
Alexandria City	INC	INC	INC	INC	INC	INC	INC
Arlington	0	0	0	0.0	A	INC	INC
Bristol City	0	0	0	0.0	A	9.0	PASS
Caroline	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Charles City	0	0	0	0.0	A	8.2	PASS
Chesterfield	0	0	0	0.0	A	INC	INC
Fairfax	1	0	0	0.3	B	8.8	PASS
Fauquier	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Frederick	1	0	0	0.3	B	9.5	PASS
Giles	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hampton City	1	0	0	0.3	B	7.9	PASS
Hanover	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Henrico	0	0	0	0.0	A	8.7	PASS
Loudoun	0	0	0	0.0	A	8.9	PASS
Lynchburg City	0	0	0	0.0	A	7.8	PASS
Madison	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Norfolk City	3	0	0	1.0	C	8.5	PASS
Page	0	0	0	0.0	A	8.1	PASS
Prince Edward	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Prince William	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Roanoke	INC	INC	INC	INC	INC	INC	INC
Roanoke City	0	0	0	0.0	A	INC	INC
Rockbridge	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rockingham	0	0	0	0.0	A	8.9	PASS

(continued)

County	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Salem City	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.1	PASS
Stafford	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Suffolk City	8	0	0	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Virginia Beach City	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.5	PASS
Wythe	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC

American Lung Association in Washington

www.lung.org/washington

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Chelan	73,967	18,050	12,545	1,241	5,549	3,372	5,071	5,303	11,715
Clallam	72,312	12,920	18,810	888	5,865	3,992	6,657	6,633	12,364
Clark	443,817	113,829	58,529	7,824	32,826	18,719	26,307	28,432	55,277
King	2,044,449	431,775	243,225	29,677	160,236	86,757	116,404	128,154	250,514
Kitsap	253,968	53,921	38,832	3,706	19,885	11,610	16,740	17,869	27,967
Okanogan	41,193	9,626	7,984	662	3,134	1,993	3,105	3,203	8,789
Pierce	819,743	198,422	100,763	13,638	61,748	34,138	46,754	51,024	113,256
Skagit	118,837	26,918	21,529	1,850	9,114	5,597	8,526	8,857	19,160
Snohomish	745,913	174,378	87,390	11,985	56,972	31,539	42,566	47,016	82,517
Spokane	479,398	108,366	68,660	7,448	36,829	21,022	29,887	32,019	79,280
Thurston	262,388	58,410	38,506	4,015	20,258	11,669	16,688	17,849	32,383
Whatcom	206,353	41,898	30,772	2,880	16,283	9,199	13,114	13,971	32,960
Yakima	247,044	74,058	30,799	5,090	17,137	9,562	13,435	14,416	51,184
Totals	**5,809,382**	**1,322,571**	**758,344**	**90,902**	**445,837**	**249,166**	**345,254**	**374,745**	**777,366**

HIGH OZONE DAYS 2011–2013

County	Orange	Red	Purple	Wgt. Avg	Grade
Chelan	DNC	DNC	DNC	DNC	DNC
Clallam	0	0	0	0.0	A
Clark	0	0	0	0.0	A
King	2	0	0	0.7	B
Kitsap	DNC	DNC	DNC	DNC	DNC
Okanogan	DNC	DNC	DNC	DNC	DNC
Pierce	0	0	0	0.0	A
Skagit	0	0	0	0.0	A
Snohomish	DNC	DNC	DNC	DNC	DNC
Spokane	0	0	0	0.0	A
Thurston	1	0	0	0.3	B
Whatcom	0	0	0	0.0	A
Yakima	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2011–2013

	24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Chelan	INC	INC	INC	INC	INC	INC	INC
Clallam	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clark	7	0	0	2.3	D	INC	INC
King	5	0	0	1.7	C	10.1	PASS
Kitsap	INC	INC	INC	INC	INC	INC	INC
Okanogan	INC	INC	INC	INC	INC	INC	INC
Pierce	16	1	0	5.8	F	7.8	PASS
Skagit	INC	INC	INC	INC	INC	INC	INC
Snohomish	11	1	0	4.2	F	7.7	PASS
Spokane	1	0	0	0.3	B	8.0	PASS
Thurston	INC	INC	INC	INC	INC	INC	INC
Whatcom	INC	INC	INC	INC	INC	INC	INC
Yakima	16	3	0	6.8	F	9.1	PASS

American Lung Association in West Virginia

www.lung.org/westvirginia

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Berkeley	108,706	26,423	13,990	2,298	7,404	8,224	10,614	9,906	14,171
Brooke	23,737	4,339	4,886	377	1,752	2,152	2,965	2,685	3,355
Cabell	97,133	19,294	16,177	1,678	6,960	7,885	10,402	9,515	21,778
Gilmer	8,672	1,218	1,264	106	664	710	902	837	1,986
Greenbrier	35,644	6,962	7,367	606	2,591	3,203	4,430	4,006	6,176
Hancock	30,291	6,066	5,951	528	2,193	2,698	3,712	3,374	4,376
Harrison	68,972	14,858	11,977	1,292	4,880	5,776	7,781	7,118	10,931
Kanawha	191,275	39,051	33,816	3,397	13,728	16,271	21,934	20,059	28,685
Marion	56,868	11,261	10,118	980	4,096	4,785	6,416	5,853	8,459
Marshall	32,459	6,479	6,189	564	2,349	2,856	3,905	3,556	5,364
Monongalia	102,274	16,274	10,802	1,416	7,593	7,411	8,827	8,342	18,172
Ohio	43,727	8,319	8,379	724	3,189	3,820	5,194	4,720	6,301
Raleigh	78,833	16,640	13,772	1,447	5,594	6,566	8,818	8,054	15,133
Tucker	6,968	1,222	1,521	106	520	652	908	820	1,097
Wood	86,569	18,565	15,636	1,615	6,136	7,345	9,961	9,086	15,308
Totals	**972,128**	**196,971**	**161,845**	**17,134**	**69,650**	**80,354**	**106,769**	**97,931**	**161,292**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Berkeley	1	0	0	0.3	B	1	0	0	0.3	B	10.7	PASS
Brooke	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	11.6	PASS
Cabell	5	0	0	1.7	C	0	0	0	0.0	A	10.4	PASS
Gilmer	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greenbrier	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hancock	6	0	0	2.0	C	0	0	0	0.0	A	10.5	PASS
Harrison	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	INC	INC
Kanawha	9	0	0	3.0	D	0	0	0	0.0	A	10.8	PASS
Marion	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	10.3	PASS
Marshall	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	11.6	PASS
Monongalia	2	0	0	0.7	B	0	0	0	0.0	A	9.5	PASS
Ohio	3	0	0	1.0	C	0	0	0	0.0	A	10.6	PASS
Raleigh	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.3	PASS
Tucker	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wood	5	0	0	1.7	C	0	0	0	0.0	A	10.4	PASS

American Lung Association in Wisconsin

www.lung.org/wisconsin

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**COPD**	**Cardio-vascular Disease**	**Diabetes**	**Poverty**
Ashland	16,016	3,626	2,756	282	1,276	749	1,114	1,106	2,781
Brown	254,586	62,231	32,215	4,832	20,126	10,453	14,673	14,948	29,989
Columbia	56,653	12,834	8,978	997	4,523	2,601	3,793	3,802	5,042
Dane	509,939	108,165	58,677	8,399	42,540	20,133	27,657	28,380	68,205
Dodge	88,344	18,469	14,120	1,434	7,230	4,089	5,958	5,971	7,721
Door	27,896	4,791	7,095	372	2,327	1,593	2,542	2,445	2,789
Eau Claire	101,438	20,848	13,768	1,619	8,510	4,144	5,914	5,953	13,182
Fond du Lac	101,798	22,306	16,453	1,732	8,222	4,668	6,845	6,837	8,916
Forest	9,126	1,891	1,978	147	738	465	728	705	1,613
Grant	51,069	10,589	8,340	822	4,229	2,247	3,333	3,300	8,141
Jefferson	84,509	19,223	12,222	1,493	6,792	3,692	5,302	5,346	8,595
Kenosha	167,757	41,019	20,413	3,185	13,256	6,886	9,565	9,800	25,791
Kewaunee	20,505	4,592	3,737	357	1,631	988	1,486	1,468	2,023
La Crosse	116,713	24,150	16,753	1,875	9,724	4,931	7,102	7,128	16,585
Manitowoc	80,654	17,219	14,617	1,337	6,502	3,934	5,883	5,830	8,524
Marathon	135,416	32,058	20,900	2,489	10,698	6,040	8,805	8,821	14,825
Milwaukee	956,023	234,451	113,944	18,206	76,141	37,109	51,803	52,772	208,877
Oneida	35,689	6,246	8,325	485	2,976	1,981	3,096	3,008	4,078
Outagamie	180,345	43,776	23,034	3,399	14,259	7,516	10,545	10,753	15,294
Ozaukee	87,054	19,363	14,668	1,504	6,946	4,157	6,117	6,112	5,107
Racine	195,041	46,961	27,869	3,647	15,357	8,521	12,211	12,337	25,222
Rock	160,739	38,502	23,621	2,990	12,709	6,947	10,057	10,100	22,494
Sauk	63,162	14,664	10,366	1,139	5,014	2,862	4,232	4,210	7,460
Sheboygan	114,922	26,382	18,161	2,049	9,145	5,237	7,646	7,658	12,249
Taylor	20,610	4,904	3,656	381	1,609	979	1,466	1,452	2,793

(continued)

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Vilas	21,368	3,647	6,007	283	1,772	1,271	2,075	1,976	3,050
Walworth	102,945	22,957	15,282	1,783	8,325	4,517	6,526	6,558	12,883
Waukesha	393,843	89,433	62,810	6,945	31,321	18,382	26,763	26,873	22,437
Totals	**4,154,160**	**955,297**	**580,765**	**74,182**	**333,899**	**177,091**	**253,235**	**255,649**	**566,666**

American Lung Association in Wisconsin

www.lung.org/wisconsin

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	**Orange**	**Red**	**Purple**	**Wgt. Avg**	**Grade**	**Orange**	**Red**	**Purple**	**Wgt. Avg**	**Grade**	**Design Value**	**Pass/ Fail**
Ashland	0	0	0	0.0	A	0	0	0	0.0	A	5.1	PASS
Brown	8	1	0	3.2	D	6	0	0	2.0	C	8.8	PASS
Columbia	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dane	2	0	0	0.7	B	1	0	0	0.3	B	9.7	PASS
Dodge	6	1	0	2.5	D	1	0	0	0.3	B	8.7	PASS
Door	15	2	0	6.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Eau Claire	0	0	0	0.0	A	0	0	0	0.0	A	INC	INC
Fond du Lac	7	1	0	2.8	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Forest	4	0	0	1.3	C	0	0	0	0.0	A	5.1	PASS
Grant	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.5	PASS
Jefferson	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kenosha	28	4	0	11.3	F	0	0	0	0.0	A	9.1	PASS
Kewaunee	12	1	0	4.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
La Crosse	0	0	0	0.0	A	0	0	0	0.0	A	8.5	PASS
Manitowoc	14	2	0	5.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Marathon	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Milwaukee	21	3	0	8.5	F	2	0	0	0.7	B	10.5	PASS
Oneida	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Outagamie	6	1	0	2.5	D	1	0	0	0.3	B	8.6	PASS
Ozaukee	21	2	0	8.0	F	0	0	0	0.0	A	8.4	PASS
Racine	22	2	0	8.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rock	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sauk	3	0	0	1.0	C	0	0	0	0.0	A	7.8	PASS
Sheboygan	31	5	0	12.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Taylor	0	0	0	0.0	A	0	0	0	0.0	A	7.2	PASS
Vilas	0	0	0	0.0	A	0	0	0	0.0	A	5.4	PASS

(continued)

County	HIGH OZONE DAYS 2011–2013					HIGH PARTICLE POLLUTION DAYS 2011–2013						
						24 Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Walworth	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Waukesha	2	0	0	0.7	B	0	0	0	0.0	A	10.8	PASS

American Lung Association in Wyoming

www.lung.org/wyoming

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardio-vascular Disease	Diabetes	Poverty
Albany	37,422	6,104	3,568	524	2,833	1,774	1,918	2,123	7,110
Big Horn	11,994	3,034	2,250	261	821	710	875	878	1,323
Campbell	48,176	13,496	3,240	1,160	3,166	2,133	2,316	2,509	3,554
Carbon	15,748	3,635	2,160	312	1,109	866	1,018	1,050	2,118
Converse	14,313	3,589	1,939	308	983	778	917	943	1,336
Crook	7,184	1,694	1,248	146	505	435	531	533	557
Fremont	40,998	10,384	6,455	892	2,803	2,291	2,754	2,805	6,120
Laramie	95,809	22,599	13,160	1,942	6,689	5,151	6,044	6,257	9,627
Natrona	80,973	19,168	10,219	1,647	5,646	4,250	4,930	5,138	8,003
Park	29,227	6,022	5,609	517	2,127	1,827	2,242	2,254	2,849
Sheridan	29,824	6,361	5,206	547	2,151	1,802	2,184	2,210	2,944
Sublette	10,041	2,388	1,236	205	701	540	627	650	626
Sweetwater	45,237	12,301	4,075	1,057	3,007	2,120	2,372	2,526	3,850
Teton	22,268	4,265	2,629	366	1,643	1,190	1,356	1,431	1,700
Uinta	21,066	6,218	2,212	534	1,359	1,018	1,169	1,221	2,515
Weston	7,158	1,541	1,244	132	515	433	525	531	672
Totals	**517,438**	**122,799**	**66,450**	**10,550**	**36,057**	**27,319**	**31,777**	**33,060**	**54,904**

HIGH OZONE DAYS 2011–2013

HIGH PARTICLE POLLUTION DAYS 2011–2013

						24 Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
Albany	1	0	0	0.3	B	0	0	0	0.0	A	4.9	PASS
Big Horn	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Campbell	1	0	0	0.3	B	1	2	0	1.3	C	INC	INC
Carbon	0	0	0	0.0	A	INC	INC	INC	INC	INC	INC	INC
Converse	INC	INC	INC	INC	INC	1	0	0	0.3	B	INC	INC
Crook	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fremont	1	0	0	0.3	B	1	0	0	0.3	B	7.8	PASS
Laramie	0	0	0	0.0	A	1	0	0	0.3	B	4.8	PASS
Natrona	1	0	0	0.3	B	1	0	0	0.3	B	4.8	PASS
Park	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	4.6	PASS
Sheridan	INC	INC	INC	INC	INC	0	0	0	0.0	A	7.6	PASS
Sublette	10	1	3	5.8	F	5	6	0	4.7	F	INC	INC
Sweetwater	0	0	0	0.0	A	2	0	0	0.7	B	5.7	PASS
Teton	0	0	0	0.0	A	1	0	0	0.3	B	5.3	PASS
Uinta	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Weston	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

We will breathe easier when the air in every American community is clean and healthy.

We will breathe easier when people are free from the addictive grip of tobacco and the debilitating effects of lung disease.

We will breathe easier when the air in our public spaces and workplaces is clear of secondhand smoke.

We will breathe easier when children no longer battle airborne poisons or fear an asthma attack.

Until then, we are fighting for air.

About the American Lung Association

Now in its second century, the American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease. With your generous support, the American Lung Association is "Fighting for Air" through research, education and advocacy. For more information about the American Lung Association, a holder of the Better Business Bureau Wise Giving Guide Seal, or to support the work it does, call 1-800-LUNGUSA (1-800-586-4872) or visit www.lung.org.

AMERICAN LUNG ASSOCIATION.