State of the Air 2009

AMERICAN LUNG ASSOCIATION® LungUSA.org / 1-800-LUNGUSA

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EMBARGOED UNTIL 3:00 AM (EST), APRIL 29, 2009

Acknowledgments

The American Lung Association State of the Air 2009 is the result of the hard work of many people:

In the American Lung Association National Headquarters: Paul G. Billings, who supervised the work; Janice E. Nolen, MS, who directed the project, analyzed data and wrote the text; Blake Early, who reviewed and revised materials; and Josephine Ceselski, who coordinated field outreach and e-advocacy and online materials; Andrea Stansfield, MPH, Zach Jump, MA, and Elizabeth Lancet, MPH, who converted the raw data into meaningful tables and comparisons and calculated all the population data; Susan Rappaport, MPH, who spearheaded the data analysis; Norman Edelman, MD, who reviewed the science and health discussions; Jean Haldorsen, who supervised production and creative for print and online editions; Tony Javed who coordinated the online development and Matthew Waldron who revamped the online presentation; and Carrie Martin, Heather Grzelka and Gregg Tubbs who coordinated internal and external communications and media outreach.

In the nationwide American Lung Association: All Lung Association field offices reviewed and commented on the data for their states. Hard-working staff across the nation went out of their way to ensure that their state and local air directors were in the loop.

Outside the American Lung Association: Allen S. Lefohn of A.S.L. & Associates, who compiled the data; Deborah Shprentz, who researched and reviewed the science; Cindy Wright of CJW Associates, who developed marketing and field materials; Kristin Lawton at Convio, Inc., who developed the web site for the report; and Frank O'Donnell of Clean Air Watch, who assisted with media outreach.

Finally, great appreciation goes to the National Association of Clean Air Administrators, who along with their Executive Director Bill Becker and Amy Royden-Bloom, strove to make this report better through their comments, review and concerns. Many of their members reviewed and commented on the individual state data presented and the methodology to help make this report more accurate. We appreciate them as our partners in the fight against air pollution. This report should in no way be construed as a comment on the work they do.

The American Lung Association assumes sole responsibility for the content of the *American Lung Association State of the Air 2009*.

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Fighting for Air

Designed by Our Designs, Inc., Nashville, TN
Translation services by Transcend, Davis, CA
Printing and binding by Hard Copy Printing, New York, NY

Contents

Executive Summary

Air pollution continues to threaten the lives and health of millions of people in the United States despite great progress since the modern Clean Air Act was first passed in 1970. Even as the nation explores the complex challenges of global warming and energy, air pollution remains widespread and dangerous.

This year marks the tenth annual *American Lung Association State of the Air* report and provides an excellent opportunity to look back over the changes in the past ten years. This 2009 report looks at ozone and particle pollution year-round (annual average) and over short-term levels (24-hour) of particle pollution ($PM_{2.5}$) found in monitoring sites across the United States in 2005, 2006, and 2007.

Ozone

In March 2008, the U.S. Environmental Protection Agency adopted a new, tighter standard for ozone pollution. Measured against the new standard, the air quality in many new places failed to meet the test. Other communities with a long history of ozone problems face an even more serious challenge. Evaluating the most recent data against the new standard, the American Lung Association found that approximately 175.4 million Americans live in counties where ozone monitors recorded too many days with unhealthy ozone levels, far more than the 92.5 million identified in the *State of the Air 2008* report.

Progress in reducing ozone shows up even when using the new standard to look backward. The American Lung Association analysis shows that ozone levels have improved in some of the cities facing the greatest burden, such as Los Angeles and Houston. However, so does the impact of warmer summers and continuing pollution challenges: Sixteen of the cities in this year's 25 most polluted experienced a worsening problem with ozone since last year's report, including Charlotte, Phoenix, Las Vegas, and Cincinnati.

Year-round particle pollution

Particle pollution improved in 9 of the cities in the list of the 25 most polluted by year-round levels, including five cities which recorded their best levels since the report began covering particle pollution in 2004: Pittsburgh, Cincinnati, Atlanta, York, PA and Lancaster, PA. However, the annual average level of particles worsened in 12 cities, including Bakersfield, CA which took over the most polluted ranking from Los Angeles, and Houston, TX which this year moved into the list of the 25 cities most-polluted by particle pollution for the first time.

Short-term particle pollution

Eleven cities experienced fewer days, or fewer severe days, of unhealthy levels of particle pollution in the *State of the Air 2009* report, including Pittsburgh, the city ranked number one on the list of cities most polluted by short-term exposure to particles. All eleven showed continued improvement since the 2007 report, which first incorporated the tighter standards for short-term levels of particle pollution. Unfortunately, 13 cities had more days—or more severe days—of particle pollution in the 2009 report than in last year's report. Eleven of those cities had consistently increased the number of days or the severity of the levels of particle pollution in the past three reports.

40.5
Million
The number of people in the U.S. who live in counties where the outdoor air failed all three tests.

186.1
Million
The number of people in the U.S. who live in counties where the outdoor air got an F.

Cleanest cities

Fargo-Wahpeton, ND-MN emerged as the cleanest city in the U.S., the only city to appear on all three lists of cleanest cities. Seventeen cities appeared on two of the three lists of cleanest cities: Billings, MT; Bismarck, ND; Cheyenne, WY; Colorado Springs, CO; Farmington, NM; Ft. Collins, CO; Honolulu, HI; Lincoln, NE; Midland-Odessa, TX; Port St. Lucie, FL; Pueblo, CO; Redding, CA; Salinas, CA; San Luis Obispo, CA; Santa Fe-Espanola, NM; Sioux Falls, ND; and Tucson, AZ.

Looking at the nation as a whole, the *American Lung Association State of the Air 2009* finds:

- **Six out of ten people (61.7%) in the United States population lives in counties that have unhealthful levels of either ozone or particle pollution.** Almost 186.1 million Americans live in the 525 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.
- **Roughly six out of ten people in the United States—58 percent—live in areas with unhealthful levels of ozone. This reflects the much lower threshold for unhealthy ozone as well as warmer temperatures in much of the eastern U.S.** Counties that were graded F for ozone levels have a combined population of 175.4 million. These people live in the 485 counties where the monitored air quality places them at risk for lower lung function, respiratory infection, lung inflammation and aggravation of respiratory illness. The actual number who breathe unhealthy levels of ozone is likely much larger, since this number does not include people who live in adjacent counties in metropolitan areas where no monitors exist. Note that this number is much greater than previous *State of the Air* reports because this estimate is based on the new national standards for ozone adopted in 2008. This increase does not represent that ozone levels have worsened; rather, this means that the problem of ozone is much more widespread than previously recognized.
- **Roughly three out of ten people in the United States live in an area with unhealthful short-term levels of particle pollution, an increase from the last report.** Over 92.7 million Americans live in 134 counties that experienced too many days with unhealthy spikes in particle pollution, an increase from the last report. 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.
- **One in six people in the United States lives in an area with unhealthful year-round levels of particle pollution.** Just over 47 million U.S. residents live in areas where chronic levels are regularly a threat to their health. 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.
- **Just under one in eight people—roughly 40.5 million in the United States—live in the 37 counties with unhealthful levels of all three: ozone and short-term and year-round particle pollution.**

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, cardiovascular disease or diabetes. Here are the numbers of people in each at-risk group.

- **People with Asthma**—Approximately 4 million children and 10.9 million adults with asthma live in parts of the

United States with very high levels of ozone. Over 5.7 million adults and over 2.1 million children with asthma live in areas with high levels of short-term particle pollution. Over 2.8 million adults and nearly 1.1 million children with asthma live in counties with unhealthful levels of year-round particle pollution.

- **Older and Younger**—Over 20.4 million adults age 65 and over and nearly 44 million children age 18 and under live in counties with unhealthful ozone levels. Nearly 10.7 million seniors and 23.3 million children live in counties with unhealthful short-term levels of particle pollution. Nearly 5.3 million seniors and over 12 million children live in counties with unhealthful levels of year-round particle pollution.
- **Chronic Bronchitis and Emphysema**—Over 4.4 million people with chronic bronchitis and over 2.1 million people with emphysema live in counties with unhealthful ozone levels. Over 2.3 million people with chronic bronchitis and over 1.1 million people with emphysema live in counties with unhealthful levels of short-term particle pollution. Nearly 1.2 million people with chronic bronchitis and nearly 556,000 people with emphysema live in counties with unhealthful year-round levels of particle pollution.
- **Cardiovascular Disease**—Nearly 24.5 million people with cardiovascular diseases live in areas with unhealthful levels of short-term particle pollution; nearly 12.2 million people live in counties with unhealthful levels of year-round particle pollution. Cardiovascular diseases include coronary heart disease, heart attacks, strokes, hypertension and angina pectoris.
- **Diabetes**—Over 5.2 million people with diabetes live in areas with unhealthful levels of short-term particle pollution; nearly 2.6 million people live in counties with unhealthful levels of year-round particle pollution. Research indicates that because diabetics are already at higher risk of cardiovascular disease, they may face increased risk due to the impact of particle pollution on their cardiovascular systems.

What needs to be done

Many major challenges require the Obama Administration and Congress to take steps to protect the health of the public. Here are a few key steps that the American Lung Association also calls for to improve the air we all breathe.

- **Clean up dirty power plants.** Coal-fired power plants are among the largest contributors to particulate pollution, ozone, mercury, and global warming. The EPA should immediately take action to reduce emissions and expand clean-up requirements for power plants nationwide. The American Lung Association has taken legal action repeatedly to fight to require power plants to clean up.
- **Clean up the existing fleet of dirty diesel.** 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 tractors and 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 virtually eliminate this problem and the economic recovery legislation is investing $300 million at the EPA for the voluntary diesel retrofit program.
- **Clean up ocean-going vessels.** Ocean-going vessels, like cruise ships, container ships and tankers deliver staggering amounts of smog-forming oxides of nitrogen, particle pollution, sulfur dioxide and heat-trapping carbon dioxide. By 2030 these vessels will produce approximately 45 percent of the national inventory of mobile source particle pollution emissions, harming health, worsening global warming and creating acid rain. New evidence

shows that pollution from these vessels reaches parts of the country far inland from the 40 port cities that have recognized air pollution problems. The International Maritime Organization must grant the EPA the right to maximize the clean air protections under international agreements, carrying out faster and deeper cuts in particulate- and smog-forming pollutants.

- **Strengthen the 2008 ozone standards.** The EPA issued new national air quality standards for ozone in March 2008, after legal action by the American Lung Association forced them to complete a formal review. Unfortunately, the Bush Administration chose to disregard the unanimous recommendations of the EPA's official science advisors and adopted standards that fail to meet the requirements of the Clean Air Act. These standards are still in the early stage of implementation and have been challenged in court by the American Lung Association, states, public health and environmental groups. The EPA should voluntarily remand its March rule and issue a new rule that meets the recommendations of the expert panel and the nation's leading public health organizations. A voluntary remand can be designed to maintain clean air progress while transitioning to more protective standards.

- **Strengthen the national standard for particle pollution.** In 2006, the EPA failed to strengthen the annual standard for fine particles, despite the near unanimous recommendation by the Clean Air Scientific Advisory Committee. the EPA can save thousands of lives each year by dramatically lowering the annual average standard. The Lung Association challenged this decision in court and, on February 25, 2009, won the case as the U.S. Court of Appeals told the EPA to review the science again. Proposed revisions to the PM standards are due in late 2010.

- **Require all appropriate counties to clean up particle pollution.** In December 2008, the EPA failed to take any action to designate counties that had violated the annual standard for fine particulates, a pollutant found to increase the risk of premature death. The EPA's most egregious omission was Houston, where the EPA's own calculations show that the year-round level of particle pollution are growing and clearly violate the standard, but the EPA also failed to recognize at least four other cities with the same problem. This omission means that Houston and the other cities will not have to reduce their pollution to restore healthy air. The EPA should revise the final rule to include plans to address the annual standard and designate all appropriate counties for the 24-hour standard.

What you can do

Individual citizens can do a great deal to help reduce air pollution outdoors as well. Simple but effective ways include:

- **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.

- **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 often 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 the emissions.
- **Get involved.** Participate in your community's review of its air pollution plans and support state and local efforts to clean up air pollution.
- **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.
- **Send a message to decision makers.** Send an email or fax to urge Congress to oppose measures that weaken the Clean Air Act. Log on at www.LungUSA.org to see how easy that can be.

The State of the Air 2009

The first *State of the Air* report came out in 2000 and focused solely on ozone pollution. In the past ten years,

most ranked cities have cut their ozone levels.

However, some have gotten worse.

This year marks the tenth annual American Lung Association *State of the Air* report and provides an excellent opportunity to look back over the changes in the past ten years. This 2009 report looks at ozone and particle pollution year-round (annual average) and over short-term levels (24-hour) of particle pollution ($PM_{2.5}$) found in monitoring sites across the United States in 2005, 2006, and 2007.

Ozone

The first *State of the Air* report, issued in 2000, covered the period 1996, 1997, and 1998 and only evaluated the levels of ozone smog, using the standard for ozone that the EPA had just established as a basis for evaluating air quality across the nation. A decade of research has demonstrated that the levels of ozone considered safe then no longer meet the critical test of protecting public health. To provide better protection, in March 2008 the U.S. Environmental Protection Agency adopted a new, tighter standard for ozone pollution. Measured against the new standard, the air quality in many additional places failed to meet the test. Other communities with long histories of ozone problems face an even more serious challenge. Evaluating the most recent data against the new standard, the American Lung Association found that approximately 175.4 million Americans live in counties where ozone monitors recorded too many days with unhealthy ozone levels, far more than the 92.5 million identified in the *State of the Air 2008* report.

Progress in reducing ozone shows up even when using the new standard to look backward. The American Lung Association analysis shows that ozone levels have improved in some of the cities facing the greatest burden, such as Los Angeles and Houston. However, so does the impact of warmer summers and continuing pollution challenges: Sixteen of the cities in this year's 25 most polluted cities experienced a worsening problem with ozone since last year's report, including Charlotte, Phoenix, Las Vegas, and Cincinnati.

Looking back over the past ten years, the ozone levels have improved in most cities, including in #1 ranked Los Angeles where ozone levels have improved consistently in each report. Most cities have improved primarily in the past five reports (covering 2001-2007), and many actually had ozone levels worsen significantly during the period covered by the first five reports (1996-2002). However, some cities have seen their ozone levels trend higher over the past decade, including Dallas-Fort Worth, TX, and Las Vegas, NV.

Year-round particle pollution

Particle pollution improved in 9 of the cities in the list of the 25 most polluted by year-round levels, including five cities which recorded their best levels since the report began covering particle pollution in 2004: Pittsburgh, Cincinnati, Atlanta, York, PA and Lancaster, PA. However, the annual average level of particles worsened in 12 cities, including Bakersfield, CA, which took over the most polluted ranking from Los Angeles, and Houston, TX which this year moved into the list of the 25 cities most-polluted by particle pollution for the first time.

Compared to the findings first included in the *State of the Air 2004* report, much of the nation has less year-round particle pollution. However, many cities have seen little change or even faced higher levels in the past three reports. Among those showing significant, continued improvement in the past

Particle pollution grades first appeared in the *State of the Air* report five years ago. Since then

many places have improved their levels,

though many continue to struggle.

Fargo-Wahpeton, ND-MN

is the only city to appear on all three lists of

cleanest cities

in the nation. Seventeen others appear on two lists each.

5 years are Los Angeles (which improved its ranking to 4th place this year), Detroit, Cleveland, and St. Louis. Stagnating problems show up particularly in eastern cities where coal-fired power plants contribute to the problem: Birmingham, AL; Charleston WV; Huntingdon, WV; Louisville, KY; Macon, GA; Indianapolis, IN; Rome, GA; and Hagerstown, MD.

Cheyenne, WY has the lowest annual level of particle pollution in the United States. Cheyenne has ranked #1 on this list of cleanest cities for the past 5 reports.

Short-term particle pollution

Eleven cities experienced fewer days of unhealthy levels of particle pollution in the *State of the Air 2009* report, including Pittsburgh, the city ranked number one on the list of cities most polluted by short-term exposure to particles. All eleven showed continued improvement since the 2007 report, which first incorporated the tighter standards for short-term levels of particle pollution. Unfortunately, 13 cities had more days—or more severe days—of particle pollution in the 2009 report than in last year's report. Eleven of those cities had consistently increased the number of days or the severity of the levels of particle pollution in the past three reports.

Twenty-four cities had straight "As"—awarded because they had no days with unhealthy levels of particle pollution during 2005-2007. They range across the nation from Portland-Lewiston-South Portland, ME to San Luis Obispo-Paso Robles, CA; from Alexandria, LA to Sioux Falls, SD.

Some short-term particle pollution occurs naturally

Not all particle pollution is made by human activity. Two examples of the natural sources that present serious problems each year are smoke from wildfires, which create fine particles and gases, and "vog," the sulfur dioxide and other emissions from volcanic eruptions that create acid gases and aerosols which occur primarily in Hawaii. For official record keeping and evaluation, the U.S. Environmental Pollution Agency generally does not include days where natural sources of particle pollution predominate. Natural sources can be just as dangerous as human-made sources. Because wildfire smoke and vog are caused by natural sources, they do not usually appear in the monitor records used in the State of the Air reports. However, the American Lung Association offices provide community warnings when such problems occur and information to assist residents to protect themselves.

Cleanest cities

Fargo-Wahpeton, ND-MN emerged as the only city to appear on all three lists of cleanest cities. Seventeen cities appeared on two of the three lists of cleanest cities: Billings, MT; Bismarck, ND; Cheyenne, WY; Colorado Springs, CO; Farmington, NM; Ft. Collins, CO; Honolulu, HI; Lincoln, NE; Midland-Odessa, TX; Port St. Lucie, FL; Pueblo, CO; Redding, CA; Salinas, CA; San Luis Obispo, CA; Santa Fe-Espanola, NM; Sioux Falls, ND; and Tucson, AZ.

What needs to be done to get healthy air

Many major challenges require the Obama Administration and Congress to take steps to protect the health of the public. Here are a few key steps that the American Lung Association calls for to improve the air we all breathe.

- **Clean up dirty power plants.** Coal-fired power plants are among the largest contributors to particulate pollution, ozone, mercury, and global warming. The EPA should immediately take action to reduce emissions of sulfur dioxide, nitrogen oxides, and air toxics including mercury below the levels allowed under the Clean Air Interstate Rule and expand clean-up requirements for

power plants nationwide. An analysis released in 2004 attributed 24,000 premature deaths *each year* to power plant pollution, as well as tens of thousands of asthma attacks, hospital admissions and emergency room visits.[1] Greater reductions in power plant pollution levels are essential to enable states and local governments to reduce air pollution to safe levels. The American Lung Association has taken legal action repeatedly to fight against efforts to allow power plants to continue to pollute. We and our partners will continue to take steps to ensure that coal-fired power plants are cleaned up.

- **Clean up the existing fleet of dirty diesel.** 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 the diesel fleet 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 virtually eliminate this problem. Congress should fully fund programs to retrofit diesel trucks, buses, heavy equipment (such as tractors and bulldozers) and other existing sources of dirty diesel exhaust. States should use these funds to retrofit diesel engines. Funding and requirements for these retrofits should be part of federal transportation funding. The economic recovery legislation invests $300 million at the EPA for the voluntary diesel retrofit program. Further, the EPA should require that long-haul trucks upgrade their emissions controls whenever their engines are rebuilt, similar to new requirements that just went into effect for locomotive and marine diesel engines.

- **Clean up ocean-going vessels.** Ocean-going vessels, like cruise ships, container ships and tankers deliver staggering amounts of smog-forming oxides of nitrogen, particle pollution, sulfur dioxide and heat-trapping carbon dioxide. By 2030 these vessels will produce approximately 45 percent of the national inventory of mobile source particle pollution emissions, harming health, worsening global warming and creating acid rain. New evidence shows that pollution from these vessels reaches parts of the country far inland from the 40 port cities that have recognized air pollution problems. The International Maritime Organization must grant the EPA the right to place an Emissions Control Area in American waters to maximize the clean air protections under international agreements, carrying out faster and deeper cuts in particulate- and smog-forming pollutants.

- **Strengthen the 2008 ozone standards.** The EPA issued new national air quality standards for ozone in March 2008, after legal action by the American Lung Association forced them to complete a formal review. Unfortunately, the Bush Administration chose to disregard the unanimous recommendations of the EPA's official science advisors and adopted standards that fail to meet the requirements of the Clean Air Act, including a decision by the President himself to overturn recommendations from key EPA staff for stronger protections for forests, vegetation and natural systems. These standards are still in the early stage of implementation and have been challenged in court by the American Lung Association, states, public health and environmental groups. The EPA should voluntarily remand its March rule and issue a new rule that meets the recommendations of the expert panel and the nation's leading public health organizations. A voluntary remand can be designed to maintain clean air progress while transitioning to more protective standards.

- **Strengthen the national standards for particle pollution.** Fine particulate air pollution ($PM_{2.5}$) is responsible for tens of thousands of premature deaths

1 Abt Associates. Power Plant Emissions: Particulate Matter-Related Health Damages and the Benefits of Alternative Emission Reduction Scenarios for the Clean Air Task Force. June 2004. Available at www.catf.us.

each year in the U.S., as well as a cascade of other adverse health effects ranging from increased hospitalization and emergency room visits to decreased lung function in children. Scientific studies show that long-term exposures to fine particles can shorten life by months to years. In 2006, the EPA failed to strengthen the annual standard for fine particles, despite the near unanimous recommendation by the Clean Air Scientific Advisory Committee. The Lung Association challenged this decision in court and, on February 25, 2009, won the case as the U.S. Court of Appeals told the EPA to review the science again. The EPA can save thousands of lives each year by dramatically lowering the annual average standard. Proposed revisions to the PM standards are due in late 2010.

- **Require all appropriate counties to clean up particle pollution.** A key step to reducing the burden of air pollution around the nation is the EPA officially determining where air pollution poses a threat to public health. The EPA issues a formal rule listing the counties that fail to meet or "attain" the national air quality standards. The counties that violate the standards ("nonattainment") must take steps to reduce emissions and meet the standards by a certain date. Historically, that process has fallen short in failing to include areas with unhealthy pollution levels. In December 2008, the EPA failed to take any action to designate counties that had violated the annual standard for fine particulates ($PM_{2.5}$), a pollutant found to increase the risk of premature death. The EPA's most egregious omission was Houston, where the EPA's own calculations show that the year-round levels of $PM_{2.5}$ are growing and clearly violate the standard, but the EPA also failed to recognize at least four other cities. This omission means that Houston and the other cities will not have to reduce their particle pollution to restore healthy air. The EPA also failed to designate many other counties that should have been included in the list of those not meeting the short-term (24-hour $PM_{2.5}$) standard. The EPA currently has the final rule held for review by the Obama Administration. The EPA should revise the final rule to include plans to address the annual standard and designate all appropriate counties for the short-term standard.

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

In Counties where the Grades were:	Chronic Diseases: Adult Asthma	Chronic Diseases: Pediatric Asthma	Chronic Diseases: Chronic Bronchitis	Chronic Diseases: Emphysema	Chronic Diseases: CV Disease	Chronic Diseases: Diabetes	Age Groups: Under 18	Age Groups: Over 65	Total Population	Number of Counties
Grade A (0.0)	829,553	285,298	337,702	165,471	3,569,069	765,450	3,138,239	1,621,022	13,080,289	79
Grade B (0.3-0.9)	1,508,328	587,947	654,603	320,398	6,914,480	1,482,837	6,467,372	3,116,360	25,737,174	114
Grade C (1.0-2.0)	3,039,579	1,077,734	1,277,031	635,278	13,587,841	2,925,415	11,854,949	6,261,138	49,112,969	182
Grade D (2.1-3.2)	1,615,570	599,558	678,505	331,719	7,163,388	1,535,736	6,595,070	3,226,800	26,583,196	75
Grade F (3.3+)	5,745,865	2,114,718	2,337,548	1,121,158	24,468,633	5,222,298	23,261,650	10,676,585	92,794,285	134
National Population in Counties with $PM_{2.5}$ Monitors	13,125,794	4,801,690	5,441,329	2,652,011	57,366,628	12,290,279	52,818,024	25,673,306	213,344,636	670

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

In Counties where the Grades were:	Chronic Diseases: Adult Asthma	Chronic Diseases: Pediatric Asthma	Chronic Diseases: Chronic Bronchitis	Chronic Diseases: Emphysema	Chronic Diseases: CV Disease	Chronic Diseases: Diabetes	Age Groups: Under 18	Age Groups: Over 65	Total Population	Number of Counties
Pass	8,900,962	3,222,756	3,725,035	1,827,567	39,389,136	8,451,886	35,450,023	17,817,941	144,968,781	466
Fail	2,846,454	1,099,884	1,168,859	555,959	12,190,347	2,596,401	12,098,580	5,261,998	47,024,001	61
National Population in Counties with $PM_{2.5}$ Monitors	13,125,798	4,801,679	5,441,335	2,652,005	57,366,628	12,290,287	52,818,024	25,673,306	213,344,636	670

People at Risk from Ozone

		Chronic Diseases: Report Year	Chronic Diseases: Adult Asthma	Chronic Diseases: Pediatric Asthma	Chronic Diseases: Chronic Bronchitis	Chronic Diseases: Emphysema	Age Groups: Under 18	Age Groups: Over 65	Total Population	Number of Counties
Grade A	(0.0)	2009	360,716	122,369	160,463	80,466	1,346,061	814,035	6,017,415	40
Grade B	(0.3-0.9)	2009	406,226	152,226	163,920	80,278	1,674,464	797,027	6,509,310	37
Grade C	(1.0-2.0)	2009	872,014	328,182	400,503	205,192	3,609,961	2,151,902	15,156,293	81
Grade D	(2.1-3.2)	2009	413,060	149,032	194,139	100,545	1,639,337	1,058,261	7,198,179	43
Grade F	(3.3+)	2009	10,875,304	3,996,013	4,439,068	2,145,510	43,955,790	20,441,256	175,378,757	485
National Population in Counties with Ozone Monitors		2009	14,025,715	5,110,896	5,802,213	2,831,715	56,219,254	27,444,372	227,268,090	821

Note: The State of the Air 2009 covers the period 2005-2007. 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 $PM_{2.5}$)

2009 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8,10]	Diabetes[9,10]
1	Pittsburgh-New Castle, PA	2,446,703	507,784	419,558	46,163	177,396	69,954	38,243	777,887	171,074
2	Fresno-Madera, CA	1,045,861	309,724	102,399	28,157	55,216	23,939	10,840	244,484	51,388
3	Bakersfield, CA	790,710	237,021	69,710	21,548	41,503	17,709	7,723	177,982	37,077
4	Los Angeles-Long Beach-Riverside, CA	17,755,322	4,737,865	1,849,322	430,719	977,873	428,819	198,167	4,416,799	933,827
5	Birmingham-Hoover-Cullman, AL	1,188,764	289,712	153,673	26,338	78,595	30,989	15,555	331,055	71,441
6	Salt Lake City-Ogden-Clearfield, UT	1,799,959	541,481	166,355	49,226	101,790	40,759	18,220	413,907	86,780
7	Sacramento--Arden-Arcade--Yuba City, CA-NV	2,397,691	591,294	284,980	53,755	135,649	60,679	29,190	636,141	135,775
8	Logan, UT-ID	121,090	38,091	9,654	3,463	6,707	2,549	1,032	24,876	5,073
9	Chicago-Naperville-Michigan City, IL-IN-WI	9,745,165	2,514,619	1,067,601	228,604	601,160	242,586	115,412	2,529,721	539,206
9	Detroit-Warren-Flint, MI	5,405,918	1,344,926	645,820	122,268	380,857	139,501	69,019	1,479,974	318,683
11	Indianapolis-Anderson-Columbus, IN	2,014,267	529,001	225,995	48,091	130,321	50,201	24,207	526,608	112,621
12	Visalia-Porterville, CA	421,553	134,499	39,663	12,227	21,524	9,305	4,190	94,813	19,898
13	Eugene-Springfield, OR	343,591	69,463	48,187	6,315	26,418	9,465	4,780	101,414	21,907
14	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,241,912	2,006,709	872,143	182,430	513,892	209,541	99,161	2,179,127	464,484
15	Hanford-Corcoran, CA	148,875	40,640	11,124	3,695	8,084	3,301	1,299	31,841	6,458
16	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,961,994	5,173,130	2,824,292	470,288	1,447,924	574,690	285,495	6,111,329	1,315,110
17	Modesto, CA	511,263	147,066	52,226	13,370	27,347	11,976	5,529	123,315	26,056
18	Merced, CA	245,514	77,534	23,405	7,049	12,588	5,429	2,438	55,266	11,585
19	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN	1,332,214	324,395	165,296	29,490	89,830	34,720	17,313	369,687	79,721
20	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,385,461	1,539,070	834,464	139,917	435,170	167,232	84,143	1,788,499	386,150
20	San Jose-San Francisco-Oakland, CA	7,264,887	1,639,367	861,264	149,035	423,837	190,849	92,528	2,006,694	429,823
22	Provo-Orem, UT	493,306	169,546	31,347	15,413	25,908	9,646	3,611	91,284	18,255
23	San Diego-Carlsbad-San Marcos, CA	2,974,859	741,404	330,820	67,401	167,704	73,751	34,396	762,821	161,535
24	Harrisburg-Carlisle-Lebanon, PA	656,781	146,271	96,234	13,298	47,490	17,925	9,323	194,665	42,344
25	St. Louis-St. Charles-Farmington, MO-IL	2,890,593	703,793	372,199	63,982	184,766	75,542	37,992	807,635	174,421

Notes:
(1) Cities are ranked using the highest weighted average for any county within that metropolitan statistical area.
(2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.
(3) Those **18 & under** and **65 & 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 2007 based on national rates (NHIS) applied to county 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 during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(8) **CV disease** estimates are based on National Heart Lung and Blood Institute (NHLBI) estimates of cardiovascular disease applied to county population estimates (U.S. Census).
(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

2009 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8,10]	Diabetes[9,10]
1	Bakersfield, CA	790,710	237,021	69,710	21,548	41,503	17,709	7,723	177,982	37,077
2	Pittsburgh-New Castle, PA	2,446,703	507,784	419,558	46,163	177,396	69,954	38,243	777,887	171,074
3	Los Angeles-Long Beach-Riverside, CA	17,755,322	4,737,865	1,849,322	430,719	977,873	428,819	198,167	4,416,799	933,827
4	Visalia-Porterville, CA	421,553	134,499	39,663	12,227	21,524	9,305	4,190	94,813	19,898
5	Birmingham-Hoover-Cullman, AL	1,188,764	289,712	153,673	26,338	78,595	30,989	15,555	331,055	71,441
6	Hanford-Corcoran, CA	148,875	40,640	11,124	3,695	8,084	3,301	1,299	31,841	6,458
7	Fresno-Madera, CA	1,045,861	309,724	102,399	28,157	55,216	23,939	10,840	244,484	51,388
8	Cincinnati-Middletown-Wilmington, OH-KY-IN	2,176,749	548,199	258,266	49,837	144,472	55,519	27,209	586,626	125,943
9	Detroit-Warren-Flint, MI	5,405,918	1,344,926	645,820	122,268	380,857	139,501	69,019	1,479,974	318,683
10	Cleveland-Akron-Elyria, OH	2,896,968	685,096	411,961	62,282	193,475	77,860	40,524	845,716	184,099
11	Charleston, WV	303,950	66,486	47,045	6,044	21,312	8,505	4,551	93,571	20,506
11	Huntington-Ashland, WV-KY-OH	284,026	61,030	44,610	5,548	19,934	7,856	4,139	85,861	18,713
11	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN	1,332,214	324,395	165,296	29,490	89,830	34,720	17,313	369,687	79,721
14	Macon-Warner Robins-Fort Valley, GA	386,534	102,065	45,073	9,278	21,597	9,673	4,727	102,072	21,892
14	St. Louis-St. Charles-Farmington, MO-IL	2,890,593	703,793	372,199	63,982	184,766	75,542	37,992	807,635	174,421
16	Weirton-Steubenville, WV-OH	122,580	24,215	23,297	2,201	8,616	3,623	2,050	40,970	9,079
17	Atlanta-Sandy Springs-Gainesville, GA-AL	5,626,400	1,521,556	467,243	138,325	311,600	133,797	59,199	1,351,339	283,618
18	Indianapolis-Anderson-Columbus, IN	2,014,267	529,001	225,995	48,091	130,321	50,201	24,207	526,608	112,621
18	Rome, GA	95,618	23,801	13,654	2,164	5,441	2,476	1,264	26,675	5,765
20	Canton-Massillon, OH	407,180	93,626	62,939	8,512	27,270	11,182	5,969	122,909	26,899
20	York-Hanover-Gettysburg, PA	521,828	120,265	71,421	10,933	37,560	13,972	7,131	150,396	32,584
22	Lancaster, PA	498,465	125,753	71,955	11,432	34,753	13,026	6,767	141,433	30,724
22	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,961,994	5,173,130	2,824,292	470,288	1,447,924	574,690	285,495	6,111,329	1,315,110
24	Hagerstown-Martinsburg, MD-WV	261,198	62,892	33,213	5,718	16,957	6,731	3,309	71,251	15,281
24	Houston-Baytown-Huntsville, TX	5,729,027	1,612,940	469,062	146,633	337,275	133,968	59,157	1,351,987	283,571

Notes:
(1) Cities are ranked using the highest design value for any county within that metropolitan statistical area.
(2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.
(3) Those **18 & under** and **65 & 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 2007 based on national rates (NHIS) applied to county 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 during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(8) **CV disease** estimates are based on National Heart Lung and Blood Institute (NHLBI) estimates of cardiovascular disease applied to county population estimates (U.S. Census).
(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

People at Risk In 25 Most Ozone-Polluted Cities

2009 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,8]	Adult Asthma[5,8]	Chronic Bronchitis[6,8]	Emphysema[7,8]
1	Los Angeles-Long Beach-Riverside, CA	17,755,322	4,737,865	1,849,322	430,719	977,873	428,819	198,167
2	Bakersfield, CA	790,710	237,021	69,710	21,548	41,503	17,709	7,723
3	Visalia-Porterville, CA	421,553	134,499	39,663	12,227	21,524	9,305	4,190
4	Fresno-Madera, CA	1,045,861	309,724	102,399	28,157	55,216	23,939	10,840
5	Houston-Baytown-Huntsville, TX	5,729,027	1,612,940	469,062	146,633	337,275	133,968	59,157
6	Sacramento--Arden-Arcade--Yuba City, CA-NV	2,397,691	591,294	284,980	53,755	135,649	60,679	29,190
7	Dallas-Fort Worth, TX	6,498,410	1,798,184	559,482	163,473	385,101	152,456	67,352
8	Charlotte-Gastonia-Salisbury, NC-SC	2,277,074	585,184	238,952	53,199	131,101	56,689	26,761
9	Phoenix-Mesa-Scottsdale, AZ	4,179,427	1,140,354	472,541	103,670	260,150	101,155	48,005
10	El Centro, CA	161,867	47,423	16,913	4,311	8,571	3,713	1,691
11	Hanford-Corcoran, CA	148,875	40,640	11,124	3,695	8,084	3,301	1,299
12	Las Vegas-Paradise-Pahrump, NV	1,880,449	494,380	199,688	44,944	94,854	46,154	21,674
13	San Diego-Carlsbad-San Marcos, CA	2,974,859	741,404	330,820	67,401	167,704	73,751	34,396
14	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,241,912	2,006,709	872,143	182,430	513,892	209,541	99,161
15	Cincinnati-Middletown-Wilmington, OH-KY-IN	2,176,749	548,199	258,266	49,837	144,472	55,519	27,209
16	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,385,461	1,539,070	834,464	139,917	435,170	167,232	84,143
17	St. Louis-St. Charles-Farmington, MO-IL	2,890,593	703,793	372,199	63,982	184,766	75,542	37,992
17	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,961,994	5,173,130	2,824,292	470,288	1,447,924	574,690	285,495
19	Knoxville-Sevierville-La Follette, TN	1,029,155	227,580	148,377	20,689	69,468	27,885	14,317
20	Birmingham-Hoover-Cullman, AL	1,188,764	289,712	153,673	26,338	78,595	30,989	15,555
21	Baton Rouge-Pierre Part, LA	793,028	202,254	81,268	18,387	37,014	19,552	9,051
22	Kansas City-Overland Park-Kansas City, MO-KS	2,053,928	530,224	233,084	48,203	128,867	51,779	25,151
23	Atlanta-Sandy Springs-Gainesville, GA-AL	5,626,400	1,521,556	467,243	138,325	311,600	133,797	59,199
24	Merced, CA	245,514	77,534	23,405	7,049	12,588	5,429	2,438
25	Memphis, TN-MS-AR	1,280,533	352,214	130,189	32,020	76,368	31,237	14,812

Notes:
(1) Cities are ranked using the highest weighted average for any county within that metropolitan statistical area.
(2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.
(3) Those **18 & under** and **65 & 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 2007 based on national rates (NHIS) applied to county 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 during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(8) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

2009 Rank[1]	County	ST	Total Population[2]	At-Risk Groups								High $PM_{2.5}$ Days in Unhealthy Ranges, 2005-2007	
				Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8]	Diabetes[9]	Weighted Avg.[11]	Grade[12]
1	Allegheny	PA	1,219,210	253,521	205,511	23,048	88,567	34,705	18,848	384,708	84,479	55.5	F
2	Fresno	CA	899,348	268,840	87,342	24,440	47,296	20,503	9,278	209,328	43,995	51.0	F
3	Kern	CA	790,710	237,021	69,710	21,548	41,503	17,709	7,723	177,982	37,077	47.5	F
4	Riverside	CA	2,073,571	582,711	233,367	52,974	111,620	48,630	22,507	501,715	105,771	39.0	F
5	Jefferson	AL	658,779	158,741	88,364	14,431	43,762	17,371	8,841	186,743	40,432	36.0	F
6	Los Angeles	CA	9,878,554	2,582,550	1,030,100	234,780	548,194	240,506	111,145	2,477,053	523,822	28.7	F
7	Salt Lake	UT	1,009,518	297,294	85,972	27,027	57,606	22,947	10,058	231,008	48,262	24.5	F
8	Sacramento	CA	1,386,667	362,861	154,056	32,988	76,932	34,049	16,063	353,901	75,181	23.5	F
9	Cache	UT	108,887	34,015	8,208	3,092	6,003	2,272	894	21,923	4,438	17.5	F
10	Cook	IL	5,285,107	1,319,728	618,729	119,977	326,958	133,325	64,106	1,397,286	298,297	14.3	F
10	Wayne	MI	1,985,101	529,335	234,076	48,122	136,555	49,947	24,716	529,996	114,087	14.3	F
12	Marion	IN	876,804	234,486	94,581	21,317	56,193	21,520	10,217	224,213	47,762	13.7	F
13	Tulare	CA	421,553	134,499	39,663	12,227	21,524	9,305	4,190	94,813	19,898	13.5	F
14	Lane	OR	343,591	69,463	48,187	6,315	26,418	9,465	4,780	101,414	21,907	13.2	F
15	San Bernardino	CA	2,007,800	597,417	165,379	54,311	105,834	45,095	19,471	451,164	93,887	13.0	F
15	Baltimore City	MD	637,455	155,155	75,658	14,105	39,656	16,254	7,844	170,623	36,462	13.0	F
17	Kings	CA	148,875	40,640	11,124	3,695	8,084	3,301	1,299	31,841	6,458	12.8	F
18	Orange	CA	2,997,033	766,234	331,797	69,658	167,815	74,630	35,414	777,475	165,540	12.2	F
19	Union	NJ	524,658	130,760	65,865	11,887	32,748	13,571	6,786	144,705	31,213	12.0	F
20	Stanislaus	CA	511,263	147,066	52,226	13,370	27,347	11,976	5,529	123,315	26,056	11.7	F
20	Washington	PA	205,553	42,168	35,282	3,833	14,952	5,892	3,219	65,498	14,402	11.7	F
22	Merced	CA	245,514	77,534	23,405	7,049	12,588	5,429	2,438	55,266	11,585	11.5	F
23	Jefferson	KY	709,264	170,787	94,963	15,526	48,204	18,771	9,587	202,101	43,812	11.3	F
24	Santa Clara	CA	1,748,976	419,320	186,665	38,120	100,048	44,224	20,662	457,498	97,105	11.0	F
24	Philadelphia	PA	1,449,634	363,648	186,573	33,059	103,046	36,802	18,128	390,049	83,636	11.0	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 **18 & under** and **65 & 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 2007 based on national rates (NHIS) applied to county 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 during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(8) **CV disease** estimates are based on National Heart Lung and Blood Institute (NHLBI) estimates of cardiovascular disease applied to county population estimates (U.S. Census).
(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.
(11) The **Weighted Average** was derived by counting the number of days in each unhealthful range (orange, red, purple, maroon) in each year (2005-2007), 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 Long-term Particle Pollution (Annual $PM_{2.5}$)

2009 Rank[1]	County	ST	Total Population[2]	At-Risk Groups								$PM_{2.5}$ Annual 2005–2007	
				Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8]	Diabetes[9]	Design Value[11]	Pass/ Fail[12]
1	Kern	CA	790,710	237,021	69,710	21,548	41,503	17,709	7,723	177,982	37,077	20.3	FAIL
2	Allegheny	PA	1,219,210	253,521	205,511	23,048	88,567	34,705	18,848	384,708	84,479	19.8	FAIL
3	Riverside	CA	2,073,571	582,711	233,367	52,974	111,620	48,630	22,507	501,715	105,771	19.6	FAIL
4	Tulare	CA	421,553	134,499	39,663	12,227	21,524	9,305	4,190	94,813	19,898	19.3	FAIL
5	Jefferson	AL	658,779	158,741	88,364	14,431	43,762	17,371	8,841	186,743	40,432	18.9	FAIL
6	San Bernardino	CA	2,007,800	597,417	165,379	54,311	105,834	45,095	19,471	451,164	93,887	18.5	FAIL
7	Kings	CA	148,875	40,640	11,124	3,695	8,084	3,301	1,299	31,841	6,458	17.6	FAIL
8	Fresno	CA	899,348	268,840	87,342	24,440	47,296	20,503	9,278	209,328	43,995	17.4	FAIL
9	Hamilton	OH	842,369	205,266	112,942	18,661	56,046	22,139	11,277	238,097	51,559	17.3	FAIL
10	Wayne	MI	1,985,101	529,335	234,076	48,122	136,555	49,947	24,716	529,996	114,087	17.2	FAIL
11	Los Angeles	CA	9,878,554	2,582,550	1,030,100	234,780	548,194	240,506	111,145	2,477,053	523,822	17.1	FAIL
12	Cuyahoga	OH	1,295,958	307,509	195,936	27,956	86,090	35,135	18,656	385,273	84,217	16.8	FAIL
13	Kanawha	WV	191,306	40,821	31,633	3,711	13,510	5,448	2,974	60,518	13,319	16.6	FAIL
13	Clark	IN	105,035	25,356	13,219	2,305	6,989	2,731	1,356	29,030	6,249	16.6	FAIL
13	Cabell	WV	94,435	19,407	15,334	1,764	6,738	2,621	1,373	28,583	6,213	16.6	FAIL
16	Madison	IL	267,347	62,322	37,242	5,666	16,898	7,071	3,586	75,926	16,402	16.5	FAIL
16	Bibb	GA	154,709	41,945	19,842	3,813	8,563	3,892	1,966	41,702	9,007	16.5	FAIL
16	Beaver	PA	173,074	35,777	31,630	3,252	12,443	5,029	2,818	56,593	12,516	16.5	FAIL
19	Brooke	WV	23,661	4,482	4,556	407	1,723	707	401	8,003	1,774	16.4	FAIL
20	Clayton	GA	272,217	81,802	18,323	7,437	14,415	6,054	2,531	59,720	12,365	16.2	FAIL
21	Marion	IN	876,804	234,486	94,581	21,317	56,193	21,520	10,217	224,213	47,762	16.1	FAIL
21	Floyd	GA	95,618	23,801	13,654	2,164	5,441	2,476	1,264	26,675	5,765	16.1	FAIL
21	Jefferson	OH	68,730	13,635	13,066	1,240	4,729	2,023	1,141	22,843	5,057	16.1	FAIL
24	York	PA	421,049	97,661	57,226	8,878	30,222	11,270	5,758	121,361	26,307	16	FAIL
24	Cobb	GA	691,905	181,550	56,954	16,505	38,794	16,826	7,548	170,859	36,034	16	FAIL
24	Stark	OH	378,664	87,280	58,696	7,935	25,341	10,392	5,551	114,267	25,010	16	FAIL

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 **18 & under** and **65 & 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 2007 based on national rates (NHIS) applied to county 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 during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(8) **CV disease** estimates are based on National Heart Lung and Blood Institute (NHLBI) estimates of cardiovascular disease applied to county population estimates (U.S. Census).
(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.
(11) 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 source for the Design Values is EPA, Office of Air Quality Planning & Standards, available at http://www.epa.gov/air/airtrends/values.html, downloaded September 12, 2008.
(12) **Grades** are based on EPA's determination of meeting or failure to meet the NAAQS for annual $PM_{2.5}$ levels during 2005-2007. 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

2009 Rank[1]	County	ST	Total Population[2]	At-Risk Groups						High Ozone Days in Unhealthy Ranges, 2005-2007	
				Under 18[3]	65 and Over[3]	Pediatric Asthma[4,8]	Adult Asthma[5,8]	Chronic Bronchitis[6,8]	Emphysema[7,8]	Weighted Avg.[9]	Grade[10]
1	San Bernardino	CA	2,007,800	597,417	165,379	54,311	105,834	45,095	19,471	138.8	F
2	Riverside	CA	2,073,571	582,711	233,367	52,974	111,620	48,630	22,507	129.5	F
3	Kern	CA	790,710	237,021	69,710	21,548	41,503	17,709	7,723	110.5	F
4	Tulare	CA	421,553	134,499	39,663	12,227	21,524	9,305	4,190	101.2	F
5	Los Angeles	CA	9,878,554	2,582,550	1,030,100	234,780	548,194	240,506	111,145	96.5	F
6	Fresno	CA	899,348	268,840	87,342	24,440	47,296	20,503	9,278	62.7	F
7	Harris	TX	3,935,855	1,132,408	306,779	102,947	229,730	90,690	39,502	53.7	F
8	El Dorado	CA	175,689	38,421	19,893	3,493	10,384	4,750	2,341	49.7	F
9	Nevada	CA	97,027	17,765	17,087	1,615	5,994	2,899	1,605	49.5	F
10	Placer	CA	332,920	73,398	49,152	6,673	19,506	8,942	4,559	43.3	F
11	Tarrant	TX	1,717,435	483,789	144,105	43,981	101,080	40,063	17,688	38.8	F
12	Sacramento	CA	1,386,667	362,861	154,056	32,988	76,932	34,049	16,063	37.5	F
13	Rowan	NC	137,383	32,515	19,373	2,956	8,198	3,648	1,872	37.3	F
14	Maricopa	AZ	3,880,181	1,063,282	432,375	96,663	241,050	93,704	44,350	36.8	F
15	Ventura	CA	798,364	208,953	88,679	18,996	44,410	19,958	9,630	34.2	F
16	Imperial	CA	161,867	47,423	16,913	4,311	8,571	3,713	1,691	32.8	F
17	Kings	CA	148,875	40,640	11,124	3,695	8,084	3,301	1,299	32.5	F
18	Clark	NV	1,836,333	485,273	190,174	44,116	92,418	44,862	20,923	30.5	F
19	Dallas	TX	2,366,511	667,478	199,401	60,680	139,207	54,747	23,913	29.8	F
20	San Diego	CA	2,974,859	741,404	330,820	67,401	167,704	73,751	34,396	29.5	F
21	Mecklenburg	NC	867,067	230,633	70,952	20,967	49,470	20,719	9,128	29.3	F
22	Denton	TX	612,357	169,092	34,308	15,372	36,340	13,780	5,429	29.0	F
23	Fairfax	VA	1,010,241	245,455	96,133	22,314	61,474	26,260	12,598	28.8	F
24	Hamilton	OH	842,369	205,266	112,942	18,661	56,046	22,139	11,277	28.5	F
25	Camden	NJ	513,769	128,429	62,967	11,675	32,060	13,199	6,534	27.3	F
25	Mariposa	CA	18,036	3,162	3,280	287	1,121	534	292	27.3	F

Notes:
(1) Counties are ranked by weighted average. See note 10 below.
(2) **Total Population** represents the at-risk populations in counties with ozone monitors.
(3) Those **18 & under** and **65 & over** are vulnerable to ozone 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 2007 based on national rates (NHIS) applied to county 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 during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).
(8) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.
(9) The **Weighted Average** was derived by counting the number of days in each unhealthful range (orange, red, purple) in each year (2005-2007), 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.
(10) **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	149,837
Amarillo, TX	242,240
Austin-Round Rock, TX	1,598,161
Bismarck, ND	103,242
Brownsville-Harlingen-Raymondville, TX	407,723
Cheyenne, WY	86,353
Colorado Springs, CO	609,096
Corpus Christi-Kingsville, TX	414,376
Fargo-Wahpeton, ND-MN	215,333
Farmington, NM	122,427
Fort Collins-Loveland, CO	287,574
Grand Junction, CO	139,082
Longview-Marshall, TX	267,115
Midland-Odessa, TX	255,978
Oklahoma City-Shawnee, OK	1,262,027
Portland-Lewiston-South Portland, ME	619,917
Pueblo, CO	154,538
Redding, CA	179,427
Salinas, CA	407,637
San Luis Obispo-Paso Robles, CA	262,436
Santa Barbara-Santa Maria-Goleta, CA	404,197
Santa Fe-Espanola, NM	183,782
Sioux Falls, SD	227,171
Tucson, AZ	967,089

Notes:
(1) This list represents cities with the lowest levels of short term $PM_{2.5}$ air pollution. Monitors in these cities reported no days with unhealthful $PM_{2.5}$ levels.

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

Rank[2]	Design Value[3]	Metropolitan Statistical Area	Population
1	4.3	Cheyenne, WY	86,353
2	4.7	Santa Fe-Espanola, NM	183,782
3	4.9	Honolulu, HI	905,601
4	5.8	Great Falls, MT	81,775
4	5.8	Farmington, NM	122,427
6	6.0	Anchorage, AK	362,340
6	6.0	Tucson, AZ	967,089
8	6.7	Bismarck, ND	103,242
9	6.9	Flagstaff, AZ	127,450
9	6.9	Salinas, CA	407,637
11	7.2	Redding, CA	179,427
12	7.4	Fort Collins-Loveland, CO	287,574
13	7.6	Duluth, MN-WI	274,308
14	7.7	Colorado Springs, CO	609,096
14	7.7	Pueblo, CO	154,538
14	7.7	Fargo-Wahpeton, ND-MN	215,333
17	7.8	Albuquerque, NM	835,120
18	7.9	San Luis Obispo-Paso Robles, CA	262,436
19	8.0	Midland-Odessa, TX	255,978
20	8.2	Palm Bay-Melbourne-Titusville, FL	536,161
20	8.2	Boise City-Nampa, ID	587,698
20	8.2	Reno-Sparks-Fernley, NV	462,751
23	8.3	Cape Coral-Fort Myers, FL	590,564
24	8.5	Port St. Lucie-Sebastian-Vero Beach, FL	531,958
25	8.6	Billings, MT	149,657
25	8.6	Lincoln, NE	292,219

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 National Ambient Air Quality Standard, and is used by the EPA to determine whether the air quality in a county meets the standard. The source for the Design Values is the EPA, Office of Air Quality Planning & Standards, available at http://www.epa.gov/air/airtrends/values.html, downloaded September 12, 2008.

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

Metropolitan Statistical Area	Population
Billings, MT	149,657
Carson City, NV	54,939
Coeur d'Alene, ID	134,442
Fargo-Wahpeton, ND-MN	215,333
Honolulu, HI	905,601
Laredo, TX	233,152
Lincoln, NE	292,219
Port St. Lucie-Sebastian-Vero Beach, FL	531,958
Sioux Falls, SD	227,171

Notes:
(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	ST	MSAs and Respective CSA[2]
Baldwin	AL	Mobile-Daphne-Fairhope, AL
Gila	AZ	
Pima	AZ	Tucson, AZ
Polk	AR	
Calaveras	CA	
Humboldt	CA	
Lake	CA	
Mendocino	CA	
Monterey	CA	Salinas, CA
Nevada	CA	Sacramento--Arden-Arcade--Yuba City, CA-NV
San Luis Obispo	CA	San Luis Obispo-Paso Robles, CA
Santa Barbara	CA	Santa Barbara-Santa Maria-Goleta, CA
Santa Cruz	CA	San Jose-San Francisco-Oakland, CA
Shasta	CA	Redding, CA
Boulder	CO	Denver-Aurora-Boulder, CO
Elbert	CO	Denver-Aurora-Boulder, CO
El Paso	CO	Colorado Springs, CO
Larimer	CO	Fort Collins-Loveland, CO
Mesa	CO	Grand Junction, CO
Pueblo	CO	Pueblo, CO
Citrus	FL	
Maui	HI	
Johnson	KS	Kansas City-Overland Park-Kansas City, MO-KS
Linn	KS	Kansas City-Overland Park-Kansas City, MO-KS
Rapides Parish	LA	Alexandria, LA
St. Tammany Parish	LA	New Orleans-Metairie-Bogalusa, LA
Androscoggin	ME	Portland-Lewiston-South Portland, ME
Aroostook	ME	
Cumberland	ME	Portland-Lewiston-South Portland, ME
Hancock	ME	
Kennebec	ME	
Oxford	ME	
Middlesex	MA	Boston-Worcester-Manchester, MA-RI-NH
Missaukee	MI	
Cass	MO	Kansas City-Overland Park-Kansas City, MO-KS
Clay	MO	Kansas City-Overland Park-Kansas City, MO-KS
Hall	NE	
Scotts Bluff	NE	
Cheshire	NH	
Grafton	NH	Claremont-Lebanon, NH-VT
Chaves	NM	
Grant	NM	
Lea	NM	
San Juan	NM	Farmington, NM
Santa Fe	NM	Santa Fe-Espanola, NM
St. Lawrence	NY	
Chatham	NC	Raleigh-Durham-Cary, NC
Duplin	NC	
Haywood	NC	Asheville-Brevard, NC
Orange	NC	Raleigh-Durham-Cary, NC
Billings	ND	
Burleigh	ND	Bismarck, ND
Cass	ND	Fargo-Wahpeton, ND-MN
Mercer	ND	
Oklahoma	OK	Oklahoma City-Shawnee, OK
Ottawa	OK	
Josephine	OR	
Brookings	SD	
Brown	SD	
Codington	SD	
Custer	SD	
Jackson	SD	
Minnehaha	SD	Sioux Falls, SD
Roane	TN	Knoxville-Sevierville-La Follette, TN
Brewster	TX	
Cameron	TX	Brownsville-Harlingen-Raymondville, TX
Ector	TX	Midland-Odessa, TX
Ellis	TX	Dallas-Fort Worth, TX
Harrison	TX	Longview-Marshall, TX
Nueces	TX	Corpus Christi-Kingsville, TX
Potter	TX	Amarillo, TX
Travis	TX	Austin-Round Rock, TX
Ashland	WI	
Forest	WI	
Taylor	WI	
Vilas	WI	
Campbell	WY	
Converse	WY	
Laramie	WY	Cheyenne, WY

Notes:
(1) This list represents cities with the lowest levels of short term $PM_{2.5}$ air pollution. Monitors in these cities reported no days with unhealthful $PM_{2.5}$ levels.
(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 multiple metropolitan statistical areas and individual counties.

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

2008 Rank[2]	County	ST	Design Value[3]
1	Gallatin	MT	4.3
1	Laramie	WY	4.3
3	Lake	CA	4.5
3	Elbert	CO	4.5
5	Maui	HI	4.7
5	Santa Fe	NM	4.7
5	Billings	ND	4.7
8	Honolulu	HI	4.9
9	Jackson	SD	5.4
10	Inyo	CA	5.5
10	Hancock	ME	5.5
12	Custer	SD	5.6
13	Cass	MN	5.7
14	Cascade	MT	5.8
14	San Juan	NM	5.8
16	Mendocino	CA	5.9
16	Essex	NY	5.9
18	Anchorage Municipality	AK	6.0
18	Pima	AZ	6.0
18	Scotts Bluff	NE	6.0
21	Mercer	ND	6.2
21	Ashland	WI	6.2
23	Nevada	CA	6.4
24	Chaves	NM	6.6
25	Mille Lacs	MN	6.7
25	Burleigh	ND	6.7

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 National Ambient Air Quality Standard, and is used by the EPA to determine whether the air quality in a county meets the standard. The source for the Design Values is EPA, Office of Air Quality Planning & Standards, available at http://www.epa.gov/air/airtrends/values.html, downloaded September 12, 2008.

Cleanest Counties for Ozone Air Pollution[1]

County	State	
Yukon-Koyukuk Borough	AK	
Lake	CA	
Marin	CA	San Jose-San Francisco-Oakland, CA
Mendocino	CA	
Napa	CA	San Jose-San Francisco-Oakland, 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
St. Lucie	FL	Port St. Lucie-Sebastian-Vero Beach, FL
Wakulla	FL	Tallahassee, FL
Honolulu	HI	Honolulu, HI
Butte	ID	
Kootenai	ID	Coeur d'Alene, ID
Palo Alto	IA	
Becker	MN	
Carlton	MN	Duluth, MN-WI
Lyon	MN	
Flathead	MT	
Yellowstone	MT	Billings, MT
Douglas	NE	Omaha-Council Bluffs-Fremont, NE-IA
Lancaster	NE	Lincoln, NE
Carson City	NV	Carson City, NV
Grant	NM	
Billings	ND	
Burke	ND	
Cass	ND	Fargo-Wahpeton, ND-MN
Dunn	ND	
Mckenzie	ND	
Mercer	ND	
Oliver	ND	
Columbia	OR	Portland-Vancouver-Beaverton, OR-WA
Jackson	SD	
Minnehaha	SD	Sioux Falls, SD
Brewster	TX	
Webb	TX	Laredo, TX
San Juan	UT	
Clallam	WA	
Ashland	WI	

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

Health Effects of Ozone and Particle Pollution

New evidence shows that the **risks** from ozone and particle pollution **are greater than we thought.**

Ozone and particle pollution are the most widespread air pollutants—and among the most dangerous. Recent research has revealed new insights into how they can harm the body—including taking the lives of infants and altering the lungs of children. All in all, the evidence shows that the risks are greater than we once thought.

Recent findings provide more evidence about the health impacts of these pollutants:

- **Reducing air pollution has extended life expectancy.** Thanks to a drop in particle pollution between 1980 and 2000, life expectancy in 51 U.S. cities increased by 5 months on average, according to a recent analysis.[1]
- **The annual death toll from particle pollution may be even greater than previously understood.** The California Air Resources Board recently tripled the estimate of premature deaths in California from particle pollution to 18,000 annually.[2]
- **Long term exposure to air pollution—especially from highway traffic—harms women, even while in their 50s.** Exposure to particle pollution to appears to increase women's risk of lower lung function, developing chronic obstructive pulmonary disease (COPD), and dying prematurely.[3]
- **Busy highways are high risk zones.** Pollution from heavy highway traffic contributes to higher risks for heart attack, allergies, premature births and the death of infants around the time they are born.[4] New studies looking at the impact of traffic pollution even in cities with generally "cleaner" air expanded the concern over the health effects of chronic exposure to exhaust from heavy traffic.
- **Ozone pollution can shorten life, a conclusion confirmed by the latest scientific review by the National Research Council.**[5] New evidence appeared that some segments of the population may face higher risks from dying prematurely because of ozone pollution, including communities with high unemployment or high public transit use and Blacks.[6]
- **Truck drivers, dockworkers and railroad workers may face higher risk of death from lung cancer and COPD from breathing diesel emissions on the job.** Studies found that these workers who inhaled diesel exhaust on the job were much more likely to die from lung cancer, COPD and heart disease.[7]

Two types of air pollution dominate the problem in the U.S.—ozone and particle pollution. They aren't the only serious air pollutants: others include carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide, as well as hundreds of toxic substances. However, ozone and particle pollution represent the most widespread.

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. First of all, the 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. You may not be able to tell when you're breathing particle pollution. Yet it is so dangerous it can shorten your life.

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 blood stream, 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 $PM_{10\text{-}2.5}$. 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[8] 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 be harmful to your health.

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 U.S. Environmental Protection Agency puts it, particles are really "a mixture of mixtures." [9] 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 in the summer, 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.[10]

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.[11] Dust storms, construction and demolition, mining operations, and agriculture are among the activities that produce coarse particles.

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.[12] 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.

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 showing up in new studies that validate earlier research.[13]

Good news came this year from researchers who looked at the impact of the drop in year-round levels of particle pollution between 1980 and 2000 in 51 US cities. Thanks to reductions in particle pollution people living in these cities

had 5 months on average added to their life expectancy.[14] This study adds to the growing research that cleaning up air pollution improves life and health. 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.[15]

Researchers these days 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 all particles from all sources are dangerous.[16]

Particle pollution can damage the body in ways similar to cigarette smoking. A recent review of the research on how particles cause harm found that the body responds to particles in similar ways to its response to cigarette smoke. These findings help explain why particle pollution can cause heart attacks and strokes.[17]

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.[18]

Researchers from Harvard University recently tripled the estimated risk of premature death following a review of the newer evidence from fine particle monitors ($PM_{2.5}$) in 27 US cities.[19] As mentioned earlier, scientists at the California Air Resources Board also tripled their estimate of the number of deaths occurring each year from particle pollution. They now put the range between 5,600 to 32,000 deaths a year in that state alone.[20]

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;[21, 22, 23, 24]
- increased mortality in infants and young children;[25]
- increased numbers of heart attacks, especially among the elderly and in people with heart conditions;[26]
- inflammation of lung tissue in young, healthy adults;[27]
- increased hospitalization for cardiovascular disease, including strokes and congestive heart failure;[28, 29, 30]
- increased emergency room visits for patients suffering from acute respiratory ailments;[31]
- increased hospitalization for asthma among children; and[32, 33, 34]
- increased severity of asthma attacks in children.[35]

Lifeguards in Galveston, Texas, provided evidence of the impact 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 reduced lung volume at the end of the day when fine particle levels were high. This occurred even when the levels were well below the national standards. Because of this research, Galveston became the first city in the nation to install an air quality warning flag system on the beach.[36]

Year-Round Exposure

Breathing high levels of particle pollution day in and day out also can be deadly, as landmark studies in the 1990s

showed conclusively.[37] Chronic exposure to particle pollution can shorten life by one to three years.[38] Other impacts range from premature births to serious respiratory disorders, even when the particle levels are very low.

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;[39, 40]
- slowed lung function growth in children and teenagers;[41, 42]
- significant damage to the small airways of the lungs;[43]
- increased risk of dying from lung cancer[44]; and
- increased risk of death from cardiovascular disease.[45]

Alarmingly, the risks may be even greater than previously thought. Earlier studies of the long-term health risks of air pollution relied on estimates of the average exposure to people in the community. New evidence from studies published since 2005 suggests that those estimates may be far too low. California just completed a review of this research and tripled the estimate of the number of people killed each year by particle pollution: 18,000 premature deaths annually, with a range of 5,600 to 32,000 deaths.[46]

New 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.[47]

Who Is at Risk?

Anyone living in an area with a high level of particle pollution is at risk (you can take a look at levels in your state in this report). People at the greatest risk from particle pollution exposure include those with lung disease such as asthma and chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis and emphysema; people with sensitive airways, where exposure to particle pollution can cause wheezing, coughing and respiratory irritation; the elderly; people with heart disease; and children. New research points to ever-larger groups at higher risk, including diabetics, and most recently, women over 50.[48]

Researchers are identifying increased risk for workers whose jobs expose them to heavy diesel exhaust as a routine part of their job. The risk of dying from lung cancer and heart disease is markedly higher in truck drivers than in the general population in the U.S., according to a study by Harvard University researchers.[49] This study of over 50,000 members of the Teamsters Union employed from 1985 to 2000 looked at the cause of death of workers classified by job category. Truckers are exposed to traffic pollution and diesel engine emissions, while dockworkers are exposed to exhaust from forklifts and trucks in the shipyard. The study found that death rates for heart disease were 49 percent higher among truck drivers, and 32 percent higher among dockworkers than in the general U.S. population. Lung cancer death rates were 10 percent higher in both the drivers and the dockworkers. Railroad workers have also faced higher risks of death from lung cancer and COPD, according to two studies looking at historical data for those workers.[50]

What Is Ozone?

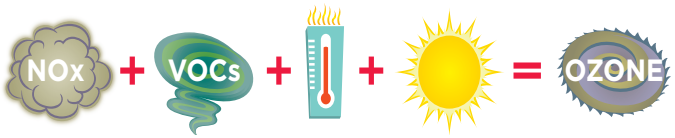
Ozone (O_3) is an extremely reactive gas molecule composed of three oxygen atoms. It is the primary ingredient of smog air pollution and is very harmful to breathe. Ozone attacks lung tissue by reacting chemically with it.

News about ozone can be confusing. Some days you hear that ozone levels are too high and other days that we need to prevent ozone depletion. Basically, the ozone layer found high in the upper atmosphere (the stratosphere) is beneficial because it 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) is harmful. It causes serious health problems.

Where Does Ozone Come From?

What you see coming out of the tailpipe on a car or a truck isn't ozone, but the raw ingredients for making ozone. Ozone is formed by chemical reactions in the atmosphere from two raw gases that do come out of tailpipes, smokestacks and many other sources. These essential raw ingredients for ozone are nitrogen oxides (NO_x) and hydrocarbons, also called volatile organic compounds (VOCs). They are produced primarily when fossil fuels like gasoline, oil or coal are burned or when some chemicals, like solvents, evaporate. When NO_x and VOCs come in contact with both heat and sunlight, they combine and form ozone smog. 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. The formula for ozone is simple, and like any formula, the ingredients must all be present and in the right proportions to make the final product.



You may have wondered why "ozone action day" warnings are sometimes followed by recommendations to avoid activities such as mowing your lawn or refilling your gas tank during daylight hours. Lawn mower exhaust and gasoline vapors are VOCs that could turn into ozone in the heat and sun. Take away the sunlight and ozone doesn't form, so refilling your gas tank after dark is better on high ozone days. Since we can't control sunlight and heat, we must reduce the chemical raw ingredients if we want to reduce ozone.

Who is at risk from breathing ozone?

Five groups of people are especially vulnerable to the effects of breathing ozone:

- children and teens;
- anyone 65 and older;
- people who work or exercise outdoors;
- people with existing lung diseases, such as asthma and chronic obstructive pulmonary disease (also known as COPD, which includes emphysema and chronic bronchitis); and
- "responders" who are otherwise healthy but for some reason react more strongly to ozone.

The impact on your health can depend on many factors, however, not just whether you are part of one of these groups. 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.

Again, the impact of even short-term exposure to ozone on healthy adults showed up in the Galveston lifeguard study in addition to the harmful effects of particle pollution; many lifeguards had greater obstruction in their airways when ozone levels were high.[51]

How Ozone Pollution Harms Your Health

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.

Breathing ozone may shorten your life. Strong evidence arrived late in 2004, when two large multi-city investigations documented that short-term exposure to ozone can shorten lives, building on numerous earlier studies. One

of them looked at 95 cities across the United States over a 14-year period. That study compared the impact of ozone on death patterns during several days after the ozone measurements. Even on days when ozone levels were low, the researchers found that the risk of premature death increased with higher levels of ozone. They estimated that over 3,700 deaths annually could be attributed to a 10-parts-per-billion increase in ozone levels.[52] Another study, published the same week, looked at 23 European cities and found similar effects on mortality from short-term exposure to ozone.[53]

Confirmation came in the summer of 2005. Three groups of researchers working independently reviewed and analyzed the research around deaths associated with short-term exposures to ozone. The three teams—at Harvard, Johns Hopkins and New York University—used different approaches but all came to similar conclusions. All three studies reported a small but robust association between daily ozone levels and increased deaths.[54] Writing a commentary on these reviews, David Bates, MD, explained how these premature deaths could occur:

> "Ozone is capable of causing inflammation in the lung at lower concentrations than any other gas. Such an effect would be a hazard to anyone with heart failure and pulmonary congestion, and would worsen the function of anyone with advanced lung disease."[55]

In 2008 a committee of the National Research Council, a division of the National Academy of Sciences, reviewed the evidence again and concluded that "short-term exposure to ambient ozone is likely to contribute to premature deaths." They recommended that preventing early death be included in any future estimates of the benefits of reducing ozone.

Other immediate risks from breathing high levels of ozone. Many areas in the United States produce enough ground-level 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;
- chest pain when inhaling;
- wheezing and coughing;
- asthma attacks;
- increased susceptibility to 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.[57]

Breathing ozone for longer periods can alter the lungs' ability to function. Two studies published in 2005 explored ozone's ability to reduce the lung's ability to work efficiently, a term called "lung function." Each study looked at otherwise healthy groups who were exposed to ozone for long periods: outdoor postal workers in Taiwan and college freshmen who were lifelong residents of Los Angeles or the San Francisco Bay area. Both studies found that the long exposure to elevated ozone levels had decreased their lung function.[58]

Other effects of long-term exposure to ozone. Inhaling ozone may affect the heart as well as the lungs. One recent 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.[59] 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. [60]

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.[61] 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.[62]

Focusing on Children's Health

Children may look like miniature adults, but they're not. Air pollution is especially dangerous to them 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.[63] In addition, the body's defenses that help adults fight off infections are still developing in young bodies.[64] Children have more respiratory infections than adults, which also seems to increase their susceptibility to air pollution.[65]

Furthermore, children don't behave like adults, which 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.[66]

Major Reviews Confirm Harm to Children

Two major analyses recently concluded that air pollution is especially harmful to children. They found that air pollution is so dangerous that it can even threaten children's lives.

The World Health Organization (WHO) published an in-depth look at the research on children's health and air pollution. Most importantly, the scientists concluded that particle pollution caused infant deaths. In addition, they found that air pollution caused a host of harmful effects in children, including:

- short-term and long-term decreased lung function rates and lower lung function levels, critical measures of how well the child will breathe throughout his or her life (due primarily to exposure to particle pollution and traffic-related pollution);
- worsening of asthma (from exposure to particle as well as ozone pollution);
- increased prevalence and incidence of cough and bronchitis (primarily from particle pollution); and
- increased risk of upper and lower respiratory infections.[67]

The American Academy of Pediatrics issued a statement on the dangers of outdoor air pollution on children's health, pointing out the special differences for children.[68] The Academy reported many of the health effects cited by the WHO study, but also focused on the sources common to many children. Both the WHO monograph and the Academy statement highlighted recent studies showing how children living near heavily traveled highways appear to be particularly harmed by traffic-related pollution. The Academy statement highlighted the specific concern over diesel school buses, citing a pilot study that showed children riding inside a school bus may be exposed to four times more diesel exhaust than if they were riding in a car.[69]

Research on Prenatal Exposure to Air Pollution

Several studies published in 2005 found prenatal exposure to air pollution can harm children. A study of pregnant women in four Pennsylvania counties found an increased risk of preterm births linked to chronic exposure to high levels of air pollution during the last six weeks of pregnancy.[70]

A study of three low-income neighborhoods in New York City found that infants born to nonsmoking mothers faced a possible increased risk of cancer from living in areas with elevated urban area air pollutants.[71] A third study in the Czech Republic found evidence that the mother's exposure to air pollution may even alter the immune system of the fetus.[72]

Air Pollution Linked to Increased Risk to Newborns and Infants

As the World Health Organization concluded, evidence shows that air pollution, especially particle pollution, increases the risk of infant death. A study looking at the infant deaths in the US from 1999 to 2002 confirmed the risk from particle pollution and found evidence that ozone may also increase the risk of sudden infant death syndrome, or SIDS.[73]

Researchers from Yale University looked at the records of over 350,000 babies born in Connecticut and Massachusetts with low birth weights to see if they could identify any relationships with outdoor air pollutants. The researchers concluded that air pollution may increase the risk of babies being born with low birth weight, even though almost all the air pollutants were at levels that were officially listed as safe by the Environmental Protection Agency.[74]

Air Pollution Linked to Asthma Attacks, New Onset of Asthma

A 2003 study followed children with asthma by having their mothers track their symptoms on a daily basis. The study found that children with asthma were particularly vulnerable to ozone even at levels then officially considered safe.[75] An accompanying editorial warned, "Air pollution is one of the most under-appreciated contributors to asthma exacerbation."[76]

A recent study suggests that year-round exposure to ozone may be associated with an increased risk of the development of asthma. While more research is needed to confirm this finding, researchers tracking 3,500 students in Southern California found an increased onset of asthma in children who were taking part in three or more outdoor activities in communities with high levels of ozone.[77]

Air Pollution Increases Risk of Underdeveloped Lungs

Another finding from the Southern California Children's Health study looked at the long-term effects of particle pollution on teenagers. Tracking 1,759 children between ages 10 and 18, 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.[78]

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.[79] 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.[80]

Cleaning Up Pollution Can Reduce Risk to Children

There is also real-world evidence that reducing air pollution can help protect children. Two new studies published in 2005 added more weight to the argument.

Changes in air pollution from the reunification of Germany

proved a real-life laboratory. Both East and West Germany had different levels and sources of particles. Outdoor particle levels were much higher in East Germany, where they came from factories and homes. West Germany had higher concentrations of traffic-generated particles. After reunification, emissions from the factories and homes dropped, but traffic increased. A German study explored the impact on the lungs of six-year olds from both East and West Germany. Total lung capacity improved with the lower particle levels. However, for those children living near busy roads, the increased pollution from the increased traffic kept them from benefiting from the overall cleaner air.[81]

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.[82]

In this country, the 1996 Olympics in Atlanta, Georgia remains one of the most interesting cases. Atlanta is a prime example of an urban area with a history of serious ozone problems. The determined efforts of the city to reduce traffic during the Olympics succeeded in not just reducing congestion, but in improving the health of children with asthma. Concerned with an expected traffic nightmare, the city brought in more buses, more subway cars, and encouraged ridesharing and telecommuting during the Summer Olympic Games. These measures created a prolonged period of low ozone pollution that resulted in significantly lower rates of childhood asthma events for children aged 1–16. The number of asthma acute care events (e.g., treatment and hospitalization) decreased 42 percent in the Georgia Medicaid claims files. Pediatric emergency departments also saw significant reductions, as did the Georgia Hospital Discharge Database and a health maintenance organization database. It is important to note researchers determined that weather was not the determining factor in the reduced ozone levels.[83]

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,[84] including a workshop the American Lung Association held in 2001 that focused on urban air pollution and health inequities.[85]

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,[86] while others found greater responsiveness for Whites and Hispanics, but not Blacks/African-Americans,[87] or for Blacks/African-Americans but not other races or ethnic groups.[88] Other researchers have found greater risk for Blacks/African-Americans from air toxics, including those pollutants that also come from traffic sources.[89]

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.[90] In the 2008 study that found greater risk for premature death for Blacks/African-Americans, researchers also found greater risk for people living in areas with higher unemployment or higher use of public transportation.[91] 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 highest Medicaid areas did not always have the strongest association of high air pollution and asthma attacks.[92] However, two other recent studies in France have found no association with lower income and asthma attacks.[93]

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, non-Hispanic Blacks, Mexican Americans and people living near a central city have higher incidence of diabetes.[94]

Living Near Highways May Be Especially Dangerous

Being in heavy traffic, or living near a road may be even more dangerous than being in other places in a community. Several studies have found 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.

Children and teenagers are among the most vulnerable—though not the only ones at risk. A new European study found infants and young children exposed to air pollution from traffic faced a greater risk of wheezing.[95] In Southern California, a 2007 study found that air pollution may limit the capacity of the lungs in ten- to eighteen-year-olds who live within about one-third of a mile of a freeway. Changes such as that can reduce their capacity to breathe for the rest of their lives and increase their risk of developing serious lung diseases. Other recent research found that children who live near freeways had a higher risk of being diagnosed with asthma.[96, 97] However, children are not the only ones at risk. Studies have found increased risk of premature death from living near a major highway or an urban road.[98] Another study found an increase in risk of heart attacks from being in traffic, whether driving or taking public transportation.[99]

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.

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Appendix: Description of Methodology

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 2005-2007 for each monitoring site.

Design values for the annual $PM_{2.5}$ concentrations by county were collected from data previously summarized by the U.S. Environmental Protection Agency (EPA) and were downloaded on September 12, 2008 from the EPA's website at www.epa.gov/airtrends/values.html.

Ozone Data Analysis

The 2005, 2006, and 2007 AQS hourly ozone data were used to calculate the daily 8-hour maximum concentration for each ozone-monitoring site. The data were considered for a 3-year period for the same reason that the EPA uses 3 years of data to determine compliance with the ozone: 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 2005, 2006, and 2007, based on the EPA-defined ozone season, was identified.

On March 12, 2008, the EPA lowered the national ambient air quality standard for ozone to 0.075 ppm measured over 8-hours and adjusted the Air Quality Index to reflect the tighter standard. Using these results, A.S.L. & Associates prepared a table by county that summarized, for each of the 3 years, the number of days the ozone level was within the ranges identified by the EPA based on the EPA Air Quality Index:

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).

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, red, or purple.

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 2005, 2006, and 2007 with monitoring information. Using these results, A.S.L. & Associates prepared a table by county that summarized, for each of the 3 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, adjusted by the American Lung Association as discussed below:

from 0.0 Qg/m^3 to 15.4 Qg/m^3	Good (Green)
from 15.5 Qg/m^3 to 35.0 Qg/m^3	Moderate (Yellow)
from 35.1 Qg/m^3 to 65.4 Qg/m^3	Unhealthy for Sensitive Groups (Orange)
from 65.5 Qg/m^3 to 150.4 Qg/m^3	Unhealthy (Red)
from 150.5 Qg/m^3 to 250.4 Qg/m^3	Very Unhealthy (Purple)
greater than or equal to 250.5 Qg/m^3	Hazardous (Maroon)

On September 21, 2006, the EPA announced a revised 24-hour National Ambient Air Quality standard for $PM_{2.5}$, changing the standard to 35 μg/m^3 from 65 μg/m^3. As of December 2008, the EPA had not yet announced changes to the Air Quality Index based on the new standard. The Lung Association adjusted the level of the category "Unhealthy for Sensitive Groups" to include the new standard, making that category range from 35.1 μg/m^3 to 65.4 μg/m^3.

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. Only 24-hour averaged PM data were used. Included in the analysis are data collected using only FRM and FEM methods, which reported 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, including the dates and monitoring sites that experienced such events.

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, red, purple or maroon.

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 roughly 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 2 percent of the days during the 3 years to exceed 35 μg/m^3 (called a "98th percentile" form) before violating the standard. That would be roughly 21 unhealthy days in 3 years. The grading used in this report would allow roughly only 1 percent of the days to be over 35 μg/m^3 (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 9 orange days and 0 red days, it would earn a weighted average of 3.0 and a D grade. However, another county which had only 8 orange days but also 2 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 EPA uses to determine violations of both the ozone standard and the 24-hour $PM_{2.5}$. 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 EPA's 1998 ozone standard.

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 2007 as defined by the White House Office of Management and Budget (OMB). In 2003, the OMB published revised definitions for the nation's Metropolitan Statistical Areas. Therefore, comparisons between MSAs in the *State of the Air* reports from 2000 to 2003 and the *State of the Air* reports from 2004 and later should be made with caution.

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 EPA's determination of violations of the national ambient air quality standard for annual $PM_{2.5}$ of 15 μg/m^3, as reported online and downloaded from the www.epa.gov/airtrends/values.html on September 12, 2008. Counties that the EPA listed as being in attainment of the standard were given grades of "Pass." Counties the EPA listed as being in nonattainment were given grades of "Fail." Where insufficient data existed for the EPA to determine attainment or nonattainment, those counties received a grade of "Incomplete." Counties were ranked by design value. Metropolitan areas were ranked by the highest design value among the counties within a given Metro-

politan Statistical Area as of 2007 as defined by the OMB. 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 the EPA to determine whether or not the air quality in a county meets the standard.

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 Administrators 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 referred to the EPA, which reviewed and had final decision on those determinations. 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 lung disease and other chronic conditions are not generally available. (The primary exception to this is asthma, as state-specific estimates for adult asthma are available through one national survey discussed below.) In order to assess the magnitude of lung disease and other 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 estimates of self-reported lung disease and other conditions to project disease prevalence to the county level.

Population Estimates

The U.S. Census Bureau estimated data on the total population of each county in the United States for 2007. The Census Bureau also estimated the age specific breakdown of the population by county.

Prevalence Estimates

Chronic Bronchitis, Emphysema, Pediatric Asthma and Diabetes. In 2007, the National Health Interview Survey (NHIS) estimated the nationwide annual prevalence of diagnosed chronic bronchitis at 7.6 million; the nationwide lifetime prevalence of diagnosed emphysema was estimated at 3.7 million. The NHIS estimated the prevalence of diagnosed pediatric asthma (under age 18) to be over 6.7 million. The NHIS estimated the nationwide lifetime prevalence of diabetes at 17.3 million in 2007.

Due to the revision of the NHIS questionnaire, prevalence estimates from the *American Lung Association State of the Air 2000* cannot be compared to later publications. Estimates for chronic bronchitis and emphysema can be compared to the *State of the Air* reports for 2001 through 2008. Furthermore, estimates for chronic bronchitis and emphysema should not be combined as they represent different types of prevalence estimates.

Pediatric asthma prevalence estimates from this year's report can only be compared to those in the *State of the Air* reports since 2004 and not the *State of the Air* reports from 2000 through 2003 due to a change of the NHIS.

Local area prevalence of chronic bronchitis, emphysema, pediatric asthma and diabetes are estimated by applying age-specific national prevalence rates from the 2007 NHIS to age-specific county-level resident populations obtained from the U.S. Census Bureau web site. Prevalence estimates for chronic bronchitis, emphysema and diabetes are calculated for those 18-44, 45-64 and 65+. The prevalence estimate for pediatric asthma is calculated for those under age 18.

Adult Asthma. In 2007, the Behavioral Risk Factor Surveillance System (BRFSS) survey indicated that approximately 8.4% of adults residing in the United States reported currently having asthma. The information on adult asthma obtained from the Behavioral Risk Factor Surveillance System survey cannot be compared with pediatric asthma estimates that are derived from the NHIS.

The prevalence estimate for adult asthma is calculated for those 18-44, 45-64 and 65+. Local area prevalence of adult asthma is estimated by applying age-specific state prevalence rates from the 2007 BRFSS to age-specific county-level resident populations obtained from the U.S. Census Bureau web site.

Cardiovascular Disease Estimates. All cardiovascular disease estimates are based on the 2005 National Health and Nutrition Examination Survey and were obtained from the National Heart Lung and Blood Institute (NHBLI). According to their estimate, 79.8 million Americans suffer from one or more types of cardiovascular disease, including coronary heart disease, hypertension, stroke and heart failure. Local area prevalence of cardiovascular disease is estimated by applying age-specific prevalence rates for those 18-44, 45-64 and 65+, provided by NHLBI, to age-specific county-level resident populations obtained from the U.S. Census Bureau web site.

Limitations of Estimates. Since the statistics presented by the NHIS, BRFSS and NHANES 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-response and processing errors. These types of errors are kept to a minimum by methods built into the survey.

Additionally, a major limitation of both surveys 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 NHIS is the best available source that depicts the magnitude of chronic disease on the national level and the BRFSS is the best available source for state-specific adult asthma information. 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 estimate derived by the NHIS or state estimates derived by the BRFSS.

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State Tables

Notes for all state data tables

1. **Total Population** is based on 2007 US 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 $PM_{2.5}$. They should not be used as population denominators for disease estimates.
3. **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2007 based on national rates (NHIS) applied to county population estimates (US Census).
4. **Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2007 based on state rates (BRFSS) applied to county population estimates (US Census).
5. **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed within 2007 based on national rates (NHIS) applied to county population estimates (US Census).
6. **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime based on national rates (NHIS) applied to county population estimates (US Census).
7. **CV disease** estimates are based on National Heart Lung and Blood Institute (NHLBI) estimates of cardiovascular disease applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, hypertension, stroke and heart failure.
8. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime based on national rates (NHIS) applied to county population estimates (US Census).
9. Adding across rows does not produce valid estimates. For example, because of differences in the surveys used to gather the information, adding pediatric and adult asthma does not produce an accurate estimate of total population with asthma. Adding emphysema and chronic bronchitis will double count people with both diseases.

ALABAMA

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BALDWIN	171,769	40,367	27,995	3,670	11,438	4,655	2,493	51,289	11,209
CLAY	13,788	2,903	2,487	264	948	391	215	4,360	958
COLBERT	54,588	12,082	8,992	1,098	3,715	1,518	819	16,777	3,676
DEKALB	68,016	16,828	9,721	1,530	4,456	1,777	914	19,208	4,162
ELMORE	77,525	19,312	8,661	1,756	5,062	1,942	918	20,199	4,296
ESCAMBIA	37,600	8,669	5,413	788	2,523	1,006	517	10,874	2,357
ETOWAH	103,217	23,878	16,417	2,171	6,923	2,811	1,498	30,896	6,750
GENEVA	25,707	5,662	4,354	515	1,752	719	392	7,985	1,753
HOUSTON	97,171	24,441	14,243	2,222	6,353	2,559	1,342	27,902	6,077
JACKSON	53,030	11,951	8,254	1,086	3,597	1,460	776	16,019	3,502
JEFFERSON	658,779	158,741	88,364	14,431	43,762	17,371	8,841	186,743	40,432
LAWRENCE	34,229	7,799	4,570	709	2,315	917	464	9,835	2,128
LIMESTONE	73,898	17,609	8,885	1,601	4,907	1,904	924	20,039	4,289
MADISON	312,734	76,379	38,529	6,944	20,663	8,090	4,000	85,822	18,460
MOBILE	404,406	106,906	49,463	9,719	26,039	10,240	5,111	109,101	23,524
MONTGOMERY	225,791	58,797	26,840	5,345	14,557	5,665	2,766	59,768	12,809
MORGAN	115,050	27,778	15,964	2,525	7,641	3,051	1,572	32,987	7,162
RUSSELL	50,183	12,873	7,065	1,170	3,259	1,305	676	14,146	3,073
SHELBY	182,113	48,772	16,328	4,434	11,699	4,434	2,035	45,484	9,638
SUMTER	13,306	3,195	2,095	290	876	353	185	3,852	837
TALLADEGA	80,255	18,946	11,080	1,722	5,361	2,133	1,091	22,989	4,982
TUSCALOOSA	177,906	40,912	19,360	3,719	11,850	4,480	2,049	45,943	9,682
WALKER	68,816	15,626	11,052	1,421	4,641	1,886	1,006	20,738	4,532
TOTALS	**3,099,877**	**760,426**	**406,132**	**69,130**	**204,337**	**80,668**	**40,605**	**862,956**	**186,288**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BALDWIN	24	0	0	8.0	F	0	0	0	0.0	A	11.1	PASS
CLAY	10	0	0	3.3	F	6	0	0	2.0	C	13.3	PASS
COLBERT	10	0	0	3.3	F	4	0	0	1.3	C	13.1	PASS
DEKALB	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	14.0	PASS
ELMORE	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ESCAMBIA	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	13.4	PASS
ETOWAH	4	0	0	1.3	C	14	0	0	4.7	F	15.2	FAIL
GENEVA	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HOUSTON	2	0	0	0.7	B	4	1	0	1.8	C	13.2	PASS
JACKSON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	64	9	0	25.8	F	108	0	0	36.0	F	18.9	FAIL
LAWRENCE	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LIMESTONE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MADISON	17	1	0	6.2	F	5	0	0	1.7	C	13.7	PASS
MOBILE	29	0	0	9.7	F	2	0	0	0.7	B	12.3	PASS
MONTGOMERY	10	0	0	3.3	F	7	1	0	2.8	D	14.4	PASS
MORGAN	27	0	0	9.0	F	6	0	0	2.0	C	13.7	PASS
RUSSELL	10	0	0	3.3	F	9	2	0	4.0	F	15.7	FAIL
SHELBY	46	4	0	17.3	F	7	0	0	2.3	D	14.6	PASS
SUMTER	2	0	0	0.7	B	*	*	*	*	*	DNC	INC
TALLADEGA	*	*	*	*	*	3	0	0	1.0	C	DNC	INC
TUSCALOOSA	17	0	0	5.7	F	5	0	0	1.7	C	13.8	PASS
WALKER	*	*	*	*	*	7	0	0	2.3	D	14.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

ALASKA

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AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ANCHORAGE MUNICIPALITY	279,671	74,470	18,817	6,770	15,721	6,627	2,824	65,834	13,727
FAIRBANKS NORTH STAR BOROUGH	97,484	27,089	5,446	2,463	5,309	2,184	858	21,006	4,286
JUNEAU CITY AND BOROUGH	30,690	6,887	2,376	626	1,866	804	368	8,228	1,751
MATANUSKA-SUSITNA BOROUGH	82,669	21,767	5,977	1,979	4,690	1,996	875	20,059	4,213
SKAGWAY-HOONAH-ANGOON BOROUGH	3,059	590	327	54	195	87	43	920	199
YUKON-KOYUKUK BOROUGH	5,838	1,565	482	142	334	145	68	1,497	320
TOTALS	**499,411**	**132,368**	**33,425**	**12,034**	**28,115**	**11,842**	**5,036**	**117,544**	**24,497**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANCHORAGE MUNICIPALITY	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	6.0	PASS
FAIRBANKS NORTH STAR BOROUGH	DNC	DNC	DNC	DNC	DNC	7	0	0	2.3	D	DNC	*
JUNEAU CITY AND BOROUGH	DNC	DNC	DNC	DNC	DNC	8	0	0	2.7	D	7.8	PASS
MATANUSKA-SUSITNA BOROUGH	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	DNC	*
SKAGWAY-HOONAH-ANGOON BOROUGH	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	*	*
YUKON-KOYUKUK BOROUGH	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

ARIZONA

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
COCHISE	127,866	31,196	22,011	2,836	8,496	3,494	1,930	39,060	8,601
COCONINO	127,450	32,370	10,139	2,943	8,064	3,104	1,366	31,265	6,562
GILA	51,994	11,967	11,154	1,088	3,571	1,508	896	17,476	3,907
LA PAZ	20,172	3,707	6,425	337	1,507	659	438	8,107	1,850
MARICOPA	3,880,181	1,063,282	432,375	96,663	241,050	93,704	44,350	975,458	207,297
NAVAJO	111,273	33,471	13,167	3,043	6,700	2,643	1,303	28,016	6,012
PIMA	967,089	230,190	143,158	20,927	63,927	25,561	13,185	276,710	59,954
PINAL	299,246	77,072	40,166	7,007	19,100	7,451	3,655	78,884	16,858
SANTA CRUZ	42,845	13,256	5,350	1,205	2,565	1,029	526	11,090	2,403
YAVAPAI	212,635	42,336	47,529	3,849	15,155	6,350	3,742	73,320	16,344
YUMA	190,557	54,662	34,914	4,969	11,930	4,830	2,686	54,262	11,904
TOTALS	**6,031,308**	**1,593,509**	**766,388**	**144,866**	**382,065**	**150,334**	**74,077**	**1,593,649**	**341,691**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
COCHISE	1	0	0	0.3	B	1	0	0	0.3	B	7.3	PASS
COCONINO	5	0	0	1.7	C	1	0	0	0.3	B	6.9	PASS
GILA	38	2	0	13.7	F	0	0	0	0.0	A	8.9	PASS
LA PAZ	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARICOPA	106	3	0	36.8	F	5	1	0	2.2	D	12.6	PASS
NAVAJO	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PIMA	17	0	0	5.7	F	0	0	0	0.0	A	6.0	PASS
PINAL	41	1	0	14.2	F	22	1	0	7.8	F	8.4	PASS
SANTA CRUZ	DNC	DNC	DNC	DNC	DNC	3	1	0	1.5	C	13.9	PASS
YAVAPAI	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YUMA	11	0	0	3.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

ARKANSAS

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ARKANSAS	19,392	4,564	3,164	415	1,035	536	293	5,965	1,313
ASHLEY	22,326	5,392	3,279	490	1,178	600	316	6,551	1,430
CRITTENDEN	52,103	15,695	5,336	1,427	2,518	1,232	592	12,901	2,759
FAULKNER	104,865	25,818	10,080	2,347	5,411	2,532	1,108	25,484	5,313
GARLAND	96,371	20,946	20,144	1,904	5,259	2,776	1,604	31,744	7,044
JACKSON	17,219	3,690	2,556	335	937	470	242	5,077	1,100
MISSISSIPPI	46,664	13,242	5,871	1,204	2,319	1,162	591	12,490	2,705
MONTGOMERY	9,048	1,965	1,820	179	495	262	151	2,996	666
NEWTON	8,339	1,734	1,457	158	461	241	133	2,691	594
PHILLIPS	22,035	6,650	3,283	605	1,072	553	301	6,138	1,348
POLK	20,197	4,811	3,760	437	1,073	561	316	6,336	1,400
POPE	58,961	13,927	8,062	1,266	3,109	1,533	764	16,342	3,512
PULASKI	373,911	96,534	44,417	8,776	19,230	9,544	4,736	101,387	21,847
SEBASTIAN	121,766	31,967	15,522	2,906	6,226	3,107	1,569	33,279	7,193
UNION	43,230	10,310	6,964	937	2,294	1,182	640	13,086	2,872
WASHINGTON	194,292	51,302	18,098	4,664	9,800	4,602	2,027	46,436	9,702
WHITE	73,441	17,399	10,381	1,582	3,870	1,915	964	20,497	4,413
TOTALS	**1,284,160**	**325,946**	**164,194**	**29,632**	**66,288**	**32,807**	**16,348**	**349,400**	**75,212**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ARKANSAS	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.5	PASS
ASHLEY	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	13.3	PASS
CRITTENDEN	31	7	0	13.8	F	8	0	0	2.7	D	13.4	PASS
FAULKNER	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.7	PASS
GARLAND	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.7	PASS
JACKSON	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
MISSISSIPPI	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
MONTGOMERY	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEWTON	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PHILLIPS	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.4	PASS
POLK	8	0	0	2.7	D	0	0	0	0.0	A	12.0	PASS
POPE	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	13.1	PASS
PULASKI	39	0	0	13.0	F	18	0	0	6.0	F	13.9	PASS
SEBASTIAN	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	DNC	INC
UNION	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	13.1	PASS
WASHINGTON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WHITE	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	12.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

CALIFORNIA

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALAMEDA	1,464,202	344,146	157,218	31,286	84,374	37,542	17,715	389,973	83,038
AMADOR	38,678	6,417	7,220	583	2,427	1,150	625	12,765	2,798
BUTTE	218,779	45,837	32,480	4,167	12,972	5,871	2,939	62,721	13,475
CALAVERAS	46,844	8,643	8,316	786	2,883	1,384	761	15,428	3,398
COLUSA	21,302	6,106	2,445	555	1,141	507	243	5,310	1,131
CONTRA COSTA	1,019,640	250,861	120,545	22,806	58,019	26,457	13,091	280,657	60,465
EL DORADO	175,689	38,421	19,893	3,493	10,384	4,750	2,341	50,262	10,841
FRESNO	899,348	268,840	87,342	24,440	47,296	20,503	9,278	209,328	43,995
GLENN	28,111	7,754	3,423	705	1,530	687	336	7,258	1,553
HUMBOLDT	128,864	25,874	16,362	2,352	7,751	3,486	1,695	36,714	7,861
IMPERIAL	161,867	47,423	16,913	4,311	8,571	3,713	1,691	38,026	7,991
INYO	17,449	3,750	2,898	341	1,036	499	274	5,554	1,224
KERN	790,710	237,021	69,710	21,548	41,503	17,709	7,723	177,982	37,077
KINGS	148,875	40,640	11,124	3,695	8,084	3,301	1,299	31,841	6,458
LAKE	64,664	14,095	10,447	1,281	3,812	1,801	965	19,842	4,343
LOS ANGELES	9,878,554	2,582,550	1,030,100	234,780	548,194	240,506	111,145	2,477,053	523,822
MADERA	146,513	40,884	15,057	3,717	7,920	3,436	1,562	35,156	7,393
MARIN	248,096	48,426	37,985	4,402	15,133	7,258	3,917	80,111	17,634
MARIPOSA	18,036	3,162	3,280	287	1,121	534	292	5,942	1,305
MENDOCINO	86,273	19,096	12,710	1,736	5,075	2,391	1,262	26,128	5,710
MERCED	245,514	77,534	23,405	7,049	12,588	5,429	2,438	55,266	11,585
MONO	12,801	2,544	1,501	231	774	349	169	3,663	785
MONTEREY	407,637	111,492	41,037	10,136	22,233	9,686	4,418	99,212	20,905
NAPA	132,565	30,063	18,979	2,733	7,720	3,566	1,831	38,510	8,348
NEVADA	97,027	17,765	17,087	1,615	5,994	2,899	1,605	32,418	7,161
ORANGE	2,997,033	766,234	331,797	69,658	167,815	74,630	35,414	777,475	165,540

AT-RISK GROUPS

Lung Diseases

County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema	CV Disease	Diabetes
PLACER	332,920	73,398	49,152	6,673	19,506	8,942	4,559	96,286	20,804
PLUMAS	20,615	3,717	3,970	338	1,278	628	357	7,115	1,581
RIVERSIDE	2,073,571	582,711	233,367	52,974	111,620	48,630	22,507	501,715	105,771
SACRAMENTO	1,386,667	362,861	154,056	32,988	76,932	34,049	16,063	353,901	75,181
SAN BENITO	54,667	16,138	4,793	1,467	2,904	1,278	585	13,095	2,772
SAN BERNARDINO	2,007,800	597,417	165,379	54,311	105,834	45,095	19,471	451,164	93,887
SAN DIEGO	2,974,859	741,404	330,820	67,401	167,704	73,751	34,396	762,821	161,535
SAN FRANCISCO	764,976	109,614	111,471	9,965	49,180	21,977	10,673	231,519	49,432
SAN JOAQUIN	670,990	195,322	66,579	17,757	35,714	15,585	7,136	159,899	33,722
SAN LUIS OBISPO	262,436	49,420	37,506	4,493	16,011	7,257	3,611	77,270	16,608
SAN MATEO	706,984	157,575	93,090	14,325	41,460	19,101	9,669	204,771	44,325
SANTA BARBARA	404,197	95,877	51,842	8,716	23,136	10,319	4,991	108,502	23,145
SANTA CLARA	1,748,976	419,320	186,665	38,120	100,048	44,224	20,662	457,498	97,105
SANTA CRUZ	251,747	54,512	26,162	4,956	14,887	6,653	3,141	69,084	14,738
SHASTA	179,427	39,759	27,066	3,614	10,518	4,890	2,546	53,151	11,554
SISKIYOU	44,296	8,659	8,299	787	2,692	1,314	742	14,842	3,290
SOLANO	408,599	104,966	44,312	9,542	22,875	10,233	4,888	106,882	22,820
SONOMA	464,435	103,746	60,044	9,432	27,236	12,561	6,354	134,594	29,146
STANISLAUS	511,263	147,066	52,226	13,370	27,347	11,976	5,529	123,315	26,056
SUTTER	92,040	24,467	11,246	2,224	5,072	2,263	1,093	23,777	5,072
TEHAMA	61,114	14,785	9,266	1,344	3,482	1,609	835	17,466	3,787
TULARE	421,553	134,499	39,663	12,227	21,524	9,305	4,190	94,813	19,898
TUOLUMNE	55,806	9,523	10,700	866	3,486	1,672	925	18,712	4,120
VENTURA	798,364	208,953	88,679	18,996	44,410	19,958	9,630	209,392	44,807
YOLO	195,844	44,882	18,541	4,080	11,297	4,758	2,023	47,337	9,789
TOTALS	**36,389,217**	**9,346,169**	**3,984,168**	**849,661**	**2,032,502**	**898,072**	**421,607**	**9,313,518**	**1,976,780**

CALIFORNIA

American Lung Association in California

424 Pendleton Way
Oakland, CA 94621
(510)638-5864
www.lungusa.org/california

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ALAMEDA	12	2	0	5.0	F
AMADOR	30	2	0	11.0	F
BUTTE	58	0	0	19.3	F
CALAVERAS	58	8	0	23.3	F
COLUSA	1	0	0	0.3	B
CONTRA COSTA	17	0	0	5.7	F
EL DORADO	113	24	0	49.7	F
FRESNO	152	24	0	62.7	F
GLENN	2	0	0	0.7	B
HUMBOLDT	*	*	*	*	*
IMPERIAL	94	3	0	32.8	F
INYO	49	1	0	16.8	F
KERN	221	71	2	110.5	F
KINGS	93	3	0	32.5	F
LAKE	0	0	0	0.0	A
LOS ANGELES	185	55	11	96.5	F
MADERA	24	0	0	8.0	F
MARIN	0	0	0	0.0	A
MARIPOSA	79	2	0	27.3	F
MENDOCINO	0	0	0	0.0	A
MERCED	65	1	0	22.2	F
MONO	*	*	*	*	*
MONTEREY	1	0	0	0.3	B
NAPA	0	0	0	0.0	A
NEVADA	130	11	1	49.5	F
ORANGE	27	3	0	10.5	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALAMEDA	6	0	0	2.0	C	9.4	PASS
AMADOR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BUTTE	11	2	0	4.7	F	12.1	PASS
CALAVERAS	0	0	0	0.0	A	7.8	PASS
COLUSA	1	0	0	0.3	B	DNC	INC
CONTRA COSTA	18	0	0	6.0	F	8.9	PASS
EL DORADO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FRESNO	117	24	0	51.0	F	17.4	FAIL
GLENN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HUMBOLDT	0	0	0	0.0	A	DNC	INC
IMPERIAL	7	2	0	3.3	F	12.7	PASS
INYO	2	0	1	1.3	C	5.5	PASS
KERN	102	27	0	47.5	F	20.3	FAIL
KINGS	31	5	0	12.8	F	17.6	FAIL
LAKE	0	0	0	0.0	A	4.5	PASS
LOS ANGELES	77	6	0	28.7	F	17.1	FAIL
MADERA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARIPOSA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MENDOCINO	0	0	0	0.0	A	5.9	PASS
MERCED	33	1	0	11.5	F	14.7	PASS
MONO	*	*	*	*	*	DNC	INC
MONTEREY	0	0	0	0.0	A	6.9	PASS
NAPA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEVADA	0	0	0	0.0	A	6.4	PASS
ORANGE	35	1	0	12.2	F	14.4	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
PLACER	103	18	0	43.3	F	3	0	0	1.0	C	9.7	PASS
PLUMAS	*	*	*	*	*	9	1	0	3.5	F	11.5	PASS
RIVERSIDE	245	77	14	129.5	F	105	8	0	39.0	F	19.6	FAIL
SACRAMENTO	81	19	2	37.5	F	60	7	0	23.5	F	DNC	INC
SAN BENITO	11	0	0	3.7	F	*	*	*	*	*	DNC	INC
SAN BERNARDINO	226	95	24	138.8	F	30	6	0	13.0	F	18.5	FAIL
SAN DIEGO	84	3	0	29.5	F	25	3	0	9.8	F	13.0	PASS
SAN FRANCISCO	0	0	0	0.0	A	14	0	0	4.7	F	9.3	PASS
SAN JOAQUIN	26	3	0	10.2	F	23	0	0	7.7	F	12.8	PASS
SAN LUIS OBISPO	55	0	0	18.3	F	0	0	0	0.0	A	7.9	PASS
SAN MATEO	0	0	0	0.0	A	1	1	0	0.8	B	8.9	PASS
SANTA BARBARA	17	0	0	5.7	F	0	0	0	0.0	A	10.1	PASS
SANTA CLARA	14	1	0	5.2	F	33	0	0	11.0	F	11.1	PASS
SANTA CRUZ	0	0	0	0.0	A	0	0	0	0.0	A	DNC	INC
SHASTA	24	0	0	8.0	F	0	0	0	0.0	A	7.2	PASS
SISKIYOU	0	0	0	0.0	A	*	*	*	*	*	DNC	INC
SOLANO	13	0	0	4.3	F	9	0	0	3.0	D	9.8	PASS
SONOMA	0	0	0	0.0	A	1	0	0	0.3	B	8.1	PASS
STANISLAUS	45	2	0	16.0	F	32	2	0	11.7	F	14.6	PASS
SUTTER	36	1	0	12.5	F	11	0	0	3.7	F	9.7	PASS
TEHAMA	60	0	0	20.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TULARE	239	43	0	101.2	F	36	3	0	13.5	F	19.3	FAIL
TUOLUMNE	33	0	0	11.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VENTURA	92	7	0	34.2	F	5	0	0	1.7	C	11.1	PASS
YOLO	24	0	0	8.0	F	8	0	0	2.7	D	8.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

COLORADO

American Lung Association in Colorado

5600 Greenwood Plaza Blvd., Suite 100
Greenwood Village, CO 80111-2316
(303) 388-4327
www.lungusa.org/colorado

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADAMS	422,495	121,034	33,303	11,003	23,345	9,625	4,116	95,883	19,925
ARAPAHOE	545,089	138,843	55,436	12,622	31,216	13,721	6,513	142,835	30,498
ARCHULETA	12,572	2,594	1,835	236	762	355	186	3,864	844
BOULDER	290,262	61,458	24,658	5,587	17,654	7,477	3,299	75,396	15,833
DELTA	30,334	6,537	6,000	594	1,811	873	497	9,910	2,195
DENVER	588,349	143,781	61,372	13,071	34,339	14,535	6,623	148,814	31,350
DOUGLAS	272,117	78,896	14,358	7,172	14,956	6,133	2,494	59,754	12,332
EL PASO	587,272	153,190	54,852	13,927	33,468	14,317	6,523	146,448	30,934
ELBERT	22,720	5,304	1,823	482	1,332	601	284	6,235	1,339
GUNNISON	14,973	2,659	1,068	242	957	382	152	3,695	755
JEFFERSON	529,354	120,222	60,334	10,929	31,288	14,262	7,104	151,624	32,801
LA PLATA	49,555	9,639	5,101	876	3,071	1,334	619	13,747	2,920
LARIMER	287,574	62,116	30,154	5,647	17,390	7,429	3,406	76,230	16,107
MESA	139,082	31,809	21,016	2,892	8,226	3,721	1,922	40,315	8,736
MONTEZUMA	25,221	6,040	3,962	549	1,464	685	368	7,555	1,655
PUEBLO	154,538	37,395	22,970	3,400	8,983	4,063	2,099	44,017	9,538
ROUTT	22,382	4,343	1,397	395	1,390	590	253	5,870	1,230
SAN MIGUEL	7,533	1,297	311	118	483	197	77	1,888	387
WELD	243,750	65,917	19,365	5,993	13,786	5,637	2,380	55,866	11,567
TOTALS	**4,245,172**	**1,053,074**	**419,315**	**95,735**	**245,920**	**105,936**	**48,916**	**1,089,945**	**230,945**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	4	0	0	1.3	C	4	0	0	1.3	C	10.2	PASS
ARAPAHOE	23	0	0	7.7	F	3	0	0	1.0	C	8.0	PASS
ARCHULETA	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BOULDER	21	0	0	7.0	F	0	0	0	0.0	A	8.3	PASS
DELTA	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
DENVER	6	0	0	2.0	C	13	0	0	4.3	F	9.8	PASS
DOUGLAS	44	0	0	14.7	F	1	0	0	0.3	B	DNC	INC
EL PASO	12	0	0	4.0	F	0	0	0	0.0	A	7.7	PASS
ELBERT	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	4.5	PASS
GUNNISON	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
JEFFERSON	48	2	0	17.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LA PLATA	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LARIMER	39	1	0	13.5	F	0	0	0	0.0	A	7.4	PASS
MESA	*	*	*	*	*	0	0	0	0.0	A	9.2	PASS
MONTEZUMA	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PUEBLO	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	7.7	PASS
ROUTT	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SAN MIGUEL	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
WELD	18	0	0	6.0	F	3	0	0	1.0	C	9.3	PASS

Notes:
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CONNECTICUT

American Lung Association in Connecticut

45 Ash Street
East Hartford, CT 06108-3272
(860) 289-5401
www.lungusa.org/connecticut

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
FAIRFIELD	895,015	224,717	116,930	20,429	61,694	23,461	12,017	252,870	54,890
HARTFORD	876,824	204,235	123,902	18,567	61,896	23,532	12,147	254,654	55,307
LITCHFIELD	188,273	41,366	27,249	3,761	13,401	5,256	2,780	57,490	12,584
MIDDLESEX	164,150	36,110	23,164	3,283	11,758	4,506	2,334	48,820	10,622
NEW HAVEN	845,494	196,968	115,874	17,906	59,956	22,430	11,379	240,839	52,068
NEW LONDON	267,376	60,766	35,038	5,524	19,161	7,092	3,539	75,571	16,281
TOLLAND	148,139	29,866	16,014	2,715	11,106	3,936	1,832	40,641	8,625
TOTALS	**3,385,271**	**794,028**	**458,171**	**72,185**	**238,972**	**90,213**	**46,029**	**970,886**	**210,377**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
FAIRFIELD	56	15	1	26.8	F	13	0	0	4.3	F	13.2	PASS
HARTFORD	19	7	0	9.8	F	10	0	0	3.3	F	10.7	PASS
LITCHFIELD	40	3	1	15.5	F	4	0	0	1.3	C	8.0	PASS
MIDDLESEX	30	9	0	14.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEW HAVEN	36	7	0	15.5	F	27	0	0	9.0	F	12.8	PASS
NEW LONDON	25	3	0	9.8	F	5	0	0	1.7	C	10.7	PASS
TOLLAND	28	10	0	14.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

CONNECTICUT

DELAWARE

American Lung Association in Delaware

1021 Gilpin Avenue, Suite 202
Wilmington, DE 19806-3280
(302) 655-7258
www.lungusa.org/delaware

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
KENT	152,255	38,771	19,341	3,525	8,896	3,857	1,904	40,919	8,783
NEW CASTLE	528,218	126,878	61,837	11,534	31,332	13,655	6,649	143,844	30,847
SUSSEX	184,291	39,997	36,500	3,636	11,179	5,267	2,992	59,722	13,211
TOTALS	**864,764**	**205,646**	**117,678**	**18,695**	**51,408**	**22,779**	**11,545**	**244,484**	**52,841**

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
KENT	31	0	0	10.3	F
NEW CASTLE	44	2	1	16.3	F
SUSSEX	48	1	0	16.5	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
KENT	5	0	0	1.7	C	12.4	PASS
NEW CASTLE	27	0	0	9.0	F	14.7	PASS
SUSSEX	4	0	0	1.3	C	13.4	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

DISTRICT OF COLUMBIA

American Lung Association in the District of Columbia

530 7th Street, SE
Washington, DC 20003
(202) 546-5864
www.lungusa.org/districtofcolumbia

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
DISTRICT OF COLUMBIA	588,292	113,720	69,741	10,338	44,348	15,497	7,113	159,233	33,555
TOTALS	**588,292**	**113,720**	**69,741**	**10,338**	**44,348**	**15,497**	**7,113**	**159,233**	**33,555**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
DISTRICT OF COLUMBIA	55	2	0	19.3	F	21	1	0	7.5	F	14.2	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

DISTRICT OF COLUMBIA

FLORIDA

American Lung Association in Florida

6852 Belfort Oaks Place
Jacksonville, FL 32216
(904) 743-2933
www.lungusa.org/florida

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALACHUA	240,082	45,165	24,423	4,106	11,791	6,170	2,648	61,620	12,773
BAKER	25,745	6,384	2,655	580	1,183	642	298	6,620	1,403
BAY	163,984	37,773	23,301	3,434	7,774	4,437	2,303	48,137	10,473
BREVARD	536,161	108,529	107,606	9,866	26,369	15,718	8,974	178,611	39,589
BROWARD	1,759,591	414,894	251,345	37,718	82,700	47,090	24,388	510,409	110,909
CITRUS	140,169	23,158	42,271	2,105	7,208	4,567	2,936	55,181	12,498
COLLIER	315,839	65,356	79,498	5,942	15,383	9,441	5,759	111,025	24,870
COLUMBIA	67,985	15,558	9,976	1,414	3,212	1,814	930	19,585	4,239
DUVAL	849,159	220,214	89,335	20,020	38,585	21,216	10,108	221,292	47,249
ESCAMBIA	306,407	68,404	44,632	6,219	14,599	8,261	4,240	89,200	19,322
HIGHLANDS	99,349	18,590	31,233	1,690	4,949	3,145	2,051	38,313	8,682
HILLSBOROUGH	1,174,727	291,318	137,365	26,484	54,121	29,910	14,498	314,514	67,327
HOLMES	19,245	4,076	3,130	371	928	528	277	5,762	1,251
LAKE	301,059	59,598	83,616	5,418	14,783	9,162	5,723	109,129	24,522
LEE	590,564	123,851	130,959	11,259	28,656	17,206	10,055	197,945	43,981
LEON	260,945	53,913	22,702	4,901	12,574	6,583	2,795	65,387	13,560
MANATEE	315,108	67,480	70,442	6,135	15,228	9,197	5,422	106,255	23,664
MARION	324,857	65,795	77,920	5,981	15,886	9,623	5,739	111,884	24,940

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MIAMI-DADE	2,387,170	545,277	352,683	49,571	112,792	63,712	32,685	687,961	148,878
ORANGE	1,066,113	269,314	102,398	24,483	48,628	26,134	11,843	266,781	56,227
OSCEOLA	255,815	66,556	28,997	6,051	11,537	6,282	2,964	65,308	13,866
PALM BEACH	1,266,451	268,290	274,737	24,390	61,384	36,874	21,506	423,690	94,171
PASCO	462,715	97,352	96,579	8,850	22,407	13,286	7,584	151,079	33,400
PINELLAS	917,437	174,578	191,267	15,871	45,954	27,695	16,076	317,181	70,625
POLK	574,746	139,468	98,788	12,679	26,653	15,390	8,317	170,383	37,245
SANTA ROSA	147,044	34,231	17,447	3,112	6,951	3,897	1,933	41,373	8,925
SARASOTA	372,073	60,888	110,540	5,535	19,215	12,195	7,834	147,243	33,377
SEMINOLE	409,509	94,093	45,962	8,554	19,433	10,831	5,293	114,203	24,563
ST. JOHNS	175,446	36,613	25,623	3,328	8,560	4,898	2,552	53,213	11,591
ST. LUCIE	260,939	59,160	51,189	5,378	12,354	7,249	4,061	81,691	17,981
VOLUSIA	500,413	98,772	102,118	8,979	24,696	14,647	8,320	166,084	36,729
WAKULLA	29,726	6,340	3,842	576	1,434	799	394	8,469	1,820
TOTALS	**16,316,573**	**3,640,988**	**2,734,579**	**331,002**	**777,926**	**448,598**	**240,508**	**4,945,528**	**1,080,648**

FLORIDA

American Lung Association in Florida

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Jacksonville, FL 32216
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www.lungusa.org/florida

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALACHUA	10	0	0	3.3	F	5	0	0	1.7	C	9.6	PASS
BAKER	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BAY	17	0	0	5.7	F	1	0	0	0.3	B	11.4	PASS
BREVARD	6	0	0	2.0	C	2	0	0	0.7	B	8.2	PASS
BROWARD	5	0	0	1.7	C	7	0	0	2.3	D	8.3	PASS
CITRUS	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.9	PASS
COLLIER	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COLUMBIA	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DUVAL	21	0	0	7.0	F	10	3	0	4.8	F	10.4	PASS
ESCAMBIA	46	0	0	15.3	F	5	0	0	1.7	C	11.5	PASS
HIGHLANDS	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HILLSBOROUGH	44	1	0	15.2	F	6	1	0	2.5	D	10.4	PASS
HOLMES	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LAKE	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEE	3	0	0	1.0	C	1	0	0	0.3	B	8.3	PASS
LEON	5	0	0	1.7	C	3	1	0	1.5	C	12.4	PASS
MANATEE	14	0	0	4.7	F	1	0	0	0.3	B	8.7	PASS
MARION	6	0	0	2.0	C	2	1	0	1.2	C	10.0	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MIAMI-DADE	7	1	0	2.8	D	3	0	0	1.0	C	9.3	PASS
ORANGE	22	1	0	7.8	F	6	1	0	2.5	D	9.4	PASS
OSCEOLA	8	0	0	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PALM BEACH	3	0	0	1.0	C	3	0	0	1.0	C	7.8	PASS
PASCO	15	0	0	5.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PINELLAS	8	0	0	2.7	D	7	0	0	2.3	D	9.7	PASS
POLK	14	0	0	4.7	F	2	0	0	0.7	B	9.4	PASS
SANTA ROSA	35	0	0	11.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SARASOTA	19	0	0	6.3	F	1	0	0	0.3	B	8.6	PASS
SEMINOLE	13	0	0	4.3	F	1	1	0	0.8	B	9.5	PASS
ST. JOHNS	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. LUCIE	0	0	0	0.0	A	1	0	0	0.3	B	8.5	PASS
VOLUSIA	4	0	0	1.3	C	3	0	0	1.0	C	9.1	PASS
WAKULLA	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

GEORGIA

American Lung Association in Georgia

2452 Spring Road
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(770) 434-5864
www.lungusa.org/georgia

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BIBB	154,709	41,945	19,842	3,813	8,563	3,892	1,966	41,702	9,007
CHATHAM	248,469	63,355	30,786	5,760	14,026	6,265	3,066	66,195	14,181
CHATTOOGA	26,797	6,054	3,842	550	1,571	710	358	7,610	1,640
CHEROKEE	204,363	58,992	15,115	5,363	11,027	4,705	2,039	47,096	9,843
CLARKE	114,063	22,138	9,477	2,013	6,871	2,723	1,017	25,765	5,140
CLAYTON	272,217	81,802	18,323	7,437	14,415	6,054	2,531	59,720	12,365
COBB	691,905	181,550	56,954	16,505	38,794	16,826	7,548	170,859	36,034
COLUMBIA	109,100	29,928	9,836	2,721	6,032	2,672	1,253	27,654	5,897
COWETA	118,936	33,605	10,761	3,055	6,465	2,794	1,261	28,469	5,995
DAWSON	21,484	5,437	2,404	494	1,217	538	256	5,616	1,197
DEKALB	737,093	178,533	62,002	16,230	42,358	18,161	7,983	182,910	38,335
DOUGHERTY	95,693	26,003	12,172	2,364	5,282	2,378	1,184	25,327	5,447
DOUGLAS	124,495	36,131	8,825	3,285	6,698	2,839	1,211	28,230	5,877
FANNIN	22,580	4,805	4,411	437	1,349	647	365	7,311	1,615
FAYETTE	106,144	25,263	11,834	2,297	6,194	2,857	1,443	30,554	6,641
FLOYD	95,618	23,801	13,654	2,164	5,441	2,476	1,264	26,675	5,765
FULTON	992,137	248,717	78,594	22,611	56,423	24,179	10,573	242,912	50,890
GLYNN	74,932	18,917	10,746	1,720	4,258	1,968	1,027	21,402	4,657

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
GWINNETT	776,380	226,121	47,510	20,557	41,762	17,607	7,353	173,471	35,991
HALL	180,175	51,685	17,591	4,699	9,710	4,183	1,893	42,706	8,979
HENRY	186,037	56,232	13,466	5,112	9,812	4,116	1,729	40,694	8,422
HOUSTON	131,016	35,762	13,559	3,251	7,229	3,190	1,507	33,153	7,058
LOWNDES	101,790	26,670	9,784	2,425	5,666	2,406	1,056	24,249	5,057
MURRAY	40,664	11,376	3,670	1,034	2,220	960	433	9,779	2,060
MUSCOGEE	187,046	51,119	22,438	4,647	10,311	4,626	2,276	48,977	10,513
PAULDING	127,906	39,845	7,833	3,622	6,640	2,717	1,072	26,206	5,339
RICHMOND	197,372	52,455	23,288	4,769	10,988	4,903	2,386	51,655	11,059
ROCKDALE	82,052	22,455	7,750	2,041	4,534	2,005	941	20,768	4,425
SUMTER	32,532	8,809	4,148	801	1,796	805	399	8,553	1,836
WALKER	64,554	15,318	9,162	1,393	3,737	1,710	877	18,454	3,998
WASHINGTON	20,937	4,973	2,761	452	1,211	546	272	5,814	1,251
WILKINSON	10,064	2,574	1,432	234	569	262	136	2,848	619
TOTALS	**6,349,260**	**1,692,370**	**563,970**	**153,853**	**353,167**	**152,722**	**68,674**	**1,553,337**	**327,134**

GEORGIA

American Lung Association in Georgia

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HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
BIBB	36	3	0	13.5	F
CHATHAM	1	0	0	0.3	B
CHATTOOGA	16	1	0	5.8	F
CHEROKEE	*	*	*	*	*
CLARKE	35	0	0	11.7	F
CLAYTON	DNC	DNC	DNC	DNC	DNC
COBB	55	1	0	18.8	F
COLUMBIA	8	0	0	2.7	D
COWETA	31	1	0	10.8	F
DAWSON	17	0	0	5.7	F
DEKALB	54	9	2	23.8	F
DOUGHERTY	DNC	DNC	DNC	DNC	DNC
DOUGLAS	59	6	0	22.7	F
FANNIN	*	*	*	*	*
FAYETTE	46	7	0	18.8	F
FLOYD	DNC	DNC	DNC	DNC	DNC
FULTON	52	9	2	23.2	F
GLYNN	1	0	0	0.3	B

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BIBB	16	1	0	5.8	F	16.5	FAIL
CHATHAM	4	0	0	1.3	C	13.7	PASS
CHATTOOGA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHEROKEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARKE	2	0	0	0.7	B	14.9	PASS
CLAYTON	7	0	0	2.3	D	16.2	FAIL
COBB	8	1	0	3.2	D	16.0	FAIL
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	20	1	0	7.2	F	15.2	FAIL
DOUGHERTY	6	1	0	2.5	D	14.6	PASS
DOUGLAS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FANNIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FAYETTE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FLOYD	18	0	0	6.0	F	16.1	FAIL
FULTON	20	1	0	7.2	F	15.6	FAIL
GLYNN	3	0	0	1.0	C	11.9	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
GWINNETT	58	4	1	22.0	F	2	0	0	0.7	B	15.7	FAIL
HALL	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	13.9	PASS
HENRY	45	11	0	20.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HOUSTON	DNC	DNC	DNC	DNC	DNC	3	2	0	2.0	C	14.2	PASS
LOWNDES	DNC	DNC	DNC	DNC	DNC	1	1	0	0.8	B	12.3	PASS
MURRAY	27	0	0	9.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MUSCOGEE	17	0	0	5.7	F	6	1	0	2.5	D	15.2	FAIL
PAULDING	32	1	0	11.2	F	5	0	0	1.7	C	14.3	PASS
RICHMOND	24	0	0	8.0	F	4	0	0	1.3	C	15.7	FAIL
ROCKDALE	46	10	0	20.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SUMTER	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WALKER	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	DNC	INC
WASHINGTON	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	15.2	FAIL
WILKINSON	DNC	DNC	DNC	DNC	DNC	7	0	0	2.3	D	15.1	FAIL

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

HAWAII

American Lung Association in Hawaii

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	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	**Orange**	**Red**	**Purple**	**Wgt. Avg**	**Grade**	**Orange**	**Red**	**Purple**	**Wgt. Avg**	**Grade**	**Design Value**	**Pass/ Fail**
HAWAII	173,057	38,989	23,429	3,544		10,691	4,669	2,379		50,215	10,881	
HONOLULU	905,601	200,554	134,509	18,232		55,827	24,323	12,435		262,236	56,691	
MAUI	141,783	31,939	16,815	2,904		8,830	3,769	1,852		39,853	8,574	
TOTALS	**1,220,441**	**271,482**	**174,753**	**24,680**		**75,347**	**32,761**	**16,666**		**352,305**	**76,146**	

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
HAWAII	*	*	*	*	*
HONOLULU	0	0	0	0.0	A
MAUI	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
HAWAII	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HONOLULU	2	1	0	1.2	C	4.9	PASS
MAUI	0	0	0	0.0	A	4.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

IDAHO

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADA	373,406	99,135	36,371	9,012	23,668	9,081	4,185	93,362	19,764
BANNOCK	79,925	22,722	8,228	2,066	4,942	1,902	891	19,702	4,182
BENEWAH	9,243	2,225	1,526	202	606	258	143	2,890	639
BONNEVILLE	96,545	29,290	10,106	2,663	5,807	2,271	1,092	23,788	5,084
BOUNDARY	10,872	2,722	1,543	247	703	293	156	3,220	706
BUTTE	2,771	708	452	64	178	76	43	855	189
CANYON	179,381	56,201	18,270	5,109	10,665	4,026	1,853	41,419	8,733
ELMORE	28,856	8,519	2,352	774	1,758	645	275	6,421	1,331
FRANKLIN	12,203	4,076	1,446	371	704	277	138	2,953	635
GEM	16,496	4,134	2,836	376	1,072	444	244	4,954	1,089
IDAHO	15,345	3,103	2,960	282	1,059	460	265	5,246	1,170
KOOTENAI	134,442	33,351	18,555	3,032	8,741	3,522	1,808	38,022	8,244
LEMHI	7,717	1,610	1,429	146	527	230	132	2,621	585
POWER	7,684	2,277	907	207	467	188	95	2,015	436
SHOSHONE	12,838	2,627	2,426	239	883	382	220	4,352	969
TOTALS	**987,724**	**272,700**	**109,407**	**24,791**	**61,782**	**24,054**	**11,541**	**251,819**	**53,758**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADA	22	0	0	7.3	F	1	0	0	0.3	B	DNC	INC
BANNOCK	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BENEWAH	DNC	DNC	DNC	DNC	DNC	4	0	0	1.3	C	9.7	PASS
BONNEVILLE	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BOUNDARY	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BUTTE	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CANYON	*	*	*	*	*	5	0	0	1.7	C	8.2	PASS
ELMORE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FRANKLIN	DNC	DNC	DNC	DNC	DNC	23	4	0	9.7	F	7.7	PASS
GEM	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
IDAHO	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	9.6	PASS
KOOTENAI	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEMHI	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
POWER	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SHOSHONE	DNC	DNC	DNC	DNC	DNC	7	0	0	2.3	D	12.0	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

ILLINOIS

American Lung Association in Illinois

55 W. Wacker Drive, Suite 800
Chicago, IL 60606
(312) 781-1100
www.lungusa.org/illinois

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADAMS	67,046	15,279	11,678	1,389	4,260	1,843	1,001	20,447	4,479
CHAMPAIGN	190,260	38,470	18,743	3,497	12,484	4,708	1,954	46,399	9,519
CLARK	16,884	3,821	2,922	347	1,075	465	253	5,161	1,131
COOK	5,285,107	1,319,728	618,729	119,977	326,958	133,325	64,106	1,397,286	298,297
DUPAGE	929,192	232,431	98,302	21,130	57,584	23,781	11,486	249,447	53,505
EFFINGHAM	34,225	8,693	5,087	790	2,104	895	469	9,761	2,124
HAMILTON	8,245	1,709	1,667	155	538	240	137	2,723	603
JERSEY	22,455	4,910	3,382	446	1,446	611	316	6,617	1,435
KANE	501,021	148,342	41,708	13,486	29,108	11,469	5,081	115,931	24,317
LAKE	710,241	198,274	66,460	18,025	42,296	17,141	7,994	177,063	37,650
LASALLE	112,616	26,257	17,808	2,387	7,113	3,042	1,611	33,330	7,267
MACON	108,732	25,121	17,247	2,284	6,893	2,979	1,595	32,804	7,180
MACOUPIN	48,235	10,615	8,050	965	3,098	1,335	716	14,719	3,219
MADISON	267,347	62,322	37,242	5,666	16,898	7,071	3,586	75,926	16,402
MCHENRY	315,943	86,069	30,240	7,825	18,981	7,652	3,548	78,866	16,732
MCLEAN	164,209	37,526	15,923	3,411	10,435	4,036	1,750	40,469	8,415
PEORIA	182,993	45,291	25,307	4,117	11,348	4,757	2,421	51,162	11,060
RANDOLPH	32,760	6,750	4,912	614	2,142	896	456	9,638	2,082
ROCK ISLAND	147,329	33,587	22,885	3,053	9,370	3,992	2,097	43,580	9,486
SANGAMON	194,122	45,905	26,666	4,173	12,228	5,176	2,656	55,856	12,119
ST. CLAIR	261,316	67,381	32,861	6,126	15,989	6,618	3,280	70,312	15,114
WILL	673,586	193,170	55,035	17,561	39,642	15,499	6,761	155,660	32,519
WINNEBAGO	298,759	75,279	38,414	6,844	18,425	7,654	3,817	81,551	17,558
TOTALS	**10,572,623**	**2,686,930**	**1,201,268**	**244,269**	**650,414**	**265,182**	**127,091**	**2,774,709**	**592,213**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	8	0	0	2.7	D	2	0	0	0.7	B	DNC	INC
CHAMPAIGN	2	0	0	0.7	B	4	0	0	1.3	C	12.9	PASS
CLARK	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COOK	41	5	0	16.2	F	43	0	0	14.3	F	15.7	FAIL
DUPAGE	5	0	0	1.7	C	5	0	0	1.7	C	14.0	PASS
EFFINGHAM	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMILTON	9	0	0	3.0	D	2	0	0	0.7	B	DNC	INC
JERSEY	18	0	0	6.0	F	3	0	0	1.0	C	13.2	PASS
KANE	12	0	0	4.0	F	5	0	0	1.7	C	14.3	PASS
LAKE	25	1	0	8.8	F	3	0	0	1.0	C	12.1	PASS
LASALLE	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	DNC	INC
MACON	10	0	0	3.3	F	4	0	0	1.3	C	13.6	PASS
MACOUPIN	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MADISON	55	4	0	20.3	F	21	0	0	7.0	F	16.5	FAIL
MCHENRY	14	0	0	4.7	F	5	0	0	1.7	C	12.4	PASS
MCLEAN	12	0	0	4.0	F	2	0	0	0.7	B	12.4	PASS
PEORIA	11	0	0	3.7	F	6	0	0	2.0	C	13.2	PASS
RANDOLPH	12	0	0	4.0	F	1	0	0	0.3	B	13.6	PASS
ROCK ISLAND	3	0	0	1.0	C	3	0	0	1.0	C	12.2	PASS
SANGAMON	5	0	0	1.7	C	4	0	0	1.3	C	13.2	PASS
ST. CLAIR	22	5	0	9.8	F	7	0	0	2.3	D	15.7	FAIL
WILL	6	0	0	2.0	C	6	0	0	2.0	C	14.1	PASS
WINNEBAGO	5	0	0	1.7	C	5	0	0	1.7	C	13.6	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

INDIANA

American Lung Association in Indiana

115 W. Washington Street, Suite 1180 South
Indianapolis, IN 46204
(317) 819-1181
www.lungusa.org/indiana

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALLEN	349,488	94,619	40,164	8,602	22,430	8,695	4,261	91,869	19,728
BOONE	54,137	14,376	6,274	1,307	3,520	1,367	676	14,496	3,122
CARROLL	19,987	4,726	2,922	430	1,345	540	283	5,887	1,284
CLARK	105,035	25,356	13,219	2,305	6,989	2,731	1,356	29,030	6,249
DEKALB	41,796	10,931	5,068	994	2,713	1,059	525	11,251	2,422
DELAWARE	115,419	23,764	16,500	2,160	7,841	3,094	1,528	32,844	7,036
DUBOIS	41,225	10,312	5,798	937	2,708	1,082	560	11,722	2,546
ELKHART	197,942	56,395	21,556	5,127	12,355	4,754	2,275	49,716	10,606
FLOYD	73,064	17,614	9,260	1,601	4,929	1,933	980	20,730	4,491
GIBSON	32,754	7,750	4,881	705	2,193	883	464	9,637	2,101
GREENE	32,692	7,596	5,030	691	2,197	889	471	9,737	2,126
HAMILTON	261,661	78,009	20,287	7,092	16,258	6,004	2,658	60,640	12,740
HANCOCK	66,305	16,764	8,042	1,524	4,370	1,703	846	18,101	3,900
HENDRICKS	134,558	35,339	13,325	3,213	8,716	3,296	1,528	33,970	7,202
HENRY	47,181	10,497	7,642	954	3,211	1,309	704	14,442	3,163
HOWARD	83,776	20,602	12,292	1,873	5,566	2,241	1,184	24,515	5,354
HUNTINGTON	37,743	8,885	5,611	808	2,519	1,013	529	11,021	2,398
JACKSON	42,184	10,430	5,963	948	2,763	1,102	566	11,904	2,579

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
JOHNSON	135,951	35,146	15,355	3,195	8,814	3,393	1,628	35,524	7,585
KNOX	37,949	8,031	6,160	730	2,579	1,047	550	11,430	2,486
KOSCIUSKO	76,115	19,861	9,620	1,806	4,939	1,940	975	20,739	4,477
LAKE	492,104	128,179	63,487	11,653	32,141	12,686	6,469	136,480	29,582
LAPORTE	109,787	25,578	15,183	2,325	7,401	2,936	1,505	31,667	6,867
LAWRENCE	46,033	10,505	7,340	955	3,113	1,267	680	13,964	3,058
MADISON	131,312	29,947	20,457	2,722	8,828	3,573	1,887	39,095	8,523
MARION	876,804	234,486	94,581	21,317	56,193	21,520	10,217	224,213	47,762
MORGAN	69,874	17,304	8,107	1,573	4,675	1,810	894	19,181	4,132
PERRY	18,916	3,895	2,790	354	1,308	521	267	5,620	1,217
PORTER	160,578	38,135	18,555	3,467	10,878	4,199	2,060	44,366	9,542
POSEY	26,262	6,029	3,382	548	1,822	717	370	7,744	1,687
SHELBY	44,063	10,724	5,699	975	2,940	1,156	584	12,387	2,679
SPENCER	20,334	4,748	2,934	432	1,380	553	290	6,029	1,316
ST. JOSEPH	266,088	67,584	34,419	6,144	17,321	6,813	3,411	72,719	15,671
TIPPECANOE	163,364	34,524	15,266	3,139	10,819	3,972	1,623	38,903	7,952
VANDERBURGH	174,425	40,545	25,352	3,686	11,638	4,650	2,392	50,261	10,891
VIGO	104,915	23,142	14,253	2,104	7,055	2,771	1,368	29,408	6,307
WARRICK	57,090	13,898	6,841	1,263	3,867	1,506	758	16,090	3,484
TOTALS	**4,748,911**	**1,206,226**	**573,615**	**109,658**	**310,333**	**120,725**	**59,322**	**1,277,331**	**274,266**

INDIANA

American Lung Association in Indiana

115 W. Washington Street, Suite 1180 South
Indianapolis, IN 46204
(317) 819-1181
www.lungusa.org/indiana

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ALLEN	33	0	0	11.0	F
BOONE	31	0	0	10.3	F
CARROLL	8	0	0	2.7	D
CLARK	44	1	0	15.2	F
DEKALB	*	*	*	*	*
DELAWARE	20	1	0	7.2	F
DUBOIS	DNC	DNC	DNC	DNC	DNC
ELKHART	23	0	0	7.7	F
FLOYD	30	3	0	11.5	F
GIBSON	*	*	*	*	*
GREENE	30	0	0	10.0	F
HAMILTON	41	1	0	14.2	F
HANCOCK	27	0	0	9.0	F
HENDRICKS	17	0	0	5.7	F
HENRY	DNC	DNC	DNC	DNC	DNC
HOWARD	DNC	DNC	DNC	DNC	DNC
HUNTINGTON	13	0	0	4.3	F
JACKSON	19	0	0	6.3	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALLEN	6	0	0	2.0	C	13.6	PASS
BOONE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARROLL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARK	19	0	0	6.3	F	16.6	FAIL
DEKALB	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DELAWARE	8	1	0	3.2	D	13.9	PASS
DUBOIS	17	0	0	5.7	F	14.9	PASS
ELKHART	6	1	0	2.5	D	DNC	INC
FLOYD	10	0	0	3.3	F	14.9	PASS
GIBSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMILTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HANCOCK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENDRICKS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENRY	6	0	0	2.0	C	DNC	INC
HOWARD	4	0	0	1.3	C	13.9	PASS
HUNTINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JACKSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
JOHNSON	25	0	0	8.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KNOX	DNC	DNC	DNC	DNC	DNC	12	0	0	4.0	F	14.2	PASS
KOSCIUSKO	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LAKE	38	2	0	13.7	F	18	0	0	6.0	F	14.5	PASS
LAPORTE	25	1	0	8.8	F	8	0	0	2.7	D	12.5	PASS
LAWRENCE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MADISON	18	0	0	6.0	F	10	0	0	3.3	F	13.9	PASS
MARION	44	0	0	14.7	F	41	0	0	13.7	F	16.1	FAIL
MORGAN	27	0	0	9.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PERRY	35	0	0	11.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PORTER	25	2	0	9.3	F	6	0	0	2.0	C	13.4	PASS
POSEY	20	0	0	6.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SHELBY	32	0	0	10.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SPENCER	DNC	DNC	DNC	DNC	DNC	6	0	0	2.0	C	14.6	PASS
ST. JOSEPH	18	1	0	6.5	F	9	0	0	3.0	D	13.2	PASS
TIPPECANOE	DNC	DNC	DNC	DNC	DNC	9	0	0	3.0	D	13.7	PASS
VANDERBURGH	50	0	0	16.7	F	9	0	0	3.0	D	15.0	PASS
VIGO	14	0	0	4.7	F	11	0	0	3.7	F	14.2	PASS
WARRICK	36	1	0	12.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

IOWA

American Lung Association in Iowa

2530 73rd Street
Des Moines, IA 50322
(515) 309-9507
www.lungusa.org/iowa

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BLACK HAWK	127,446	28,523	17,806	2,593	6,871	3,379	1,692	36,079	7,764
BREMER	23,734	5,102	3,977	464	1,287	660	353	7,271	1,589
CLINTON	49,051	11,548	7,994	1,050	2,583	1,347	732	14,934	3,279
DELAWARE	17,459	4,229	2,800	384	911	476	259	5,279	1,160
HARRISON	15,409	3,597	2,627	327	813	427	235	4,765	1,049
JOHNSON	125,692	25,956	9,980	2,360	7,034	3,069	1,222	29,723	6,055
LEE	35,619	7,940	5,846	722	1,902	1,006	552	11,196	2,467
LINN	205,836	51,476	26,050	4,680	10,717	5,275	2,617	56,068	12,059
MONTGOMERY	11,002	2,509	2,187	228	581	317	184	3,629	808
MUSCATINE	42,423	11,047	5,180	1,004	2,172	1,089	548	11,648	2,519
PALO ALTO	9,442	1,995	1,995	181	511	276	160	3,159	702
POLK	418,339	110,711	45,965	10,065	21,406	10,350	4,949	108,170	23,086
POTTAWATTAMIE	89,409	22,213	12,128	2,019	4,650	2,342	1,200	25,253	5,475
SCOTT	162,687	41,597	20,144	3,782	8,384	4,201	2,116	44,930	9,716
STORY	84,752	15,281	8,735	1,389	4,901	2,142	882	21,053	4,307
VAN BUREN	7,690	1,721	1,449	156	410	219	124	2,471	547
WARREN	44,503	10,508	5,765	955	2,358	1,169	585	12,473	2,689
WOODBURY	102,287	28,140	13,196	2,558	5,136	2,572	1,308	27,641	5,982
WRIGHT	13,064	3,019	2,723	274	686	381	226	4,412	988
TOTALS	**1,585,844**	**387,112**	**196,547**	**35,192**	**83,311**	**40,695**	**19,944**	**430,154**	**92,241**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						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	6	0	0	2.0	C	11.5	PASS
BREMER	3	0	0	1.0	C	*	*	*	*	*	DNC	INC
CLINTON	8	0	0	2.7	D	13	0	0	4.3	F	12.6	PASS
DELAWARE	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
HARRISON	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSON	DNC	DNC	DNC	DNC	DNC	11	0	0	3.7	F	12.3	PASS
LEE	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
LINN	6	0	0	2.0	C	10	0	0	3.3	F	10.9	PASS
MONTGOMERY	2	0	0	0.7	B	2	0	0	0.7	B	10.3	PASS
MUSCATINE	DNC	DNC	DNC	DNC	DNC	14	0	0	4.7	F	13.3	PASS
PALO ALTO	0	0	0	0.0	A	3	0	0	1.0	C	9.5	PASS
POLK	1	0	0	0.3	B	5	0	0	1.7	C	10.5	PASS
POTTAWATTAMIE	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	11.5	PASS
SCOTT	6	0	0	2.0	C	21	0	0	7.0	F	14.4	PASS
STORY	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VAN BUREN	4	0	0	1.3	C	1	0	0	0.3	B	10.8	PASS
WARREN	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WOODBURY	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	10.5	PASS
WRIGHT	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	10.4	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

KANSAS

American Lung Association in Kansas

2400 Troost Avenue, #4300
Kansas City, MO 64108
(816) 842-5242
www.lungusa.org/kansas

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
DOUGLAS	113,488	21,596	10,019	1,963	8,048	2,815	1,124	27,311	5,557
JEFFERSON	18,467	4,164	2,695	379	1,171	509	268	5,562	1,215
JOHNSON	526,319	137,505	53,726	12,501	32,617	13,094	6,203	136,209	29,053
LEAVENWORTH	73,603	18,318	7,466	1,665	4,651	1,850	867	19,158	4,075
LINN	9,767	2,193	1,768	199	614	276	155	3,106	686
MIAMI	31,078	7,929	3,574	721	1,927	794	390	8,397	1,806
PAWNEE	6,415	1,367	1,036	124	412	182	98	2,007	441
SEDGWICK	476,026	131,362	54,158	11,942	28,876	11,682	5,678	122,995	26,344
SHAWNEE	173,476	42,729	23,886	3,884	10,806	4,569	2,352	49,379	10,718
SHERMAN	5,959	1,213	1,187	110	385	174	99	1,968	436
SUMNER	23,888	5,899	3,521	536	1,467	646	346	7,103	1,558
TREGO	2,927	581	661	53	186	90	54	1,049	236
WYANDOTTE	153,956	44,233	16,158	4,021	9,227	3,685	1,755	38,441	8,197
TOTALS	**1,615,369**	**419,089**	**179,855**	**38,099**	**100,386**	**40,364**	**19,389**	**422,686**	**90,321**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
DOUGLAS	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSON	14	0	0	4.7	F	0	0	0	0.0	A	10.5	PASS
LEAVENWORTH	16	1	0	5.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LINN	6	0	0	2.0	C	0	0	0	0.0	A	10.6	PASS
MIAMI	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PAWNEE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SEDGWICK	4	0	0	1.3	C	2	0	0	0.7	B	10.0	PASS
SHAWNEE	*	*	*	*	*	1	0	0	0.3	B	DNC	INC
SHERMAN	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SUMNER	13	0	0	4.3	F	1	0	0	0.3	B	9.7	PASS
TREGO	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WYANDOTTE	19	3	0	7.8	F	4	0	0	1.3	C	12.4	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

KENTUCKY

American Lung Association in Kentucky

4100 Churchman Avenue
Louisville, KY 40215
(502) 363-2652
www.lungusa.org/kentucky

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BELL	28,987	6,467	4,283	588	2,021	787	408	8,540	1,855
BOONE	112,459	31,069	9,818	2,824	7,234	2,668	1,198	27,117	5,709
BOYD	48,481	10,259	7,645	933	3,433	1,362	726	14,959	3,273
BULLITT	73,931	17,827	7,199	1,621	4,989	1,869	865	19,245	4,083
CAMPBELL	86,858	20,660	11,219	1,878	5,922	2,282	1,144	24,364	5,257
CARTER	27,424	6,484	3,613	589	1,875	717	358	7,641	1,645
CHRISTIAN	80,868	25,517	8,183	2,320	4,949	1,803	826	18,512	3,897
DAVIESS	93,756	23,078	13,552	2,098	6,343	2,486	1,299	27,061	5,891
EDMONSON	11,978	2,584	1,809	235	844	328	171	3,567	775
FAYETTE	279,044	61,198	29,235	5,564	19,420	7,124	3,234	72,810	15,334
FRANKLIN	48,425	10,593	6,273	963	3,381	1,312	660	14,026	3,033
GRAVES	37,557	8,856	6,128	805	2,585	1,021	550	11,276	2,468
GREENUP	37,270	7,956	6,226	723	2,637	1,054	573	11,691	2,568
HANCOCK	8,617	2,228	1,055	203	571	222	112	2,382	516
HARDIN	97,949	25,392	11,213	2,308	6,477	2,470	1,204	26,030	5,583
HENDERSON	45,296	10,603	6,266	964	3,107	1,218	629	13,185	2,867
JEFFERSON	709,264	170,787	94,963	15,526	48,204	18,771	9,587	202,101	43,812
JESSAMINE	45,555	11,461	4,701	1,042	3,039	1,128	523	11,630	2,463

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
KENTON	156,675	40,409	16,795	3,674	10,361	3,943	1,895	41,281	8,834
LARUE	13,661	3,068	2,239	279	954	376	202	4,149	907
LAUREL	57,351	13,931	7,045	1,266	3,882	1,480	727	15,656	3,362
LAWRENCE	16,322	3,696	2,163	336	1,130	434	218	4,636	1,000
LIVINGSTON	9,610	1,931	1,620	176	691	277	151	3,073	676
MADISON	81,103	18,019	8,486	1,638	5,630	2,030	902	20,570	4,302
MCCRACKEN	64,765	14,589	10,389	1,326	4,509	1,808	980	20,020	4,399
MCLEAN	9,731	2,201	1,536	200	677	268	143	2,947	645
MUHLENBERG	31,341	6,795	4,910	618	2,206	866	457	9,476	2,067
OHIO	23,560	5,502	3,521	500	1,622	634	331	6,904	1,502
OLDHAM	55,935	13,441	4,520	1,222	3,760	1,425	651	14,566	3,093
PERRY	29,213	6,770	3,737	615	2,006	778	392	8,326	1,800
PIKE	65,544	14,138	8,613	1,285	4,593	1,793	910	19,242	4,170
PULASKI	60,148	13,603	9,921	1,237	4,193	1,650	885	18,190	3,976
SCOTT	42,954	11,416	3,706	1,038	2,805	1,014	441	10,172	2,122
SIMPSON	17,070	4,203	2,310	382	1,153	445	226	4,776	1,032
TRIGG	13,401	2,883	2,431	262	949	381	211	4,264	940
WARREN	104,023	23,863	11,365	2,169	7,155	2,630	1,208	27,023	5,703
TOTALS	**2,726,126**	**653,477**	**338,688**	**59,408**	**185,307**	**70,857**	**34,997**	**751,405**	**161,558**

KENTUCKY

American Lung Association in Kentucky

4100 Churchman Avenue
Louisville, KY 40215
(502) 363-2652
www.lungusa.org/kentucky

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
BELL	22	0	0	7.3	F
BOONE	14	0	0	4.7	F
BOYD	21	0	0	7.0	F
BULLITT	13	0	0	4.3	F
CAMPBELL	40	2	0	14.3	F
CARTER	5	0	0	1.7	C
CHRISTIAN	34	0	0	11.3	F
DAVIESS	31	0	0	10.3	F
EDMONSON	18	0	0	6.0	F
FAYETTE	11	0	0	3.7	F
FRANKLIN	DNC	DNC	DNC	DNC	DNC
GRAVES	*	*	*	*	*
GREENUP	21	0	0	7.0	F
HANCOCK	24	0	0	8.0	F
HARDIN	22	0	0	7.3	F
HENDERSON	23	0	0	7.7	F
JEFFERSON	54	1	0	18.5	F
JESSAMINE	27	0	0	9.0	F
KENTON	27	0	0	9.0	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BELL	1	1	0	0.8	B	DNC	INC
BOONE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BOYD	9	0	0	3.0	D	14.7	PASS
BULLITT	9	0	0	3.0	D	15.3	FAIL
CAMPBELL	4	0	0	1.3	C	DNC	INC
CARTER	6	0	0	2.0	C	12.6	PASS
CHRISTIAN	7	0	0	2.3	D	13.6	PASS
DAVIESS	9	0	0	3.0	D	14.1	PASS
EDMONSON	*	*	*	*	*	DNC	INC
FAYETTE	9	0	0	3.0	D	14.8	PASS
FRANKLIN	8	0	0	2.7	D	13.5	PASS
GRAVES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENUP	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HANCOCK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HARDIN	7	0	0	2.3	D	14.0	PASS
HENDERSON	7	0	0	2.3	D	14.3	PASS
JEFFERSON	34	0	0	11.3	F	15.5	FAIL
JESSAMINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KENTON	7	0	0	2.3	D	14.4	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LARUE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LAUREL	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
LAWRENCE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LIVINGSTON	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MADISON	DNC	DNC	DNC	DNC	DNC	4	0	0	1.3	C	13.6	PASS
MCCRACKEN	11	0	0	3.7	F	9	0	0	3.0	D	13.9	PASS
MCLEAN	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MUHLENBERG	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OHIO	*	*	*	*	*	2	0	0	0.7	B	DNC	INC
OLDHAM	55	0	0	18.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PERRY	7	0	0	2.3	D	3	0	0	1.0	C	13.9	PASS
PIKE	9	0	0	3.0	D	4	0	0	1.3	C	14.0	PASS
PULASKI	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SCOTT	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SIMPSON	27	0	0	9.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TRIGG	22	0	0	7.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WARREN	11	0	0	3.7	F	9	0	0	3.0	D	DNC	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

LOUISIANA

American Lung Association in Louisiana

2325 Severn Avenue, Suite 8
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AT-RISK GROUPS

				Lung Diseases					
Parish	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ASCENSION	99,056	28,684	8,025	2,608	4,408	2,277	998	22,910	4,793
BEAUREGARD	34,776	8,865	4,342	806	1,624	883	436	9,368	2,012
BOSSIER	108,705	29,582	12,507	2,689	4,959	2,666	1,287	27,994	5,982
CADDO	252,609	64,165	34,400	5,833	11,813	6,514	3,313	70,036	15,142
CALCASIEU	184,512	47,291	23,019	4,299	8,600	4,701	2,337	50,001	10,763
CONCORDIA	19,058	4,762	2,988	433	896	509	273	5,613	1,229
EAST BATON ROUGE	430,317	107,470	45,289	9,770	20,229	10,687	4,961	110,263	23,356
GRANT	19,758	5,124	2,526	466	917	503	252	5,372	1,158
IBERVILLE	32,501	7,767	3,702	706	1,550	828	394	8,639	1,840
JEFFERSON	423,520	99,906	57,713	9,082	20,281	11,345	5,840	122,573	26,629
LAFAYETTE	204,843	52,804	20,853	4,800	9,526	5,040	2,337	51,965	11,011
LAFOURCHE	92,713	22,659	11,059	2,060	4,390	2,369	1,150	24,929	5,335
LIVINGSTON	116,580	31,723	10,613	2,884	5,316	2,769	1,242	28,138	5,915
ORLEANS	239,124	44,085	30,363	4,008	12,220	6,694	3,298	70,874	15,252
OUACHITA	149,502	39,595	18,309	3,600	6,889	3,710	1,810	39,143	8,377
PLAQUEMINES	21,540	5,652	2,398	514	995	545	267	5,758	1,239
POINTE COUPEE	22,392	5,412	3,290	492	1,064	601	317	6,565	1,432
RAPIDES	130,079	33,485	17,451	3,044	6,055	3,338	1,695	35,854	7,750
ST. BERNARD	19,826	3,382	1,731	307	1,030	551	251	5,627	1,194

AT-RISK GROUPS

Parish	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ST. CHARLES	52,044	13,862	5,079	1,260	2,392	1,293	614	13,454	2,875
ST. JAMES	21,578	5,602	2,667	509	1,001	549	274	5,847	1,260
ST. JOHN THE BAPTIST	47,684	13,739	4,072	1,249	2,126	1,125	512	11,500	2,433
ST. MARY	51,311	13,553	6,713	1,232	2,367	1,313	669	14,121	3,058
ST. TAMMANY	226,625	58,962	26,429	5,360	10,505	5,787	2,875	61,495	13,264
TANGIPAHOA	115,398	30,410	12,550	2,765	5,326	2,812	1,314	29,105	6,168
TERREBONNE	108,424	28,901	11,720	2,627	4,983	2,671	1,272	27,868	5,943
WEST BATON ROUGE	22,625	5,778	2,367	525	1,055	566	268	5,891	1,256
TOTALS	**3,247,100**	**813,220**	**382,175**	**73,930**	**152,516**	**82,644**	**40,255**	**870,904**	**186,666**

LOUISIANA

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HIGH OZONE DAYS/2005–2007

Parish	Orange	Red	Purple	Wgt. Avg	Grade
ASCENSION	34	2	0	12.3	F
BEAUREGARD	*	*	*	*	*
BOSSIER	28	0	0	9.3	F
CADDO	31	0	0	10.3	F
CALCASIEU	29	1	0	10.2	F
CONCORDIA	DNC	DNC	DNC	DNC	DNC
EAST BATON ROUGE	56	11	0	24.2	F
GRANT	*	*	*	*	*
IBERVILLE	68	5	0	25.2	F
JEFFERSON	29	1	0	10.2	F
LAFAYETTE	21	0	0	7.0	F
LAFOURCHE	23	1	0	8.2	F
LIVINGSTON	25	0	0	8.3	F
ORLEANS	*	*	*	*	*
OUACHITA	13	0	0	4.3	F
PLAQUEMINES	DNC	DNC	DNC	DNC	DNC
POINTE COUPEE	38	3	0	14.2	F
RAPIDES	DNC	DNC	DNC	DNC	DNC
ST. BERNARD	*	*	*	*	*

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
Parish	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ASCENSION	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BEAUREGARD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BOSSIER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CADDO	4	0	0	1.3	C	DNC	INC
CALCASIEU	3	0	0	1.0	C	10.9	PASS
CONCORDIA	*	*	*	*	*	DNC	INC
EAST BATON ROUGE	5	0	0	1.7	C	13.3	PASS
GRANT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
IBERVILLE	1	0	0	0.3	B	13.0	PASS
JEFFERSON	7	0	0	2.3	D	11.4	PASS
LAFAYETTE	1	0	0	0.3	B	11.0	PASS
LAFOURCHE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LIVINGSTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ORLEANS	3	0	0	1.0	C	DNC	INC
OUACHITA	4	0	0	1.3	C	12.2	PASS
PLAQUEMINES	*	*	*	*	*	DNC	INC
POINTE COUPEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RAPIDES	0	0	0	0.0	A	11.0	PASS
ST. BERNARD	3	0	0	1.0	C	DNC	INC

HIGH OZONE DAYS/2005–2007

Parish	Orange	Red	Purple	Wgt. Avg	Grade
ST. CHARLES	15	0	0	5.0	F
ST. JAMES	18	0	0	6.0	F
ST. JOHN THE BAPTIST	22	0	0	7.3	F
ST. MARY	*	*	*	*	*
ST. TAMMANY	DNC	DNC	DNC	DNC	DNC
TANGIPAHOA	DNC	DNC	DNC	DNC	DNC
TERREBONNE	DNC	DNC	DNC	DNC	DNC
WEST BATON ROUGE	25	3	0	9.8	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
Parish	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ST. CHARLES	*	*	*	*	*	DNC	INC
ST. JAMES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. JOHN THE BAPTIST	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. MARY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. TAMMANY	0	0	0	0.0	A	DNC	INC
TANGIPAHOA	3	0	0	1.0	C	12.4	PASS
TERREBONNE	0	1	0	0.5	B	10.8	PASS
WEST BATON ROUGE	4	1	0	1.8	C	13.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MAINE

American Lung Association in Maine

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ANDROSCOGGIN	106,815	24,371	15,248	2,216	8,435	2,878	1,483	31,119	6,753
AROOSTOOK	72,047	14,251	12,742	1,296	5,818	2,109	1,169	23,596	5,209
CUMBERLAND	275,374	59,922	37,527	5,448	21,932	7,583	3,907	81,936	17,821
HANCOCK	53,278	10,472	8,638	952	4,311	1,553	844	17,204	3,787
KENNEBEC	120,839	25,324	17,637	2,302	9,704	3,385	1,772	36,861	8,042
KNOX	40,781	8,088	7,151	735	3,289	1,194	662	13,360	2,950
OXFORD	56,734	11,816	9,005	1,074	4,537	1,619	873	17,872	3,925
PENOBSCOT	148,784	30,561	20,159	2,778	12,119	4,093	2,065	43,818	9,471
PISCATAQUIS	17,180	3,362	2,984	306	1,383	510	284	5,719	1,266
SAGADAHOC	36,387	8,365	4,950	760	2,837	999	522	10,865	2,374
SOMERSET	51,658	11,157	7,856	1,014	4,103	1,448	770	15,886	3,478
WASHINGTON	32,751	6,669	5,946	606	2,625	954	533	10,717	2,369
YORK	201,341	44,376	28,695	4,034	15,909	5,590	2,937	60,950	13,318
TOTALS	**1,213,969**	**258,734**	**178,538**	**23,522**	**97,002**	**33,913**	**17,820**	**369,902**	**80,764**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANDROSCOGGIN	9	0	0	3.0	D	0	0	0	0.0	A	9.3	PASS
AROOSTOOK	*	*	*	*	*	0	0	0	0.0	A	9.2	PASS
CUMBERLAND	8	1	0	3.2	D	0	0	0	0.0	A	10.5	PASS
HANCOCK	27	1	0	9.5	F	0	0	0	0.0	A	5.5	PASS
KENNEBEC	9	0	0	3.0	D	0	0	0	0.0	A	9.5	PASS
KNOX	9	2	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OXFORD	2	0	0	0.7	B	0	0	0	0.0	A	9.8	PASS
PENOBSCOT	2	0	0	0.7	B	1	0	0	0.3	B	8.8	PASS
PISCATAQUIS	*	*	*	*	*	*	*	*	*	*	DNC	INC
SAGADAHOC	8	1	0	3.2	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SOMERSET	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YORK	20	1	0	7.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MARYLAND

American Lung Association in Maryland

Executive Plaza 1, Suite 600 11350 McCormick Road
Hunt Valley, MD 21031
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www.lungusa.org/maryland

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ANNE ARUNDEL	512,154	123,957	56,517	11,269	31,951	13,188	6,360	138,281	29,617
BALTIMORE CITY	637,455	155,155	75,658	14,105	39,656	16,254	7,844	170,623	36,462
BALTIMORE	788,994	177,547	113,302	16,141	50,475	21,266	10,918	229,612	49,766
CALVERT	88,223	22,342	8,686	2,031	5,417	2,220	1,046	23,033	4,911
CARROLL	169,220	41,481	19,741	3,771	10,531	4,397	2,172	46,608	10,041
CECIL	99,695	24,729	11,047	2,248	6,159	2,511	1,192	26,159	5,572
CHARLES	140,444	37,625	11,651	3,420	8,423	3,362	1,494	34,012	7,149
FREDERICK	224,705	58,380	22,530	5,307	13,667	5,575	2,618	57,771	12,296
GARRETT	29,627	6,536	4,920	594	1,911	820	440	9,041	1,977
HARFORD	239,993	60,620	27,176	5,511	14,779	6,143	3,008	64,857	13,942
KENT	19,987	3,737	3,879	340	1,346	581	320	6,493	1,425
MONTGOMERY	930,813	226,246	113,190	20,568	58,144	24,440	12,246	260,713	56,351
PRINCE GEORGE'S	828,770	208,468	74,818	18,952	50,847	20,388	9,191	207,576	43,756
WASHINGTON	145,113	33,189	19,903	3,017	9,211	3,802	1,888	40,449	8,685
WORCESTER	49,374	9,385	10,962	853	3,325	1,471	854	16,872	3,745
TOTALS	**4,904,567**	**1,189,397**	**573,980**	**108,128**	**305,842**	**126,418**	**61,592**	**1,332,099**	**285,696**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANNE ARUNDEL	48	2	1	17.7	F	7	0	0	2.3	D	14.3	PASS
BALTIMORE CITY	*	*	*	*	*	39	0	0	13.0	F	15.6	FAIL
BALTIMORE	50	5	0	19.2	F	25	0	0	8.3	F	14.5	PASS
CALVERT	29	0	0	9.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARROLL	39	1	0	13.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CECIL	53	6	1	21.3	F	2	0	0	0.7	B	12.5	PASS
CHARLES	38	3	0	14.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FREDERICK	42	0	0	14.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GARRETT	13	0	0	4.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HARFORD	65	9	0	26.2	F	4	0	0	1.3	C	12.4	PASS
KENT	40	1	0	13.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	33	3	0	12.5	F	3	0	0	1.0	C	12.2	PASS
PRINCE GEORGE'S	67	7	0	25.8	F	8	0	0	2.7	D	12.8	PASS
WASHINGTON	24	0	0	8.0	F	2	0	0	0.7	B	13.2	PASS
WORCESTER	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MASSACHUSETTS

American Lung Association in Massachusetts

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BARNSTABLE	222,175	39,744	52,371	3,613	17,472	6,890	4,125	80,179	17,945
BERKSHIRE	129,798	25,493	23,346	2,318	10,099	3,773	2,079	42,124	9,276
BRISTOL	543,024	124,389	73,906	11,308	40,894	14,443	7,293	154,748	33,420
DUKES	15,485	2,933	2,313	267	1,222	451	239	4,933	1,081
ESSEX	733,101	174,173	99,915	15,834	54,537	19,576	10,071	211,459	45,926
HAMPDEN	457,908	110,090	63,641	10,008	33,939	12,060	6,158	129,894	28,117
HAMPSHIRE	153,147	25,276	19,006	2,298	12,562	4,245	1,994	44,041	9,347
MIDDLESEX	1,473,416	318,720	188,487	28,975	113,049	39,461	19,478	418,353	89,935
NORFOLK	654,909	148,300	91,003	13,482	49,419	17,791	9,186	192,486	41,847
PLYMOUTH	490,258	120,027	60,908	10,912	36,203	12,896	6,514	138,075	29,898
SUFFOLK	713,049	140,758	77,156	12,796	56,455	18,166	7,911	182,602	37,941
WORCESTER	781,352	186,963	95,733	16,997	58,204	20,344	10,041	215,636	46,376
TOTALS	**6,367,622**	**1,416,866**	**847,785**	**128,807**	**484,056**	**170,094**	**85,090**	**1,814,531**	**391,109**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BARNSTABLE	36	3	0	13.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BERKSHIRE	25	0	0	8.3	F	4	0	0	1.3	C	10.3	PASS
BRISTOL	18	2	0	7.0	F	1	0	0	0.3	B	9.1	PASS
DUKES	22	5	0	9.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ESSEX	32	4	0	12.7	F	3	0	0	1.0	C	9.4	PASS
HAMPDEN	36	7	1	16.2	F	6	0	0	2.0	C	12.0	PASS
HAMPSHIRE	33	7	0	14.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MIDDLESEX	23	0	0	7.7	F	0	0	0	0.0	A	DNC	INC
NORFOLK	35	1	0	12.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PLYMOUTH	*	*	*	*	*	2	0	0	0.7	B	9.6	PASS
SUFFOLK	19	0	0	6.3	F	13	0	0	4.3	F	12.2	PASS
WORCESTER	32	1	0	11.2	F	4	0	0	1.3	C	11.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MICHIGAN

American Lung Association in Michigan

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www.lungusa.org/michigan

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALLEGAN	112,761	28,856	13,125	2,623	7,880	2,872	1,412	30,379	6,531
BAY	107,517	23,937	16,564	2,176	7,708	2,980	1,588	32,729	7,162
BENZIE	17,510	3,828	3,294	348	1,249	496	277	5,575	1,229
BERRIEN	159,589	39,014	24,357	3,547	11,116	4,299	2,297	47,279	10,348
CASS	50,551	11,488	6,886	1,044	3,621	1,383	718	14,994	3,268
CHIPPEWA	38,922	7,013	5,330	638	3,012	1,071	519	11,271	2,407
CLINTON	69,755	17,095	8,308	1,554	4,927	1,823	909	19,402	4,189
DICKINSON	26,937	5,874	5,196	534	1,907	780	447	8,870	1,970
GENESEE	434,715	112,032	54,368	10,185	30,168	11,156	5,607	119,221	25,752
GRAND TRAVERSE	85,479	18,907	12,172	1,719	6,192	2,327	1,199	25,156	5,461
HURON	33,290	6,875	7,001	625	2,379	986	576	11,330	2,525
INGHAM	279,295	62,001	28,017	5,637	20,822	7,038	3,135	71,351	14,955
IRON	12,151	2,158	2,849	196	893	379	227	4,416	989
KALAMAZOO	245,333	56,768	28,839	5,161	17,860	6,292	2,988	65,590	13,956
KENT	604,330	164,289	62,419	14,936	41,744	14,665	6,880	151,982	32,290
LEELANAU	21,898	4,364	4,348	397	1,578	659	383	7,546	1,683
LENAWEE	101,243	23,736	13,778	2,158	7,228	2,692	1,371	28,955	6,269
MACOMB	831,077	194,548	112,242	17,686	59,455	22,010	11,141	236,061	51,022

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MANISTEE	24,803	5,003	4,738	455	1,804	722	406	8,140	1,799
MASON	28,750	6,145	5,380	559	2,058	826	465	9,318	2,060
MECOSTA	42,090	8,640	6,064	785	3,163	1,111	539	11,714	2,494
MISSAUKEE	14,976	3,474	2,358	316	1,064	406	215	4,450	971
MONROE	153,608	36,896	18,475	3,354	10,937	4,020	1,994	42,696	9,203
MUSKEGON	174,386	43,994	22,167	3,999	12,212	4,481	2,240	47,782	10,299
OAKLAND	1,206,089	288,952	144,647	26,269	85,599	31,989	16,089	341,731	73,998
OTTAWA	259,206	67,532	28,238	6,139	18,178	6,381	3,005	66,258	14,077
ROSCOMMON	25,517	4,669	6,388	424	1,853	796	486	9,360	2,103
SAGINAW	202,268	49,715	28,938	4,520	14,133	5,383	2,817	58,617	12,773
SCHOOLCRAFT	8,518	1,642	1,728	149	623	253	145	2,883	639
ST. CLAIR	170,119	40,635	22,114	3,694	12,090	4,491	2,270	48,115	10,407
WASHTENAW	350,003	75,499	31,293	6,864	26,457	8,766	3,764	87,488	18,189
WAYNE	1,985,101	529,335	234,076	48,122	136,555	49,947	24,716	529,996	114,087
TOTALS	**7,877,787**	**1,944,914**	**965,697**	**176,812**	**556,464**	**203,480**	**100,823**	**2,160,653**	**465,106**

MICHIGAN

American Lung Association in Michigan

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HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ALLEGAN	48	6	0	19.0	F
BAY	DNC	DNC	DNC	DNC	DNC
BENZIE	28	2	0	10.3	F
BERRIEN	35	2	0	12.7	F
CASS	26	0	0	8.7	F
CHIPPEWA	DNC	DNC	DNC	DNC	DNC
CLINTON	11	0	0	3.7	F
DICKINSON	DNC	DNC	DNC	DNC	DNC
GENESEE	22	0	0	7.3	F
GRAND TRAVERSE	*	*	*	*	*
HURON	19	1	0	6.8	F
INGHAM	11	0	0	3.7	F
IRON	DNC	DNC	DNC	DNC	DNC
KALAMAZOO	18	0	0	6.0	F
KENT	35	1	0	12.2	F
LEELANAU	19	1	0	6.8	F
LENAWEE	16	1	0	5.8	F
MACOMB	45	5	0	17.5	F
MANISTEE	*	*	*	*	*

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALLEGAN	11	0	0	3.7	F	11.9	PASS
BAY	6	0	0	2.0	C	10.9	PASS
BENZIE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BERRIEN	2	0	0	0.7	B	11.8	PASS
CASS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHIPPEWA	*	*	*	*	*	DNC	INC
CLINTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DICKINSON	*	*	*	*	*	DNC	INC
GENESEE	4	0	0	1.3	C	11.6	PASS
GRAND TRAVERSE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HURON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
INGHAM	5	0	0	1.7	C	12.2	PASS
IRON	*	*	*	*	*	DNC	INC
KALAMAZOO	3	0	0	1.0	C	12.9	PASS
KENT	18	1	0	6.5	F	12.8	PASS
LEELANAU	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LENAWEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MACOMB	5	1	0	2.2	D	12.5	PASS
MANISTEE	*	*	*	*	*	DNC	INC

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MASON	23	4	0	9.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MECOSTA	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MISSAUKEE	10	0	0	3.3	F	0	0	0	0.0	A	8.4	PASS
MONROE	DNC	DNC	DNC	DNC	DNC	7	1	0	2.8	D	13.8	PASS
MUSKEGON	44	3	0	16.2	F	6	0	0	2.0	C	11.6	PASS
OAKLAND	20	0	0	6.7	F	11	0	0	3.7	F	13.6	PASS
OTTAWA	28	3	0	10.8	F	5	0	0	1.7	C	12.6	PASS
ROSCOMMON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SAGINAW	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SCHOOLCRAFT	21	4	0	9.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. CLAIR	29	2	0	10.7	F	12	1	0	4.5	F	13.2	PASS
WASHTENAW	13	1	0	4.8	F	8	0	0	2.7	D	13.7	PASS
WAYNE	33	1	0	11.5	F	37	4	0	14.3	F	17.2	FAIL

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MINNESOTA

American Lung Association in Minnesota

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www.lungusa.org/minnesota

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ANOKA	326,252	86,151	27,263	7,832	18,748	7,955	3,600	81,073	17,138
BECKER	31,964	7,375	5,306	670	1,867	882	479	9,781	2,147
CARLTON	33,893	7,497	5,000	682	2,022	923	478	10,008	2,174
CASS	28,723	6,275	5,403	570	1,693	818	460	9,230	2,039
CROW WING	61,648	14,070	10,807	1,279	3,617	1,694	922	18,821	4,124
DAKOTA	390,478	104,895	32,489	9,536	22,286	9,482	4,304	96,758	20,473
GOODHUE	45,839	10,535	6,995	958	2,691	1,254	665	13,746	3,004
HENNEPIN	1,136,599	267,405	123,283	24,310	67,387	29,393	14,046	306,953	65,603
LAKE	10,741	2,019	2,206	184	653	325	188	3,712	826
LYON	24,695	5,803	3,637	528	1,453	651	333	7,020	1,517
MILLE LACS	26,354	6,297	4,167	572	1,536	699	367	7,632	1,658
OLMSTED	139,747	35,701	16,396	3,246	8,052	3,530	1,719	37,198	7,971
RAMSEY	499,891	121,327	63,534	11,030	29,193	12,982	6,461	138,150	29,748
SCOTT	126,642	38,028	8,151	3,457	7,015	2,795	1,149	27,382	5,645
ST. LOUIS	196,694	38,538	30,762	3,503	12,077	5,584	2,935	60,948	13,288
STEARNS	146,051	33,475	17,291	3,043	8,779	3,714	1,740	38,500	8,154
WASHINGTON	226,475	59,917	19,582	5,447	12,955	5,594	2,589	57,557	12,242
WRIGHT	117,372	33,831	9,972	3,076	6,559	2,706	1,193	27,302	5,717
TOTALS	**3,570,058**	**879,139**	**392,244**	**79,923**	**208,583**	**90,982**	**43,628**	**951,771**	**203,469**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANOKA	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BECKER	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARLTON	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CASS	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	5.7	PASS
CROW WING	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DAKOTA	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	9.6	PASS
GOODHUE	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENNEPIN	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	9.8	PASS
LAKE	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LYON	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MILLE LACS	8	0	0	2.7	D	2	0	0	0.7	B	6.7	PASS
OLMSTED	2	0	0	0.7	B	2	0	0	0.7	B	DNC	INC
RAMSEY	DNC	DNC	DNC	DNC	DNC	1	1	0	0.8	B	11.2	PASS
SCOTT	2	0	0	0.7	B	2	0	0	0.7	B	9.2	PASS
ST. LOUIS	2	0	0	0.7	B	1	0	0	0.3	B	7.6	PASS
STEARNS	1	0	0	0.3	B	3	0	0	1.0	C	8.5	PASS
WASHINGTON	6	0	0	2.0	C	*	*	*	*	*	DNC	INC
WRIGHT	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MISSISSIPPI

American Lung Association in Mississippi

P.O. Box 2178
Ridgeland, MS 39158
(601) 206-5810
www.lungusa.org/mississippi

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADAMS	31,710	7,739	5,391	704	1,632	875	487	9,811	2,167
ALCORN	35,609	8,476	5,576	771	1,810	956	506	10,480	2,285
BOLIVAR	37,635	10,038	4,188	913	1,792	920	436	9,588	2,039
CHOCTAW	9,052	2,130	1,505	194	468	249	136	2,774	610
DESOTO	149,393	43,805	14,195	3,982	6,830	3,483	1,600	35,763	7,560
FORREST	78,241	19,591	8,710	1,781	3,733	1,898	862	19,421	4,077
GRENADA	23,076	5,936	3,309	540	1,139	598	311	6,495	1,410
HANCOCK	39,687	9,295	5,744	845	2,060	1,091	581	11,968	2,623
HARRISON	176,105	45,934	20,657	4,176	8,609	4,469	2,209	47,393	10,203
HINDS	249,157	68,323	27,033	6,211	11,828	6,091	2,918	63,709	13,604
JACKSON	130,098	34,499	14,963	3,136	6,355	3,304	1,643	35,125	7,580
JONES	66,763	17,118	9,563	1,556	3,287	1,725	890	18,670	4,047
LAUDERDALE	77,100	20,477	10,869	1,862	3,757	1,973	1,021	21,382	4,640
LEE	80,349	21,817	9,965	1,983	3,861	2,009	1,003	21,409	4,612
LOWNDES	59,614	16,201	7,456	1,473	2,872	1,497	753	16,006	3,455
MADISON	89,387	25,329	9,189	2,303	4,172	2,140	1,009	22,223	4,727
MARSHALL	36,695	9,204	4,624	837	1,805	937	463	9,940	2,135
PANOLA	35,408	9,801	4,418	891	1,680	873	433	9,277	1,994
PEARL RIVER	57,071	14,664	7,707	1,333	2,807	1,468	747	15,790	3,415
RANKIN	138,362	35,813	14,583	3,256	6,674	3,421	1,608	35,485	7,543
SCOTT	28,895	7,992	3,661	727	1,376	717	359	7,651	1,648
SHARKEY	5,571	1,559	727	142	271	143	75	1,556	340
WARREN	48,866	13,651	5,767	1,241	2,349	1,226	618	13,113	2,838
WEBSTER	9,789	2,360	1,620	215	498	265	144	2,935	643
TOTALS	**1,693,633**	**451,752**	**201,420**	**41,069**	**81,664**	**42,329**	**20,810**	**447,964**	**96,196**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	7	0	0	2.3	D	2	0	0	0.7	B	11.3	PASS
ALCORN	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BOLIVAR	13	0	0	4.3	F	2	0	0	0.7	B	12.3	PASS
CHOCTAW	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DESOTO	43	2	0	15.3	F	5	0	0	1.7	C	12.5	PASS
FORREST	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	14.0	PASS
GRENADA	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
HANCOCK	*	*	*	*	*	*	*	*	*	*	DNC	INC
HARRISON	35	0	0	11.7	F	11	0	0	3.7	F	12.0	PASS
HINDS	7	0	0	2.3	D	3	0	0	1.0	C	12.7	PASS
JACKSON	26	0	0	8.7	F	1	0	0	0.3	B	11.8	PASS
JONES	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	14.6	PASS
LAUDERDALE	11	0	0	3.7	F	3	0	0	1.0	C	13.1	PASS
LEE	12	0	0	4.0	F	5	0	0	1.7	C	12.8	PASS
LOWNDES	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	13.1	PASS
MADISON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARSHALL	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PANOLA	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PEARL RIVER	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
RANKIN	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SCOTT	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SHARKEY	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WARREN	*	*	*	*	*	*	*	*	*	*	DNC	INC
WEBSTER	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MISSOURI

American Lung Association in Missouri

1118 Hampton Avenue
St. Louis, MO 63139-3196
(314) 645-5505
www.lungusa.org/missouri

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BOONE	152,435	34,125	13,858	3,102	10,005	3,739	1,586	37,142	7,686
BUCHANAN	86,485	20,381	12,524	1,853	5,595	2,278	1,162	24,532	5,301
CASS	97,133	25,646	11,118	2,331	6,079	2,426	1,179	25,539	5,472
CEDAR	13,729	3,170	2,850	288	891	391	228	4,491	999
CLAY	211,952	54,806	22,676	4,982	13,374	5,288	2,517	55,142	11,764
CLINTON	20,894	5,013	2,948	456	1,350	555	287	6,013	1,306
GREENE	263,980	58,247	35,964	5,295	17,401	6,951	3,421	73,655	15,779
JACKSON	666,890	170,640	81,321	15,513	42,222	17,041	8,464	181,148	39,016
JEFFERSON	216,076	54,575	22,276	4,961	13,775	5,454	2,592	56,811	12,131
LINCOLN	51,528	13,993	5,083	1,272	3,186	1,235	566	12,670	2,676
MONROE	9,205	2,189	1,603	199	595	253	140	2,831	623
PERRY	18,794	4,591	2,926	417	1,203	499	263	5,461	1,189
PLATTE	84,881	20,809	8,148	1,892	5,480	2,166	1,021	22,467	4,796
ST. CHARLES	343,952	90,898	35,172	8,264	21,542	8,476	3,991	87,959	18,722
ST. LOUIS CITY	350,759	88,110	40,756	8,010	22,320	8,882	4,298	93,332	19,970
ST. LOUIS	995,118	232,461	141,481	21,133	65,038	27,098	14,235	295,504	64,532
STE. GENEVIEVE	17,841	4,020	2,653	365	1,175	487	255	5,310	1,157
TOTALS	**3,601,652**	**883,674**	**443,357**	**80,335**	**231,230**	**93,220**	**46,204**	**990,008**	**213,117**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BOONE	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BUCHANAN	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.8	PASS
CASS	14	0	0	4.7	F	0	0	0	0.0	A	10.8	PASS
CEDAR	12	0	0	4.0	F	*	*	*	*	*	DNC	INC
CLAY	67	4	0	24.3	F	0	0	0	0.0	A	11.3	PASS
CLINTON	46	0	0	15.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	13	0	0	4.3	F	1	0	0	0.3	B	11.8	PASS
JACKSON	*	*	*	*	*	4	0	0	1.3	C	12.6	PASS
JEFFERSON	45	2	0	16.0	F	21	0	0	7.0	F	13.9	PASS
LINCOLN	42	3	0	15.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONROE	10	0	0	3.3	F	*	*	*	*	*	DNC	INC
PERRY	36	0	0	12.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PLATTE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. CHARLES	73	5	0	26.8	F	7	0	0	2.3	D	13.3	PASS
ST. LOUIS CITY	44	3	0	16.2	F	26	0	0	8.7	F	14.6	PASS
ST. LOUIS	70	7	0	26.8	F	13	0	0	4.3	F	13.4	PASS
STE. GENEVIEVE	31	1	0	10.8	F	3	0	0	1.0	C	13.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

MONTANA

American Lung Association in Montana

825 Helena Avenue
Helena, MT 59601-3459
(406) 442-6556
www.lungusa.org/montana

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
CASCADE	81,775	20,402	12,414	1,855	5,663	2,192	1,174	24,131	5,285
FLATHEAD	86,844	20,471	11,199	1,861	6,136	2,338	1,200	25,217	5,484
GALLATIN	87,359	18,908	7,442	1,719	6,310	2,186	934	21,768	4,524
LAKE	28,438	6,898	4,483	627	1,988	776	421	8,599	1,889
LEWIS AND CLARK	59,998	13,641	7,565	1,240	4,288	1,633	834	17,568	3,819
LINCOLN	18,885	3,855	3,635	350	1,389	568	329	6,494	1,450
MISSOULA	105,650	22,178	10,928	2,016	7,700	2,758	1,265	28,296	5,984
RAVALLI	40,396	9,033	6,936	821	2,896	1,151	642	12,920	2,858
ROSEBUD	9,182	2,676	982	243	603	231	118	2,481	540
SANDERS	11,033	2,162	2,150	197	819	334	193	3,813	851
SILVER BOW	32,652	7,201	5,460	655	2,348	917	500	10,190	2,240
YELLOWSTONE	139,936	33,891	19,115	3,081	9,786	3,710	1,908	40,072	8,700
TOTALS	**702,148**	**161,316**	**92,309**	**14,665**	**49,927**	**18,794**	**9,519**	**201,548**	**43,624**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CASCADE	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	5.8	PASS
FLATHEAD	0	0	0	0.0	A	2	2	0	1.7	C	9.6	PASS
GALLATIN	DNC	DNC	DNC	DNC	DNC	7	2	0	3.3	F	4.3	PASS
LAKE	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
LEWIS AND CLARK	DNC	DNC	DNC	DNC	DNC	7	0	0	2.3	D	8.0	PASS
LINCOLN	DNC	DNC	DNC	DNC	DNC	13	1	0	4.8	F	14.7	PASS
MISSOULA	*	*	*	*	*	14	1	0	5.2	F	10.1	PASS
RAVALLI	DNC	DNC	DNC	DNC	DNC	6	1	0	2.5	D	8.6	PASS
ROSEBUD	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SANDERS	DNC	DNC	DNC	DNC	DNC	0	1	0	0.5	B	6.9	PASS
SILVER BOW	DNC	DNC	DNC	DNC	DNC	15	1	0	5.5	F	10.5	PASS
YELLOWSTONE	0	0	0	0.0	A	0	2	0	1.0	C	8.6	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NEBRASKA

American Lung Association in Nebraska

7101 Newport Avenue, #303
Omaha, NE 68152
(402) 572-3030
www.lungusa.org/nebraska

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
CASS	25,577	6,491	3,119	590	1,521	662	332	7,067	1,528
DOUGLAS	497,416	133,437	52,794	12,131	29,128	12,157	5,737	126,329	26,872
HALL	55,642	15,218	7,627	1,383	3,231	1,409	727	15,249	3,308
LANCASTER	275,665	65,366	28,210	5,942	16,889	6,829	3,070	69,519	14,596
LINCOLN	35,500	8,781	5,279	798	2,133	943	497	10,309	2,248
SARPY	146,756	42,431	11,743	3,857	8,361	3,362	1,461	33,708	7,037
SCOTTS BLUFF	36,370	9,005	6,221	819	2,186	988	545	11,034	2,428
SIOUX	1,351	253	207	23	87	40	21	440	97
WASHINGTON	19,959	4,701	2,687	427	1,217	533	273	5,740	1,245
TOTALS	**1,094,236**	**285,683**	**117,887**	**25,971**	**64,753**	**26,923**	**12,664**	**279,396**	**59,359**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CASS	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
DOUGLAS	0	0	0	0.0	A	6	0	0	2.0	C	9.9	PASS
HALL	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.0	PASS
LANCASTER	0	0	0	0.0	A	1	0	0	0.3	B	8.6	PASS
LINCOLN	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
SARPY	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	9.8	PASS
SCOTTS BLUFF	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	6.0	PASS
SIOUX	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	9.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NEVADA

American Lung Association in Nevada

3552 W. Cheyenne Avenue, Suite 130
North Las Vegas NV 89032
(702) 431-6333
www.lungusa.org/nevada

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
CARSON CITY	54,939	12,647	8,825	1,150	2,945	1,505	806	16,578	3,627
CHURCHILL	24,891	6,817	3,536	620	1,259	639	336	6,976	1,521
CLARK	1,836,333	485,273	190,174	44,116	92,418	44,862	20,923	463,779	98,374
DOUGLAS	45,406	8,597	8,379	782	2,625	1,371	779	15,518	3,449
LYON	52,479	12,771	7,120	1,161	2,738	1,368	691	14,665	3,166
WASHOE	406,079	98,757	47,069	8,978	21,299	10,494	5,128	110,703	23,772
WHITE PINE	9,146	1,886	1,419	171	501	253	131	2,743	595
TOTALS	**2,429,273**	**626,748**	**266,522**	**56,978**	**123,785**	**60,491**	**28,795**	**630,963**	**134,506**

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
CARSON CITY	0	0	0	0.0	A
CHURCHILL	*	*	*	*	*
CLARK	87	3	0	30.5	F
DOUGLAS	*	*	*	*	*
LYON	*	*	*	*	*
WASHOE	3	0	0	1.0	C
WHITE PINE	6	0	0	2.0	C

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CARSON CITY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHURCHILL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARK	2	0	0	0.7	B	9.4	PASS
DOUGLAS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LYON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHOE	4	0	0	1.3	C	8.2	PASS
WHITE PINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NEW HAMPSHIRE

American Lung Association in New Hampshire

20 Warren Street, Suite 4
Concord, NH 03301
(603) 369-3977
www.lungusa.org/newhampshire

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BELKNAP	61,048	12,593	9,511	1,145	4,817	1,733	925	19,043	4,171
CARROLL	47,380	9,229	8,619	839	3,734	1,398	782	15,713	3,475
CHESHIRE	77,725	15,639	10,966	1,422	6,297	2,151	1,091	23,094	4,995
COOS	32,772	6,331	6,122	576	2,590	969	543	10,905	2,412
GRAFTON	85,514	16,213	12,876	1,474	7,029	2,402	1,229	25,904	5,608
HILLSBOROUGH	402,302	98,897	44,993	8,991	30,888	10,430	5,115	110,160	23,708
MERRIMACK	148,274	32,568	18,600	2,961	11,727	4,009	2,006	42,745	9,235
ROCKINGHAM	296,543	70,632	33,779	6,421	22,732	7,908	3,965	84,322	18,272
STRAFFORD	121,581	26,762	13,595	2,433	9,851	3,153	1,477	32,667	6,935
SULLIVAN	42,689	9,322	6,681	847	3,315	1,195	640	13,152	2,882
TOTALS	**1,315,828**	**298,186**	**165,742**	**27,108**	**102,980**	**35,348**	**17,774**	**377,706**	**81,694**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BELKNAP	6	0	0	2.0	C	1	0	0	0.3	B	7.2	PASS
CARROLL	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHESHIRE	4	0	0	1.3	C	0	0	0	0.0	A	11.5	PASS
COOS	16	0	0	5.3	F	*	*	*	*	*	DNC	INC
GRAFTON	3	0	0	1.0	C	0	0	0	0.0	A	8.4	PASS
HILLSBOROUGH	28	1	0	9.8	F	3	0	0	1.0	C	10.0	PASS
MERRIMACK	6	0	0	2.0	C	1	0	0	0.3	B	9.7	PASS
ROCKINGHAM	19	1	0	6.8	F	1	0	0	0.3	B	8.8	PASS
STRAFFORD	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SULLIVAN	7	0	0	2.3	D	1	0	0	0.3	B	9.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NEW JERSEY

American Lung Association in New Jersey

1600 Route 22 East
Union, NJ 07083-3410
(908) 687-9340
www.lungusa.org/newjersey

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ATLANTIC	270,644	65,045	37,532	5,913	17,028	7,116	3,625	76,563	16,562
BERGEN	895,744	197,496	132,209	17,954	57,784	24,722	12,979	269,595	58,817
CAMDEN	513,769	128,429	62,967	11,675	32,060	13,199	6,534	140,105	30,146
CUMBERLAND	155,544	38,024	19,413	3,457	9,765	3,945	1,910	41,492	8,859
ESSEX	776,087	198,343	90,495	18,031	48,128	19,542	9,471	205,500	43,978
GLOUCESTER	285,753	67,124	32,921	6,102	18,242	7,405	3,575	77,712	16,632
HUDSON	598,160	130,946	65,061	11,904	39,035	15,188	6,875	155,093	32,594
HUNTERDON	129,348	30,035	14,459	2,730	8,311	3,504	1,767	37,446	8,136
MERCER	365,449	84,231	43,772	7,657	23,431	9,501	4,593	99,797	21,345
MIDDLESEX	788,629	181,367	94,772	16,488	50,584	20,432	9,833	214,212	45,744
MONMOUTH	642,030	154,596	82,609	14,054	40,536	17,154	8,802	184,980	40,218
MORRIS	488,475	116,696	61,578	10,609	30,944	13,038	6,642	140,120	30,418
OCEAN	565,493	131,100	117,194	11,918	35,242	15,837	9,098	180,668	39,985
PASSAIC	492,115	127,258	59,297	11,569	30,353	12,395	6,072	130,981	28,092
UNION	524,658	130,760	65,865	11,887	32,748	13,571	6,786	144,705	31,213
WARREN	109,737	26,452	14,269	2,405	6,920	2,899	1,472	31,130	6,743
TOTALS	**7,601,635**	**1,807,902**	**994,413**	**164,356**	**481,112**	**199,449**	**100,035**	**2,130,100**	**459,480**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ATLANTIC	24	0	0	8.0	F	2	1	0	1.2	C	11.5	PASS
BERGEN	*	*	*	*	*	11	0	0	3.7	F	13.2	PASS
CAMDEN	70	8	0	27.3	F	17	0	0	5.7	F	13.5	PASS
CUMBERLAND	30	2	0	11.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ESSEX	*	*	*	*	*	10	0	0	3.3	F	13.3	PASS
GLOUCESTER	35	2	0	12.7	F	3	0	0	1.0	C	DNC	INC
HUDSON	33	1	0	11.5	F	19	0	0	6.3	F	14.0	PASS
HUNTERDON	50	2	0	17.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MERCER	44	5	0	17.2	F	9	0	0	3.0	D	12.5	PASS
MIDDLESEX	52	6	0	20.3	F	3	0	0	1.0	C	12.1	PASS
MONMOUTH	37	2	0	13.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MORRIS	55	4	0	20.3	F	4	0	0	1.3	C	11.3	PASS
OCEAN	51	7	0	20.5	F	5	0	0	1.7	C	10.7	PASS
PASSAIC	29	0	0	9.7	F	9	0	0	3.0	D	12.9	PASS
UNION	*	*	*	*	*	36	0	0	12.0	F	14.5	PASS
WARREN	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	12.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NEW MEXICO

American Lung Association in New Mexico

7001 Menaul Blvd. NE, Suite 1A
Albuquerque, NM 87110-3696
(505) 265-0732
www.lungusa.org/newmexico

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BERNALILLO	629,292	155,593	75,933	14,145	41,008	16,061	7,833	169,371	36,291
CHAVES	62,595	16,550	9,297	1,505	3,969	1,605	838	17,476	3,795
DONA ANA	198,791	54,656	23,455	4,969	12,443	4,758	2,250	49,548	10,505
EDDY	51,002	13,410	7,011	1,219	3,251	1,320	686	14,327	3,116
GRANT	29,699	6,613	5,728	601	1,984	847	481	9,599	2,126
LEA	58,043	16,529	6,871	1,503	3,589	1,401	683	14,777	3,162
LUNA	26,996	7,402	5,474	673	1,674	714	413	8,176	1,810
SAN JUAN	122,427	33,845	12,827	3,077	7,680	2,965	1,403	30,848	6,568
SANDOVAL	117,866	30,420	12,648	2,765	7,586	2,949	1,408	30,793	6,576
SANTA FE	142,955	30,181	18,725	2,744	9,782	3,951	2,011	42,449	9,212
VALENCIA	71,364	18,614	8,081	1,692	4,571	1,784	862	18,731	4,007
TOTALS	**1,511,030**	**383,813**	**186,050**	**34,892**	**97,537**	**38,356**	**18,868**	**406,097**	**87,168**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BERNALILLO	15	0	0	5.0	F	2	0	0	0.7	B	7.1	PASS
CHAVES	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	6.6	PASS
DONA ANA	18	0	0	6.0	F	6	0	0	2.0	C	9.7	PASS
EDDY	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GRANT	0	0	0	0.0	A	0	0	0	0.0	A	DNC	INC
LEA	6	0	0	2.0	C	0	0	0	0.0	A	DNC	INC
LUNA	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SAN JUAN	24	0	0	8.0	F	0	0	0	0.0	A	5.8	PASS
SANDOVAL	7	0	0	2.3	D	2	0	0	0.7	B	7.8	PASS
SANTA FE	*	*	*	*	*	0	0	0	0.0	A	4.7	PASS
VALENCIA	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NEW YORK

American Lung Association in New York

155 Washington Ave., Suite 210
Albany, NY 12210
(518) 465-2013
www.lungusa.org/newyork

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALBANY	299,307	61,188	40,642	5,563	20,697	8,128	4,033	86,406	18,577
BRONX	1,373,659	387,025	144,266	35,184	85,167	32,337	14,905	332,814	70,239
CHAUTAUQUA	133,945	28,707	21,252	2,610	9,145	3,703	1,951	40,476	8,818
CHEMUNG	88,015	19,347	13,477	1,759	5,978	2,412	1,263	26,288	5,722
DUTCHESS	292,746	65,970	36,677	5,997	19,818	7,767	3,839	82,381	17,723
ERIE	913,338	199,858	141,471	18,169	62,178	25,168	13,259	275,031	59,961
ESSEX	38,119	7,158	6,350	651	2,691	1,093	580	11,986	2,615
FRANKLIN	50,449	9,485	6,677	862	3,550	1,379	668	14,502	3,099
HAMILTON	5,075	848	1,090	77	370	159	93	1,832	409
HERKIMER	62,558	13,312	10,068	1,210	4,289	1,745	929	19,164	4,186
JEFFERSON	117,201	28,862	13,365	2,624	7,587	2,877	1,321	29,574	6,227
KINGS	2,528,050	637,307	307,692	57,938	163,692	63,455	30,635	666,473	142,257
MADISON	69,829	14,743	9,110	1,340	4,801	1,882	931	19,973	4,294
MONROE	729,681	167,562	97,857	15,233	49,087	19,455	9,838	208,542	45,082
NASSAU	1,306,533	301,502	194,619	27,410	88,379	35,998	19,192	395,319	86,610
NEW YORK	1,620,867	273,423	204,078	24,857	116,001	44,125	20,423	455,080	96,056
NIAGARA	214,845	46,837	32,807	4,258	14,675	5,939	3,128	64,886	14,154
ONEIDA	232,304	49,945	36,989	4,541	15,827	6,403	3,370	69,964	15,234

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ONONDAGA	454,010	105,188	61,931	9,563	30,398	12,059	6,108	129,381	27,964
ORANGE	377,169	101,162	37,461	9,197	24,125	9,213	4,305	95,287	20,247
OSWEGO	121,454	27,445	14,338	2,495	8,209	3,184	1,540	33,445	7,159
PUTNAM	99,489	23,571	11,068	2,143	6,734	2,647	1,317	28,129	6,085
QUEENS	2,270,338	485,989	299,388	44,181	154,922	60,582	29,797	641,503	137,609
RENSSELAER	155,318	33,819	20,137	3,074	10,598	4,160	2,063	44,202	9,511
RICHMOND	481,613	114,171	57,621	10,379	32,127	12,538	6,142	132,437	28,439
SARATOGA	215,852	47,726	26,149	4,339	14,713	5,741	2,811	60,628	13,022
SCHENECTADY	150,818	34,541	23,143	3,140	10,126	4,098	2,159	44,786	9,762
ST. LAWRENCE	109,809	22,409	14,804	2,037	7,563	2,950	1,443	31,167	6,671
STEUBEN	96,874	21,801	14,898	1,982	6,551	2,656	1,404	29,065	6,343
SUFFOLK	1,453,229	358,691	185,431	32,609	95,965	38,051	19,260	407,911	88,295
ULSTER	181,860	37,615	24,747	3,420	12,630	5,010	2,538	53,734	11,629
WAYNE	91,291	21,797	12,121	1,982	6,112	2,444	1,258	26,404	5,741
WESTCHESTER	951,325	230,588	133,307	20,963	63,088	25,344	13,163	275,008	59,838
TOTALS	**17,286,970**	**3,979,592**	**2,255,031**	**361,785**	**1,157,796**	**454,702**	**225,669**	**4,833,777**	**1,039,582**

NEW YORK

American Lung Association in New York

155 Washington Ave., Suite 210
Albany, NY 12210
(518) 465-2013
www.lungusa.org/newyork

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ALBANY	11	0	0	3.7	F
BRONX	12	2	0	5.0	F
CHAUTAUQUA	48	1	0	16.5	F
CHEMUNG	2	0	0	0.7	B
DUTCHESS	15	0	0	5.0	F
ERIE	34	2	0	12.3	F
ESSEX	25	2	0	9.3	F
FRANKLIN	13	0	0	4.3	F
HAMILTON	4	0	0	1.3	C
HERKIMER	3	0	0	1.0	C
JEFFERSON	17	1	0	6.2	F
KINGS	*	*	*	*	*
MADISON	7	0	0	2.3	D
MONROE	19	0	0	6.3	F
NASSAU	DNC	DNC	DNC	DNC	DNC
NEW YORK	*	*	*	*	*
NIAGARA	32	1	0	11.2	F
ONEIDA	3	0	0	1.0	C
ONONDAGA	14	0	0	4.7	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALBANY	7	0	0	2.3	D	DNC	INC
BRONX	31	0	0	10.3	F	15.5	FAIL
CHAUTAUQUA	3	0	0	1.0	C	9.7	PASS
CHEMUNG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DUTCHESS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ERIE	11	0	0	3.7	F	12.5	PASS
ESSEX	1	0	0	0.3	B	5.9	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	8	0	0	2.7	D	14.0	PASS
MADISON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONROE	4	0	0	1.3	C	10.6	PASS
NASSAU	5	0	0	1.7	C	11.4	PASS
NEW YORK	15	0	0	5.0	F	15.9	FAIL
NIAGARA	8	0	0	2.7	D	11.8	PASS
ONEIDA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ONONDAGA	1	0	0	0.3	B	9.9	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ORANGE	27	2	0	10.0	F	4	0	0	1.3	C	10.8	PASS
OSWEGO	15	0	0	5.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PUTNAM	23	3	1	9.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
QUEENS	19	0	0	6.3	F	16	0	0	5.3	F	11.8	PASS
RENSSELAER	14	1	0	5.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RICHMOND	33	7	0	14.5	F	6	0	0	2.0	C	13.2	PASS
SARATOGA	21	0	0	7.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SCHENECTADY	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. LAWRENCE	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	6.9	PASS
STEUBEN	*	*	*	*	*	3	0	0	1.0	C	8.7	PASS
SUFFOLK	34	9	1	16.5	F	3	0	0	1.0	C	DNC	INC
ULSTER	13	0	0	4.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WAYNE	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WESTCHESTER	29	7	0	13.2	F	4	0	0	1.3	C	11.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NORTH CAROLINA

American Lung Association in North Carolina

8300 Health Park, Suite 316
Raleigh, NC 27615
(919) 832-8326
www.lungusa.org/northcarolina

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALAMANCE	145,360	34,881	19,918	3,171	8,631	3,801	1,920	40,743	8,793
ALEXANDER	36,396	8,190	4,817	745	2,203	974	490	10,420	2,251
AVERY	17,776	3,133	3,056	285	1,145	507	264	5,515	1,195
BUNCOMBE	226,771	48,921	34,698	4,447	13,918	6,277	3,300	68,512	14,936
CALDWELL	79,454	17,983	11,857	1,635	4,810	2,169	1,138	23,652	5,155
CAMDEN	9,490	2,245	1,119	204	565	245	118	2,572	550
CASWELL	23,261	4,836	3,491	440	1,442	653	343	7,124	1,555
CATAWBA	155,646	37,325	20,281	3,393	9,241	4,078	2,048	43,572	9,403
CHATHAM	61,455	14,077	8,471	1,280	3,701	1,632	825	17,497	3,778
CUMBERLAND	306,518	86,598	28,151	7,873	17,113	7,240	3,296	74,051	15,632
DAVIDSON	156,530	37,143	20,943	3,377	9,330	4,156	2,118	44,702	9,685
DAVIE	40,516	9,495	5,859	863	2,426	1,088	565	11,807	2,567
DUPLIN	52,979	13,830	6,773	1,257	3,056	1,337	665	14,226	3,059
DURHAM	256,500	62,730	23,715	5,703	15,062	6,257	2,757	63,126	13,204
EDGECOMBE	52,647	13,296	6,341	1,209	3,074	1,374	694	14,710	3,187
FORSYTH	338,774	83,593	42,237	7,599	19,921	8,748	4,343	92,988	20,018
FRANKLIN	57,222	14,063	6,054	1,278	3,362	1,442	678	14,952	3,179
GASTON	202,535	49,107	25,909	4,464	11,983	5,295	2,657	56,549	12,207
GRAHAM	7,858	1,750	1,388	159	479	222	123	2,491	550
GRANVILLE	55,045	12,911	6,017	1,174	3,283	1,409	664	14,627	3,112
GUILFORD	465,931	111,017	55,379	10,093	27,682	12,023	5,834	126,485	27,083
HAYWOOD	56,430	11,440	11,136	1,040	3,534	1,649	936	18,686	4,137
JACKSON	36,751	6,850	5,017	623	2,333	1,007	490	10,617	2,270
JOHNSTON	157,437	43,145	14,255	3,922	8,890	3,742	1,685	38,085	8,017
LENOIR	56,761	13,863	9,189	1,260	3,363	1,551	848	17,248	3,795
LINCOLN	73,106	17,757	8,732	1,614	4,320	1,898	936	20,100	4,324

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MARTIN	23,598	5,542	3,923	504	1,416	656	361	7,320	1,614
MCDOWELL	43,537	9,634	6,729	876	2,653	1,193	627	13,024	2,837
MECKLENBURG	867,067	230,633	70,952	20,967	49,470	20,719	9,128	208,870	43,803
MITCHELL	15,786	3,108	3,097	283	996	466	264	5,277	1,169
MONTGOMERY	27,451	6,900	3,731	627	1,607	717	368	7,743	1,680
NEW HANOVER	190,432	40,980	24,992	3,725	11,663	5,075	2,496	53,736	11,528
NORTHAMPTON	20,830	4,529	3,983	412	1,281	600	342	6,808	1,509
ONSLOW	162,745	44,908	11,728	4,083	9,132	3,608	1,423	34,816	7,073
ORANGE	124,313	23,836	12,049	2,167	7,811	3,258	1,440	32,913	6,896
PERSON	37,356	8,778	5,075	798	2,234	1,004	518	10,854	2,360
PITT	152,068	36,574	14,816	3,325	8,979	3,718	1,642	37,561	7,851
RANDOLPH	140,145	34,121	18,401	3,102	8,283	3,675	1,860	39,405	8,522
ROBESON	128,149	35,018	13,643	3,183	7,257	3,116	1,476	32,433	6,905
ROCKINGHAM	92,421	20,814	14,307	1,892	5,607	2,553	1,362	28,052	6,139
ROWAN	137,383	32,515	19,373	2,956	8,198	3,648	1,872	39,373	8,534
SWAIN	13,643	3,099	2,310	282	827	379	207	4,218	927
UNION	184,675	51,890	15,272	4,717	10,320	4,301	1,888	43,305	9,064
WAKE	832,970	217,456	63,864	19,769	47,813	19,873	8,579	198,611	41,461
WATAUGA	44,541	6,648	5,358	604	2,947	1,220	546	12,405	2,596
WAYNE	113,590	29,489	14,209	2,681	6,568	2,900	1,454	30,966	6,683
YANCEY	18,456	3,736	3,563	340	1,156	539	305	6,092	1,348
TOTALS	**6,500,305**	**1,610,387**	**716,178**	**146,400**	**381,088**	**163,993**	**77,893**	**1,708,838**	**364,140**

NORTH CAROLINA

American Lung Association in North Carolina

8300 Health Park, Suite 316
Raleigh, NC 27615
(919) 832-8326
www.lungusa.org/northcarolina

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ALAMANCE	DNC	DNC	DNC	DNC	DNC
ALEXANDER	28	0	0	9.3	F
AVERY	4	0	0	1.3	C
BUNCOMBE	10	0	0	3.3	F
CALDWELL	11	0	0	3.7	F
CAMDEN	*	*	*	*	*
CASWELL	22	0	0	7.3	F
CATAWBA	DNC	DNC	DNC	DNC	DNC
CHATHAM	10	0	0	3.3	F
CUMBERLAND	27	1	0	9.5	F
DAVIDSON	DNC	DNC	DNC	DNC	DNC
DAVIE	46	0	0	15.3	F
DUPLIN	*	*	*	*	*
DURHAM	20	0	0	6.7	F
EDGECOMBE	20	0	0	6.7	F
FORSYTH	45	1	0	15.5	F
FRANKLIN	21	0	0	7.0	F
GASTON	DNC	DNC	DNC	DNC	DNC
GRAHAM	33	0	0	11.0	F
GRANVILLE	42	1	0	14.5	F
GUILFORD	45	1	0	15.5	F
HAYWOOD	34	0	0	11.3	F
JACKSON	18	0	0	6.0	F
JOHNSTON	21	1	0	7.5	F
LENOIR	15	0	0	5.0	F
LINCOLN	43	1	0	14.8	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALAMANCE	5	0	0	1.7	C	13.8	PASS
ALEXANDER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
AVERY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BUNCOMBE	1	0	0	0.3	B	12.6	PASS
CALDWELL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CAMDEN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CASWELL	1	0	0	0.3	B	13.1	PASS
CATAWBA	5	0	0	1.7	C	15.2	FAIL
CHATHAM	0	0	0	0.0	A	12.0	PASS
CUMBERLAND	1	0	0	0.3	B	13.6	PASS
DAVIDSON	5	0	0	1.7	C	15.1	FAIL
DAVIE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DUPLIN	0	0	0	0.0	A	10.9	PASS
DURHAM	4	0	0	1.3	C	13.4	PASS
EDGECOMBE	1	0	0	0.3	B	12.4	PASS
FORSYTH	7	0	0	2.3	D	14.1	PASS
FRANKLIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GASTON	2	0	0	0.7	B	14.1	PASS
GRAHAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GRANVILLE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GUILFORD	6	0	0	2.0	C	DNC	INC
HAYWOOD	0	0	0	0.0	A	13.0	PASS
JACKSON	1	0	0	0.3	B	12.4	PASS
JOHNSTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LENOIR	1	0	0	0.3	B	10.9	PASS
LINCOLN	DNC	DNC	DNC	DNC	DNC	DNC	DNC

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MARTIN	8	0	0	2.7	D	2	0	0	0.7	B	10.6	PASS
MCDOWELL	DNC	DNC	DNC	DNC	DNC	4	0	0	1.3	C	14.3	PASS
MECKLENBURG	74	8	1	29.3	F	13	0	0	4.3	F	14.8	PASS
MITCHELL	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	13.0	PASS
MONTGOMERY	DNC	DNC	DNC	DNC	DNC	1	1	0	0.8	B	12.2	PASS
NEW HANOVER	7	0	0	2.3	D	2	0	0	0.7	B	9.7	PASS
NORTHAMPTON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ONSLOW	DNC	DNC	DNC	DNC	DNC	1	0	0	0.3	B	10.5	PASS
ORANGE	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	12.9	PASS
PERSON	18	0	0	6.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PITT	20	0	0	6.7	F	3	0	0	1.0	C	11.3	PASS
RANDOLPH	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROBESON	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	12.8	PASS
ROCKINGHAM	16	0	0	5.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROWAN	97	10	0	37.3	F	2	0	0	0.7	B	14.0	PASS
SWAIN	1	0	0	0.3	B	1	0	0	0.3	B	12.8	PASS
UNION	34	2	0	12.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WAKE	47	0	0	15.7	F	11	0	0	3.7	F	13.5	PASS
WATAUGA	DNC	DNC	DNC	DNC	DNC	2	1	0	1.2	C	12.0	PASS
WAYNE	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.6	PASS
YANCEY	21	0	0	7.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

NORTH DAKOTA

American Lung Association in North Dakota

212 N. 2nd Street
Bismarck, ND 58501
(701) 223-5613
www.lungusa.org/northdakota

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BILLINGS	798	144	131	13	50	25	14	277	62
BURKE	1,862	344	447	31	118	61	38	720	164
BURLEIGH	77,316	16,885	10,165	1,535	4,598	2,046	1,003	21,637	4,636
CASS	137,582	31,348	13,183	2,850	8,031	3,382	1,462	33,864	7,038
DUNN	3,308	722	576	66	198	96	54	1,087	242
MCKENZIE	5,617	1,318	884	120	329	158	87	1,761	389
MERCER	7,972	1,651	1,205	150	484	235	130	2,623	582
OLIVER	1,725	314	281	29	108	54	31	612	137
TOTALS	**236,180**	**52,726**	**26,872**	**4,793**	**13,916**	**6,056**	**2,819**	**62,581**	**13,249**

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
BILLINGS	0	0	0	0.0	A
BURKE	0	0	0	0.0	A
BURLEIGH	*	*	*	*	*
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

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BILLINGS	0	0	0	0.0	A	4.7	PASS
BURKE	*	*	*	*	*	DNC	INC
BURLEIGH	0	0	0	0.0	A	6.7	PASS
CASS	0	0	0	0.0	A	7.7	PASS
DUNN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MCKENZIE	*	*	*	*	*	DNC	INC
MERCER	0	0	0	0.0	A	6.2	PASS
OLIVER	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

OHIO

American Lung Association in Ohio

1950 Arlingate Lane
Columbus, OH 43228-4102
(614) 279-1700
www.lungusa.org/ohio

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALLEN	105,233	25,952	15,318	2,359	6,949	2,779	1,448	30,210	6,569
ASHTABULA	101,141	24,069	14,799	2,188	6,733	2,721	1,427	29,666	6,467
ATHENS	63,275	10,488	6,335	953	4,887	1,615	653	15,757	3,209
BUTLER	357,888	89,436	39,670	8,131	23,987	8,992	4,269	93,688	19,956
CLARK	140,477	32,976	21,884	2,998	9,369	3,816	2,032	41,911	9,160
CLERMONT	193,490	50,740	20,784	4,613	12,691	4,838	2,326	50,663	10,840
CLINTON	43,071	10,736	5,422	976	2,870	1,101	543	11,677	2,508
CUYAHOGA	1,295,958	307,509	195,936	27,956	86,090	35,135	18,656	385,273	84,217
DELAWARE	160,865	44,429	13,236	4,039	10,552	3,765	1,646	37,841	7,913
FRANKLIN	1,118,107	285,167	108,297	25,925	75,107	27,278	12,355	278,434	58,653
GEAUGA	95,029	23,251	13,673	2,114	6,197	2,599	1,397	28,642	6,297
GREENE	154,656	33,782	19,321	3,071	10,736	4,107	2,008	43,353	9,297
HAMILTON	842,369	205,266	112,942	18,661	56,046	22,139	11,277	238,097	51,559
JEFFERSON	68,730	13,635	13,066	1,240	4,729	2,023	1,141	22,843	5,057
KNOX	58,961	13,731	8,253	1,248	3,999	1,554	786	16,667	3,596
LAKE	233,392	52,197	34,369	4,745	15,780	6,441	3,396	70,372	15,374
LAWRENCE	62,609	14,424	9,198	1,311	4,232	1,681	870	18,218	3,954
LICKING	156,985	38,555	19,757	3,505	10,449	4,087	2,047	43,611	9,413

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
LOGAN	46,279	11,528	6,444	1,048	3,046	1,218	630	13,193	2,867
LORAIN	302,260	73,577	39,961	6,689	20,132	7,933	4,025	85,158	18,426
LUCAS	441,910	110,939	56,247	10,085	29,254	11,376	5,687	121,307	26,148
MADISON	41,499	9,473	4,996	861	2,855	1,079	520	11,318	2,418
MAHONING	240,420	52,864	41,051	4,806	16,197	6,793	3,735	75,745	16,681
MEDINA	169,832	42,190	19,669	3,835	11,268	4,398	2,174	46,624	10,047
MIAMI	101,038	23,816	14,672	2,165	6,745	2,727	1,429	29,714	6,477
MONTGOMERY	538,104	127,349	78,851	11,577	36,001	14,397	7,495	156,457	34,020
PORTAGE	155,869	33,208	18,043	3,019	10,967	4,102	1,942	42,691	9,087
PREBLE	41,739	9,637	6,071	876	2,804	1,134	594	12,349	2,692
SCIOTO	75,958	17,437	11,688	1,585	5,143	2,039	1,062	22,174	4,814
STARK	378,664	87,280	58,696	7,935	25,341	10,392	5,551	114,267	25,010
SUMMIT	543,487	129,095	75,511	11,736	36,308	14,531	7,507	157,290	34,184
TRUMBULL	213,475	47,170	35,469	4,288	14,383	6,004	3,276	66,697	14,669
UNION	47,234	12,644	4,304	1,149	3,112	1,139	517	11,629	2,454
WARREN	204,390	54,349	19,956	4,941	13,474	4,964	2,286	51,022	10,798
WASHINGTON	61,576	13,166	10,334	1,197	4,194	1,741	947	19,311	4,242
WOOD	125,399	26,464	14,586	2,406	8,880	3,279	1,535	33,965	7,203
TOTALS	**8,981,369**	**2,158,529**	**1,188,809**	**196,232**	**601,504**	**235,915**	**119,190**	**2,527,834**	**546,275**

OHIO

American Lung Association in Ohio

1950 Arlingate Lane
Columbus, OH 43228-4102
(614) 279-1700
www.lungusa.org/ohio

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALLEN	26	0	0	8.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ASHTABULA	42	4	0	16.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ATHENS	DNC	DNC	DNC	DNC	DNC	3	0	0	1.0	C	12.7	PASS
BUTLER	64	5	0	23.8	F	15	0	0	5.0	F	15.6	FAIL
CLARK	32	2	0	11.7	F	7	0	0	2.3	D	14.8	PASS
CLERMONT	40	0	0	13.3	F	5	0	0	1.7	C	14.2	PASS
CLINTON	52	1	0	17.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CUYAHOGA	30	2	0	11.0	F	20	0	0	6.7	F	16.8	FAIL
DELAWARE	26	0	0	8.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FRANKLIN	58	2	0	20.3	F	10	0	0	3.3	F	14.9	PASS
GEAUGA	21	0	0	7.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	26	0	0	8.7	F	5	0	0	1.7	C	13.6	PASS
HAMILTON	78	5	0	28.5	F	22	0	0	7.3	F	17.3	FAIL
JEFFERSON	32	0	0	10.7	F	14	0	0	4.7	F	16.1	FAIL
KNOX	22	1	0	7.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LAKE	41	3	1	15.8	F	7	0	0	2.3	D	DNC	INC
LAWRENCE	12	0	0	4.0	F	9	0	0	3.0	D	15.4	FAIL
LICKING	20	0	0	6.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LOGAN	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LORAIN	11	1	0	4.2	F	3	0	0	1.0	C	13.0	PASS
LUCAS	34	2	0	12.3	F	9	0	0	3.0	D	14.4	PASS
MADISON	31	0	0	10.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MAHONING	24	0	0	8.0	F	10	0	0	3.3	F	14.8	PASS
MEDINA	17	1	0	6.2	F	3	0	0	1.0	C	DNC	INC
MIAMI	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	13	0	0	4.3	F	12	0	0	4.0	F	15.5	FAIL
PORTAGE	35	1	0	12.2	F	6	0	0	2.0	C	13.6	PASS
PREBLE	13	0	0	4.3	F	7	0	0	2.3	D	13.9	PASS
SCIOTO	DNC	DNC	DNC	DNC	DNC	9	0	0	3.0	D	14.8	PASS
STARK	53	2	0	18.7	F	5	0	0	1.7	C	16.0	FAIL
SUMMIT	46	2	0	16.3	F	9	0	0	3.0	D	14.8	PASS
TRUMBULL	46	0	0	15.3	F	8	0	0	2.7	D	14.5	PASS
UNION	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WARREN	64	4	0	23.3	F	*	*	*	*	*	DNC	INC
WASHINGTON	41	1	0	14.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WOOD	17	0	0	5.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

OKLAHOMA

American Lung Association in Oklahoma

1010 East 8th Street
Tulsa, OK 74120
(918) 747-3441
www.lungusa.org/oklahoma

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADAIR	21,902	6,195	2,557	563	1,344	533	261	5,627	1,206
CADDO	29,296	7,560	4,196	687	1,861	759	394	8,236	1,789
CANADIAN	103,559	26,186	10,677	2,381	6,640	2,605	1,234	27,096	5,779
CARTER	47,582	11,901	7,373	1,082	3,059	1,266	676	13,923	3,043
CHEROKEE	45,393	10,725	5,567	975	2,955	1,152	549	12,031	2,558
CLEVELAND	236,452	53,092	21,572	4,827	15,657	5,916	2,590	59,514	12,438
COMANCHE	113,811	32,953	12,110	2,996	6,900	2,675	1,253	27,722	5,876
COTTON	6,299	1,551	976	141	407	168	89	1,843	402
CREEK	69,073	16,701	10,193	1,518	4,496	1,852	976	20,237	4,415
DEWEY	4,338	905	899	82	295	129	76	1,490	333
GARFIELD	57,657	14,594	9,164	1,327	3,690	1,533	825	16,926	3,705
JEFFERSON	6,273	1,449	1,213	132	413	176	100	1,998	442
JOHNSTON	10,402	2,499	1,569	227	678	279	147	3,046	664
KAY	45,638	11,516	7,512	1,047	2,930	1,234	678	13,750	3,027
LATIMER	10,508	2,385	1,708	217	693	283	149	3,092	672
LINCOLN	32,272	7,918	4,659	720	2,091	860	451	9,369	2,042
LOVE	9,112	2,166	1,534	197	596	250	137	2,781	611
MARSHALL	14,830	3,556	2,738	323	963	404	224	4,533	997

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MAYES	39,627	9,524	6,069	866	2,579	1,060	559	11,588	2,525
MCCLAIN	31,849	7,809	4,152	710	2,060	828	416	8,857	1,911
MUSKOGEE	71,116	17,054	11,008	1,550	4,626	1,897	998	20,726	4,512
OKLAHOMA	701,807	185,702	86,814	16,882	44,137	17,536	8,636	185,796	39,868
OKMULGEE	39,300	9,650	5,902	877	2,541	1,043	549	11,394	2,482
OTTAWA	32,474	7,665	5,465	697	2,122	882	476	9,755	2,135
PITTSBURG	44,711	9,711	7,786	883	2,995	1,247	677	13,826	3,029
SEQUOYAH	41,024	10,121	5,745	920	2,649	1,078	555	11,653	2,528
TULSA	585,068	154,409	70,081	14,037	36,899	14,697	7,240	155,674	33,447
TOTALS	**2,451,373**	**625,497**	**309,239**	**56,864**	**156,275**	**62,343**	**30,912**	**662,481**	**142,436**

OKLAHOMA

American Lung Association in Oklahoma

1010 East 8th Street
Tulsa, OK 74120
(918) 747-3441
www.lungusa.org/oklahoma

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAIR	17	0	0	5.7	F
CADDO	*	*	*	*	*
CANADIAN	23	0	0	7.7	F
CARTER	*	*	*	*	*
CHEROKEE	6	1	0	2.5	D
CLEVELAND	21	0	0	7.0	F
COMANCHE	20	0	0	6.7	F
COTTON	*	*	*	*	*
CREEK	20	1	0	7.2	F
DEWEY	7	0	0	2.3	D
GARFIELD	DNC	DNC	DNC	DNC	DNC
JEFFERSON	*	*	*	*	*
JOHNSTON	*	*	*	*	*
KAY	23	0	0	7.7	F
LATIMER	*	*	*	*	*
LINCOLN	*	*	*	*	*
LOVE	*	*	*	*	*
MARSHALL	*	*	*	*	*

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAIR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CADDO	1	0	0	0.3	B	8.6	PASS
CANADIAN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARTER	*	*	*	*	*	DNC	INC
CHEROKEE	2	0	0	0.7	B	12.3	PASS
CLEVELAND	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COMANCHE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COTTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CREEK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DEWEY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GARFIELD	*	*	*	*	*	DNC	INC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KAY	2	0	0	0.7	B	10.3	PASS
LATIMER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LINCOLN	*	*	*	*	*	DNC	INC
LOVE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARSHALL	DNC	DNC	DNC	DNC	DNC	DNC	DNC

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MAYES	29	0	0	9.7	F	2	0	0	0.7	B	11.8	PASS
MCCLAIN	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MUSKOGEE	*	*	*	*	*	3	0	0	1.0	C	12.0	PASS
OKLAHOMA	44	0	0	14.7	F	0	0	0	0.0	A	10.2	PASS
OKMULGEE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OTTAWA	12	0	0	4.0	F	0	0	0	0.0	A	12.0	PASS
PITTSBURG	7	0	0	2.3	D	2	0	0	0.7	B	11.4	PASS
SEQUOYAH	*	*	*	*	*	5	0	0	1.7	C	13.0	PASS
TULSA	47	2	0	16.7	F	6	0	0	2.0	C	11.6	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

OREGON

American Lung Association in Oregon

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
CLACKAMAS	376,251	85,284	45,573	7,753	28,081	10,151	5,102	108,406	23,474
COLUMBIA	48,996	11,220	5,759	1,020	3,648	1,309	651	13,909	3,003
DOUGLAS	104,119	21,281	20,827	1,935	7,917	3,062	1,756	34,866	7,741
HARNEY	6,767	1,526	1,267	139	501	198	115	2,265	506
JACKSON	199,295	43,134	33,249	3,921	14,987	5,594	3,029	61,927	13,584
JOSEPHINE	81,056	16,469	16,961	1,497	6,165	2,410	1,405	27,658	6,161
KLAMATH	66,512	15,557	10,331	1,414	4,895	1,822	976	20,063	4,395
LAKE	7,277	1,466	1,450	133	555	218	126	2,492	556
LANE	343,591	69,463	48,187	6,315	26,418	9,465	4,780	101,414	21,907
LINN	113,264	26,828	17,053	2,439	8,310	3,044	1,600	33,233	7,241
MARION	311,449	82,763	37,465	7,524	22,072	7,738	3,776	81,644	17,484
MULTNOMAH	701,986	160,395	71,920	14,582	52,425	18,148	8,498	187,816	39,961
UMATILLA	73,491	19,287	9,094	1,753	5,228	1,863	930	19,853	4,279
UNION	24,753	5,399	3,789	491	1,861	683	360	7,464	1,628
WASCO	23,762	5,483	4,108	498	1,752	668	372	7,493	1,655
WASHINGTON	522,514	137,217	47,321	12,474	37,341	12,725	5,788	130,045	27,476
TOTALS	**3,005,083**	**702,772**	**374,354**	**63,889**	**222,155**	**79,098**	**39,265**	**840,548**	**181,053**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CLACKAMAS	1	1	0	0.8	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COLUMBIA	0	0	0	0.0	A	*	*	*	*	*	DNC	INC
DOUGLAS	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
HARNEY	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
JACKSON	3	0	0	1.0	C	6	0	0	2.0	C	10.0	PASS
JOSEPHINE	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	DNC	INC
KLAMATH	DNC	DNC	DNC	DNC	DNC	17	0	0	5.7	F	11.2	PASS
LAKE	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
LANE	8	0	0	2.7	D	38	1	0	13.2	F	11.5	PASS
LINN	*	*	*	*	*	*	*	*	*	*	DNC	INC
MARION	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MULTNOMAH	1	0	0	0.3	B	5	0	0	1.7	C	9.0	PASS
UMATILLA	*	*	*	*	*	*	*	*	*	*	DNC	INC
UNION	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	8.2	PASS
WASCO	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
WASHINGTON	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	DNC	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

PENNSYLVANIA

American Lung Association in Pennsylvania

3001 Old Gettysburg Road
Camp Hill, PA 17011
(717) 541-5864
www.lungusa.org/pennsylvania

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADAMS	100,779	22,604	14,195	2,055	7,338	2,702	1,373	29,035	6,277
ALLEGHENY	1,219,210	253,521	205,511	23,048	88,567	34,705	18,848	384,708	84,479
ARMSTRONG	69,059	13,999	12,735	1,273	4,993	2,015	1,129	22,668	5,012
BEAVER	173,074	35,777	31,630	3,252	12,443	5,029	2,818	56,593	12,516
BERKS	401,955	95,598	56,560	8,691	28,680	10,637	5,447	114,713	24,846
BLAIR	125,527	26,644	21,520	2,422	9,079	3,546	1,929	39,343	8,636
BUCKS	621,144	143,312	84,064	13,029	44,301	16,896	8,762	183,106	39,895
CAMBRIA	144,995	28,199	27,048	2,564	10,648	4,235	2,353	47,483	10,469
CENTRE	144,658	23,511	15,998	2,137	12,016	3,764	1,582	37,307	7,669
CHESTER	486,345	119,360	59,067	10,851	34,435	12,712	6,361	135,531	29,279
CLEARFIELD	81,452	16,213	14,460	1,474	5,987	2,340	1,277	26,014	5,712
CUMBERLAND	228,019	46,679	34,547	4,244	16,927	6,327	3,273	68,561	14,882
DAUPHIN	255,710	60,287	34,950	5,481	18,170	6,873	3,552	74,395	16,182
DELAWARE	554,399	132,836	78,371	12,076	39,288	14,756	7,632	159,838	34,724
ERIE	279,092	64,329	39,904	5,848	20,070	7,480	3,847	80,828	17,528
FRANKLIN	141,665	32,584	23,396	2,962	10,100	3,855	2,061	42,444	9,269
GREENE	39,503	7,880	5,933	716	2,950	1,105	571	11,961	2,597
INDIANA	87,690	16,273	13,826	1,479	6,708	2,463	1,262	26,582	5,747

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
LACKAWANNA	209,330	43,290	37,619	3,935	15,217	5,968	3,277	66,536	14,624
LANCASTER	498,465	125,753	71,955	11,432	34,753	13,026	6,767	141,433	30,724
LAWRENCE	90,991	19,388	16,696	1,763	6,509	2,609	1,458	29,329	6,477
LEHIGH	337,343	79,588	50,971	7,235	23,923	9,081	4,776	99,158	21,608
LUZERNE	312,265	62,461	56,760	5,678	22,884	8,985	4,939	100,227	22,035
LYCOMING	116,811	24,740	19,097	2,249	8,499	3,273	1,751	36,026	7,880
MERCER	116,809	25,170	20,743	2,288	8,381	3,306	1,821	36,906	8,121
MONROE	164,722	40,084	19,314	3,644	11,788	4,256	2,083	44,930	9,649
MONTGOMERY	776,172	180,296	114,326	16,391	55,135	21,119	11,123	230,656	50,348
NORTHAMPTON	293,522	64,674	42,435	5,880	21,372	7,980	4,109	86,274	18,717
PERRY	45,163	10,440	5,713	949	3,245	1,212	613	12,984	2,813
PHILADELPHIA	1,449,634	363,648	186,573	33,059	103,046	36,802	18,128	390,049	83,636
TIOGA	40,681	8,492	7,079	772	2,962	1,149	624	12,740	2,793
WASHINGTON	205,553	42,168	35,282	3,833	14,952	5,892	3,219	65,498	14,402
WESTMORELAND	362,326	71,731	66,171	6,521	26,341	10,643	5,952	119,641	26,455
YORK	421,049	97,661	57,226	8,878	30,222	11,270	5,758	121,361	26,307
TOTALS	**10,595,112**	**2,399,190**	**1,581,675**	**218,111**	**761,927**	**288,010**	**150,473**	**3,134,858**	**682,305**

PENNSYLVANIA

American Lung Association in Pennsylvania

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HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAMS	26	0	0	8.7	F
ALLEGHENY	52	5	0	19.8	F
ARMSTRONG	43	3	0	15.8	F
BEAVER	35	2	0	12.7	F
BERKS	32	0	0	10.7	F
BLAIR	7	0	0	2.3	D
BUCKS	47	4	2	19.0	F
CAMBRIA	8	0	0	2.7	D
CENTRE	15	0	0	5.0	F
CHESTER	45	2	1	16.7	F
CLEARFIELD	15	0	0	5.0	F
CUMBERLAND	DNC	DNC	DNC	DNC	DNC
DAUPHIN	35	0	0	11.7	F
DELAWARE	34	1	0	11.8	F
ERIE	30	3	0	11.5	F
FRANKLIN	7	0	0	2.3	D
GREENE	32	0	0	10.7	F
INDIANA	29	0	0	9.7	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	17	0	0	5.7	F	12.6	PASS
ALLEGHENY	147	13	0	55.5	F	19.8	FAIL
ARMSTRONG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BEAVER	14	0	0	4.7	F	16.5	FAIL
BERKS	13	0	0	4.3	F	DNC	INC
BLAIR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BUCKS	8	0	0	2.7	D	13.2	PASS
CAMBRIA	10	0	0	3.3	F	15.3	FAIL
CENTRE	23	0	0	7.7	F	12.2	PASS
CHESTER	5	0	0	1.7	C	DNC	INC
CLEARFIELD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CUMBERLAND	27	0	0	9.0	F	13.9	PASS
DAUPHIN	29	0	0	9.7	F	14.6	PASS
DELAWARE	10	0	0	3.3	F	15.0	PASS
ERIE	22	1	0	7.8	F	12.6	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

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LACKAWANNA	18	0	0	6.0	F	13	0	0	4.3	F	11.5	PASS
LANCASTER	45	1	0	15.5	F	16	0	0	5.3	F	15.9	FAIL
LAWRENCE	8	0	0	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEHIGH	33	0	0	11.0	F	*	*	*	*	*	DNC	INC
LUZERNE	16	0	0	5.3	F	*	*	*	*	*	DNC	INC
LYCOMING	15	0	0	5.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MERCER	40	1	0	13.8	F	17	0	0	5.7	F	13.0	PASS
MONROE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	49	0	0	16.3	F	6	0	0	2.0	C	DNC	INC
NORTHAMPTON	28	1	0	9.8	F	25	0	0	8.3	F	13.4	PASS
PERRY	18	0	0	6.0	F	*	*	*	*	*	DNC	INC
PHILADELPHIA	54	6	0	21.0	F	33	0	0	11.0	F	DNC	INC
TIOGA	10	0	0	3.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	31	0	0	10.3	F	35	0	0	11.7	F	15.5	FAIL
WESTMORELAND	23	1	0	8.2	F	11	0	0	3.7	F	15.5	FAIL
YORK	37	1	0	12.8	F	15	0	0	5.0	F	16.0	FAIL

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

RHODE ISLAND

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Providence, RI 02903
(401) 421-6487
www.lungusa.org/rhodeisland

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
KENT	168,639	35,723	24,625	3,248	12,929	4,702	2,459	51,176	11,159
PROVIDENCE	629,435	145,180	83,711	13,198	47,548	16,445	8,128	174,554	37,462
WASHINGTON	126,902	25,797	17,314	2,345	9,886	3,523	1,790	37,835	8,197
TOTALS	**924,976**	**206,700**	**125,650**	**18,791**	**70,363**	**24,670**	**12,377**	**263,565**	**56,819**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
KENT	22	3	0	8.8	F	2	0	0	0.7	B	DNC	INC
PROVIDENCE	22	1	0	7.8	F	8	0	0	2.7	D	12.0	PASS
WASHINGTON	30	2	1	11.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

SOUTH CAROLINA

American Lung Association in South Carolina

1817 Gadsden Street
Columbia, SC 29201-2392
(803) 779-5864
www.lungusa.org/southcarolina

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ABBEVILLE	25,457	5,820	3,898	529	1,463	695	367	7,606	1,660
AIKEN	152,307	36,176	22,254	3,289	8,662	4,103	2,153	44,742	9,755
ANDERSON	179,981	43,140	25,940	3,922	10,207	4,799	2,495	52,114	11,332
BARNWELL	22,975	5,885	3,056	535	1,277	599	309	6,474	1,407
BEAUFORT	147,316	35,634	27,273	3,239	8,258	3,995	2,213	44,768	9,835
BERKELEY	163,622	42,621	14,847	3,875	9,108	4,003	1,825	40,943	8,657
CHARLESTON	342,973	79,656	42,541	7,242	19,711	8,968	4,402	94,846	20,360
CHEROKEE	54,015	13,371	6,850	1,216	3,040	1,399	699	14,917	3,217
CHESTER	32,531	7,987	4,470	726	1,833	864	448	9,364	2,038
CHESTERFIELD	42,761	10,537	5,489	958	2,411	1,123	570	12,052	2,611
COLLETON	38,903	9,803	5,446	891	2,172	1,026	535	11,157	2,430
DARLINGTON	66,833	16,564	9,037	1,506	3,756	1,766	912	19,110	4,155
EDGEFIELD	25,435	5,389	2,831	490	1,505	674	320	7,015	1,496
FLORENCE	131,886	33,075	16,676	3,007	7,393	3,419	1,720	36,557	7,899
GEORGETOWN	60,499	13,730	10,385	1,248	3,473	1,689	929	18,839	4,146
GREENVILLE	428,243	104,821	51,321	9,529	24,227	11,051	5,432	116,911	25,123
GREENWOOD	68,259	16,586	9,947	1,508	3,850	1,793	924	19,403	4,204
HORRY	249,925	53,766	41,550	4,888	14,576	6,900	3,665	75,744	16,512
LEXINGTON	243,270	60,492	28,492	5,499	13,703	6,297	3,118	66,816	14,400

	AT-RISK GROUPS								
				Lung Diseases					
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema	CV Disease	Diabetes
OCONEE	70,753	15,358	12,817	1,396	4,107	2,003	1,110	22,426	4,940
ORANGEBURG	89,952	21,895	13,028	1,990	5,074	2,377	1,232	25,785	5,599
PICKENS	116,003	24,300	14,954	2,209	6,856	3,059	1,467	32,038	6,822
RICHLAND	357,734	86,117	34,520	7,829	20,422	8,913	4,036	90,952	19,171
SPARTANBURG	275,534	66,283	36,247	6,026	15,641	7,220	3,636	77,252	16,680
UNION	27,770	6,275	4,581	570	1,599	776	423	8,618	1,895
WILLIAMSBURG	35,447	8,427	5,070	766	2,016	949	493	10,304	2,241
YORK	208,827	52,339	22,413	4,758	11,746	5,271	2,509	54,965	11,730
TOTALS	**3,659,211**	**876,047**	**475,933**	**79,641**	**208,090**	**95,732**	**47,944**	**1,021,716**	**220,315**

SOUTH CAROLINA

American Lung Association in South Carolina

1817 Gadsden Street
Columbia, SC 29201-2392
(803) 779-5864
www.lungusa.org/southcarolina

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ABBEVILLE	24	0	0	8.0	F
AIKEN	14	0	0	4.7	F
ANDERSON	*	*	*	*	*
BARNWELL	4	0	0	1.3	C
BEAUFORT	DNC	DNC	DNC	DNC	DNC
BERKELEY	3	0	0	1.0	C
CHARLESTON	12	0	0	4.0	F
CHEROKEE	13	0	0	4.3	F
CHESTER	18	0	0	6.0	F
CHESTERFIELD	8	0	0	2.7	D
COLLETON	6	0	0	2.0	C
DARLINGTON	13	0	0	4.3	F
EDGEFIELD	2	0	0	0.7	B
FLORENCE	DNC	DNC	DNC	DNC	DNC
GEORGETOWN	DNC	DNC	DNC	DNC	DNC
GREENVILLE	*	*	*	*	*
GREENWOOD	DNC	DNC	DNC	DNC	DNC
HORRY	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ABBEVILLE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
AIKEN	*	*	*	*	*	DNC	INC
ANDERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BARNWELL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BEAUFORT	3	0	0	1.0	C	11.4	PASS
BERKELEY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHARLESTON	11	1	0	4.2	F	12.1	PASS
CHEROKEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHESTER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHESTERFIELD	2	0	0	0.7	B	12.5	PASS
COLLETON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DARLINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
EDGEFIELD	4	0	0	1.3	C	13.2	PASS
FLORENCE	3	0	0	1.0	C	12.7	PASS
GEORGETOWN	1	0	0	0.3	B	DNC	INC
GREENVILLE	11	0	0	3.7	F	15.3	FAIL
GREENWOOD	1	0	0	0.3	B	13.5	PASS
HORRY	3	0	0	1.0	C	12.1	PASS

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
LEXINGTON	DNC	DNC	DNC	DNC	DNC
OCONEE	6	0	0	2.0	C
ORANGEBURG	*	*	*	*	*
PICKENS	25	0	0	8.3	F
RICHLAND	38	1	0	13.2	F
SPARTANBURG	40	0	0	13.3	F
UNION	16	0	0	5.3	F
WILLIAMSBURG	4	0	0	1.3	C
YORK	16	0	0	5.3	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LEXINGTON	4	0	0	1.3	C	14.7	PASS
OCONEE	1	0	0	0.3	B	11.2	PASS
ORANGEBURG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PICKENS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RICHLAND	11	0	0	3.7	F	14.2	PASS
SPARTANBURG	10	0	0	3.3	F	14.2	PASS
UNION	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WILLIAMSBURG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YORK	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

SOUTH DAKOTA

American Lung Association in South Dakota

108 E. 38th Street, Suite 600
Sioux Falls, SD 57105
(605) 336-7222
www.lungusa.org/southdakota

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BROOKINGS	29,241	5,528	3,096	503	1,705	745	319	7,435	1,537
BROWN	35,113	7,791	5,874	708	1,913	971	522	10,717	2,345
CODINGTON	26,356	6,482	3,877	589	1,390	696	363	7,565	1,645
CUSTER	7,818	1,633	1,377	148	422	230	130	2,602	578
JACKSON	2,792	859	370	78	135	68	35	734	160
MEADE	23,999	6,453	2,734	587	1,206	611	306	6,519	1,411
MINNEHAHA	175,272	44,842	20,800	4,077	9,142	4,408	2,140	46,399	9,929
PENNINGTON	96,280	24,152	12,442	2,196	5,018	2,497	1,262	26,754	5,784
TOTALS	**396,871**	**97,740**	**50,570**	**8,886**	**20,930**	**10,227**	**5,077**	**108,725**	**23,387**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BROOKINGS	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.1	PASS
BROWN	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.4	PASS
CODINGTON	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	9.8	PASS
CUSTER	3	0	0	1.0	C	0	0	0	0.0	A	5.6	PASS
JACKSON	0	0	0	0.0	A	0	0	0	0.0	A	5.4	PASS
MEADE	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MINNEHAHA	0	0	0	0.0	A	0	0	0	0.0	A	10.0	PASS
PENNINGTON	*	*	*	*	*	1	0	0	0.3	B	8.7	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

TENNESSEE

American Lung Association in Tennessee

One Vantage Way, Suite B-130
Nashville, TN 37228
(615) 329-1151
www.lungusa.org/tennessee

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ANDERSON	73,471	16,157	12,247	1,469	4,994	2,063	1,123	22,889	5,029
BLOUNT	119,855	26,426	17,666	2,402	8,103	3,266	1,692	35,410	7,691
BRADLEY	95,443	21,893	12,772	1,990	6,354	2,516	1,255	26,818	5,772
COFFEE	51,741	12,428	8,192	1,130	3,403	1,386	736	15,203	3,316
DAVIDSON	619,626	145,918	67,807	13,265	40,880	15,807	7,436	164,022	34,870
DICKSON	47,366	12,118	5,827	1,102	3,051	1,206	597	12,799	2,753
DYER	37,684	9,279	5,203	844	2,466	992	511	10,722	2,327
GILES	29,024	6,435	4,464	585	1,965	801	424	8,771	1,916
HAMBLEN	61,829	14,467	9,191	1,315	4,096	1,649	854	17,876	3,878
HAMILTON	330,168	73,899	47,435	6,718	22,295	9,009	4,678	97,747	21,266
HAYWOOD	19,126	4,885	2,592	444	1,237	497	256	5,372	1,166
HUMPHREYS	18,173	4,136	2,920	376	1,220	500	269	5,517	1,208
JEFFERSON	50,221	11,123	7,268	1,011	3,373	1,344	682	14,441	3,117
KNOX	423,874	94,055	53,860	8,551	28,537	11,248	5,539	119,130	25,590
LAWRENCE	40,887	10,177	6,401	925	2,655	1,079	571	11,817	2,574
LOUDON	45,448	9,730	9,041	885	3,096	1,302	739	14,759	3,263
MADISON	96,518	24,403	11,848	2,218	6,240	2,462	1,215	26,094	5,608
MAURY	79,966	19,811	9,728	1,801	5,216	2,062	1,020	21,871	4,706

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MCMINN	52,131	11,928	7,950	1,084	3,488	1,415	743	15,443	3,364
MEIGS	11,657	2,722	1,510	247	776	309	156	3,311	716
MONTGOMERY	154,460	44,431	12,914	4,039	9,436	3,537	1,540	35,504	7,407
OBION	31,633	7,154	5,149	650	2,133	879	476	9,733	2,137
PUTNAM	69,916	15,581	9,983	1,416	4,660	1,835	910	19,520	4,184
ROANE	53,399	10,989	9,105	999	3,699	1,532	838	17,036	3,748
RUTHERFORD	241,462	64,114	19,218	5,829	15,183	5,634	2,385	55,898	11,585
SEVIER	83,527	18,604	12,193	1,691	5,633	2,270	1,175	24,604	5,344
SHELBY	910,100	249,090	90,883	22,645	57,331	22,283	10,563	231,859	49,474
SULLIVAN	153,519	31,876	26,661	2,898	10,609	4,405	2,422	49,121	10,818
SUMNER	152,721	37,526	17,727	3,411	10,000	3,939	1,930	41,601	8,939
WILLIAMSON	166,128	43,298	14,475	3,936	10,740	4,178	1,966	43,284	9,254
WILSON	106,356	26,591	11,315	2,417	6,931	2,712	1,304	28,396	6,082
TOTALS	**4,427,429**	**1,081,244**	**533,545**	**98,296**	**289,804**	**114,119**	**56,002**	**1,206,568**	**259,101**

TENNESSEE

American Lung Association in Tennessee

One Vantage Way, Suite B-130
Nashville, TN 37228
(615) 329-1151
www.lungusa.org/tennessee

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ANDERSON	30	1	0	10.5	F
BLOUNT	77	1	0	26.2	F
BRADLEY	*	*	*	*	*
COFFEE	*	*	*	*	*
DAVIDSON	24	2	0	9.0	F
DICKSON	*	*	*	*	*
DYER	*	*	*	*	*
GILES	*	*	*	*	*
HAMBLEN	*	*	*	*	*
HAMILTON	46	3	0	16.8	F
HAYWOOD	*	*	*	*	*
HUMPHREYS	*	*	*	*	*
JEFFERSON	42	2	0	15.0	F
KNOX	70	0	1	24.0	F
LAWRENCE	*	*	*	*	*
LOUDON	60	1	0	20.5	F
MADISON	DNC	DNC	DNC	DNC	DNC
MAURY	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANDERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BLOUNT	8	0	0	2.7	D	14.7	PASS
BRADLEY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COFFEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DAVIDSON	22	0	0	7.3	F	14.3	PASS
DICKSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DYER	7	0	0	2.3	D	12.6	PASS
GILES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMBLEN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMILTON	13	0	0	4.3	F	15.2	FAIL
HAYWOOD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HUMPHREYS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KNOX	21	0	0	7.0	F	15.7	FAIL
LAWRENCE	4	0	0	1.3	C	12.1	PASS
LOUDON	6	0	0	2.0	C	15.7	FAIL
MADISON	6	0	0	2.0	C	DNC	INC
MAURY	6	0	0	2.0	C	13.5	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MCMINN	DNC	DNC	DNC	DNC	DNC	6	0	0	2.0	C	14.7	PASS
MEIGS	33	1	0	11.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	*	*	*	*	*	18	0	0	6.0	F	13.9	PASS
OBION	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PUTNAM	*	*	*	*	*	6	0	0	2.0	C	DNC	INC
ROANE	*	*	*	*	*	0	0	0	0.0	A	14.8	PASS
RUTHERFORD	13	1	0	4.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SEVIER	79	0	0	26.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SHELBY	60	4	0	22.0	F	22	0	0	7.3	F	13.8	PASS
SULLIVAN	38	3	0	14.2	F	4	0	0	1.3	C	14.5	PASS
SUMNER	60	3	0	21.5	F	7	0	0	2.3	D	13.8	PASS
WILLIAMSON	26	0	0	8.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WILSON	34	0	0	11.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

TEXAS

American Lung Association in Texas

8150 Brookriver Drive, Suite S102
Dallas, TX 75247
(214) 631-5864
www.lungusa.org/texas

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BEXAR	1,594,493	450,444	161,826	40,950	93,703	37,699	17,418	388,246	82,092
BOWIE	91,553	21,633	12,195	1,967	5,724	2,392	1,194	25,499	5,489
BRAZORIA	294,233	82,157	26,592	7,469	17,375	6,965	3,152	71,046	14,978
BREWSTER	9,239	1,890	1,378	172	601	250	126	2,677	576
CAMERON	387,210	132,300	43,443	12,027	20,868	8,481	4,080	88,994	18,941
COLLIN	730,690	205,690	49,688	18,699	43,031	16,731	7,009	165,138	34,226
DALLAS	2,366,511	667,478	199,401	60,680	139,207	54,747	23,913	550,240	114,921
DENTON	612,357	169,092	34,308	15,372	36,340	13,780	5,429	132,682	27,098
ECTOR	129,570	38,354	14,051	3,487	7,470	3,060	1,464	31,999	6,824
EL PASO	734,669	228,842	76,869	20,804	41,423	16,795	7,919	174,542	37,059
ELLIS	143,468	39,844	13,319	3,622	8,489	3,403	1,545	34,761	7,330
GALVESTON	283,987	73,453	30,767	6,678	17,244	7,144	3,442	74,880	16,031
GREGG	117,119	31,023	15,740	2,820	7,047	2,963	1,500	31,796	6,864
HARRIS	3,935,855	1,132,408	306,779	102,947	229,730	90,690	39,502	909,956	190,239
HARRISON	63,504	15,627	8,178	1,421	3,920	1,654	833	17,696	3,822
HAYS	141,480	34,302	10,610	3,118	8,783	3,308	1,322	32,080	6,545
HIDALGO	710,514	254,941	67,593	23,177	37,306	14,668	6,614	149,649	31,343
HOOD	49,170	10,858	9,398	987	3,133	1,385	776	15,601	3,439
HUNT	82,945	20,373	10,811	1,852	5,123	2,129	1,055	22,621	4,858

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
JEFF DAVIS	2,264	460	431	42	148	67	38	759	169
JEFFERSON	241,975	59,196	32,251	5,382	14,963	6,283	3,159	67,198	14,493
JOHNSON	149,797	39,300	15,441	3,573	9,051	3,677	1,718	38,033	8,074
KAUFMAN	96,373	26,467	8,917	2,406	5,727	2,287	1,032	23,309	4,907
KLEBERG	30,390	7,721	3,495	702	1,856	741	343	7,644	1,613
LUBBOCK	260,901	65,936	29,121	5,994	15,966	6,361	2,923	65,400	13,779
MARION	10,741	2,191	2,295	199	699	319	187	3,673	819
MCLENNAN	228,123	58,898	28,063	5,354	13,855	5,639	2,707	59,098	12,581
MONTGOMERY	412,638	112,882	38,340	10,262	24,557	9,904	4,531	101,488	21,457
NUECES	321,135	86,838	37,179	7,894	19,186	7,971	3,898	84,148	18,052
ORANGE	82,669	20,216	11,674	1,838	5,112	2,190	1,136	23,754	5,164
PARKER	108,687	26,192	11,828	2,381	6,757	2,775	1,320	28,926	6,170
POTTER	120,775	34,843	14,216	3,168	7,035	2,861	1,371	29,966	6,377
ROCKWALL	73,810	20,545	6,217	1,868	4,364	1,733	767	17,507	3,672
SMITH	198,705	51,145	28,513	4,650	12,077	5,083	2,600	54,823	11,847
TARRANT	1,717,435	483,789	144,105	43,981	101,080	40,063	17,688	404,365	84,752
TRAVIS	974,365	243,608	64,754	22,146	59,897	22,660	9,013	219,169	44,767
VICTORIA	86,291	23,611	11,324	2,146	5,131	2,178	1,113	23,460	5,082
WEBB	233,152	87,166	18,993	7,924	11,958	4,659	2,035	46,865	9,757
TOTALS	**17,828,793**	**5,061,713**	**1,600,103**	**460,161**	**1,045,936**	**415,695**	**185,870**	**4,219,688**	**886,207**

TEXAS

American Lung Association in Texas

8150 Brookriver Drive, Suite S102
Dallas, TX 75247
(214) 631-5864
www.lungusa.org/texas

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
BEXAR	39	0	0	13.0	F
BOWIE	DNC	DNC	DNC	DNC	DNC
BRAZORIA	56	6	1	22.3	F
BREWSTER	0	0	0	0.0	A
CAMERON	1	0	0	0.3	B
COLLIN	68	3	0	24.2	F
DALLAS	79	7	0	29.8	F
DENTON	69	12	0	29.0	F
ECTOR	DNC	DNC	DNC	DNC	DNC
EL PASO	38	1	0	13.2	F
ELLIS	23	1	0	8.2	F
GALVESTON	24	2	0	9.0	F
GREGG	39	0	0	13.0	F
HARRIS	104	30	6	53.7	F
HARRISON	20	0	0	6.7	F
HAYS	4	0	0	1.3	C
HIDALGO	1	0	0	0.3	B
HOOD	29	0	0	9.7	F
HUNT	21	0	0	7.0	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BEXAR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BOWIE	3	0	0	1.0	C	13.0	PASS
BRAZORIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BREWSTER	0	0	0	0.0	A	DNC	INC
CAMERON	0	0	0	0.0	A	DNC	INC
COLLIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DALLAS	1	0	0	0.3	B	11.5	PASS
DENTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ECTOR	0	0	0	0.0	A	8.0	PASS
EL PASO	10	0	0	3.3	F	9.1	PASS
ELLIS	0	0	0	0.0	A	DNC	INC
GALVESTON	*	*	*	*	*	DNC	INC
GREGG	*	*	*	*	*	DNC	INC
HARRIS	10	0	0	3.3	F	15.8	FAIL
HARRISON	0	0	0	0.0	A	11.7	PASS
HAYS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HIDALGO	1	0	0	0.3	B	11.0	PASS
HOOD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HUNT	DNC	DNC	DNC	DNC	DNC	DNC	DNC

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
JEFF DAVIS	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
JEFFERSON	61	2	0	21.3	F	2	0	0	0.7	B	DNC	INC
JOHNSON	37	1	0	12.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KAUFMAN	16	0	0	5.3	F	*	*	*	*	*	DNC	INC
KLEBERG	*	*	*	*	*	*	*	*	*	*	DNC	INC
LUBBOCK	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
MARION	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MCLENNAN	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	31	2	1	12.0	F	*	*	*	*	*	DNC	INC
NUECES	3	0	0	1.0	C	0	0	0	0.0	A	10.9	PASS
ORANGE	15	0	0	5.0	F	2	0	0	0.7	B	11.3	PASS
PARKER	35	7	0	15.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
POTTER	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	DNC	INC
ROCKWALL	27	0	0	9.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SMITH	42	0	0	14.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TARRANT	87	17	2	38.8	F	1	0	0	0.3	B	11.9	PASS
TRAVIS	31	0	0	10.3	F	0	0	0	0.0	A	DNC	INC
VICTORIA	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WEBB	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

UTAH

American Lung Association in Utah

1930 South 1100 East
Salt Lake City, UT 84106-2317
(801) 484-4456
www.lungusa.org/utah

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BOX ELDER	47,846	15,098	5,185	1,373	2,656	1,089	518	11,367	2,417
CACHE	108,887	34,015	8,208	3,092	6,003	2,272	894	21,923	4,438
DAVIS	288,146	93,981	22,320	8,544	15,682	6,186	2,650	61,681	12,810
SALT LAKE	1,009,518	297,294	85,972	27,027	57,606	22,947	10,058	231,008	48,262
SAN JUAN	14,484	4,687	1,518	426	795	327	156	3,420	728
TOOELE	54,914	18,559	3,884	1,687	2,924	1,125	456	10,979	2,246
UINTAH	29,042	8,785	2,885	799	1,643	669	310	6,899	1,460
UTAH	483,702	166,212	30,396	15,110	25,401	9,442	3,517	89,191	17,815
WASHINGTON	133,791	38,713	23,364	3,519	7,694	3,241	1,714	35,595	7,692
WEBER	221,846	66,205	22,597	6,019	12,605	5,109	2,357	52,599	11,107
TOTALS	**2,392,176**	**743,549**	**206,329**	**67,596**	**133,008**	**52,408**	**22,632**	**524,663**	**108,976**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BOX ELDER	24	0	0	8.0	F	5	0	0	1.7	C	8.2	PASS
CACHE	5	0	0	1.7	C	42	7	0	17.5	F	10.3	PASS
DAVIS	33	3	0	12.5	F	5	2	0	2.7	D	10.0	PASS
SALT LAKE	55	2	0	19.3	F	63	7	0	24.5	F	11.6	PASS
SAN JUAN	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TOOELE	19	0	0	6.3	F	2	1	0	1.2	C	DNC	INC
UINTAH	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
UTAH	24	1	0	8.5	F	22	6	0	10.3	F	10.4	PASS
WASHINGTON	9	2	2	5.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WEBER	47	0	0	15.7	F	6	1	0	2.5	D	10.6	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

VERMONT

American Lung Association in Vermont

372 Hurricane Lane, Suite 101
Williston, VT 05495
(802) 876-6500
www.lungusa.org/vermont

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ADDISON	36,760	7,927	4,374	721	2,756	994	491	10,532	2,270
BENNINGTON	36,452	7,448	6,582	677	2,696	1,063	594	11,947	2,642
CHITTENDEN	151,826	32,666	15,919	2,970	11,492	3,998	1,877	41,425	8,819
RUTLAND	63,270	12,555	10,180	1,141	4,756	1,829	987	20,201	4,438
TOTALS	**288,308**	**60,596**	**37,055**	**5,509**	**21,700**	**7,884**	**3,949**	**84,104**	**18,169**

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADDISON	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BENNINGTON	7	0	0	2.3	D	1	0	0	0.3	B	8.2	PASS
CHITTENDEN	5	0	0	1.7	C	3	0	0	1.0	C	9.0	PASS
RUTLAND	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	11.0	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

VIRGINIA

American Lung Association in Virginia

9221 Forest Hill Avenue
Richmond, VA 23235
(804) 267-1900
www.lungusa.org/virginia

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ALEXANDRIA CITY	140,024	27,765	15,229	2,524	8,885	3,674	1,672	37,589	7,920
ARLINGTON	204,568	36,423	18,546	3,311	13,311	5,380	2,308	53,665	11,164
BRISTOL CITY	17,593	3,510	3,931	319	1,110	514	297	5,886	1,304
CAROLINE	27,282	6,632	3,269	603	1,638	695	336	7,298	1,559
CHARLES CITY	7,166	1,349	1,161	123	466	209	113	2,308	507
CHESTERFIELD	299,689	76,511	22,956	6,956	17,888	7,433	3,352	75,591	16,000
FAIRFAX	1,010,241	245,455	96,133	22,314	61,474	26,260	12,598	274,386	58,921
FAUQUIER	66,328	16,185	7,057	1,471	4,013	1,716	832	18,029	3,871
FREDERICK	72,880	18,107	7,907	1,646	4,352	1,832	866	19,045	4,053
HAMPTON CITY	146,439	33,809	16,794	3,074	8,915	3,731	1,749	38,678	8,202
HANOVER	98,946	23,829	11,836	2,166	6,011	2,608	1,305	27,796	6,009
HENRICO	289,822	70,699	35,572	6,427	17,426	7,472	3,675	79,093	16,987
HENRY	55,544	11,278	9,425	1,025	3,526	1,584	857	17,529	3,844
LOUDOUN	278,797	84,151	16,321	7,650	15,412	6,082	2,437	58,968	12,086
LYNCHBURG CITY	71,282	14,917	11,886	1,356	4,424	1,913	978	20,651	4,444
MADISON	13,719	2,949	2,213	268	859	385	207	4,245	930
NORFOLK CITY	235,747	60,487	23,434	5,499	13,774	5,575	2,433	56,081	11,663
PAGE	24,142	5,114	3,995	465	1,512	674	360	7,410	1,619
PRINCE WILLIAM	360,411	106,649	22,750	9,695	20,147	8,055	3,334	79,109	16,355

AT-RISK GROUPS

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ROANOKE CITY	92,600	20,973	15,860	1,907	5,682	2,546	1,377	28,187	6,170
ROANOKE	90,420	19,953	14,048	1,814	5,638	2,533	1,362	27,927	6,128
ROCKBRIDGE	21,498	4,451	3,783	405	1,358	615	338	6,862	1,510
ROCKINGHAM	73,524	17,022	10,327	1,547	4,495	1,963	1,004	21,156	4,582
SALEM CITY	25,233	4,806	4,247	437	1,619	716	378	7,831	1,704
STAFFORD	120,723	33,788	7,386	3,072	6,917	2,771	1,148	27,216	5,635
SUFFOLK CITY	81,332	21,841	8,791	1,986	4,719	1,985	938	20,642	4,390
VIRGINIA BEACH CITY	434,743	111,324	44,093	10,120	25,690	10,734	4,982	110,709	23,469
WYTHE	28,538	5,971	4,911	543	1,793	803	434	8,888	1,946
TOTALS	**4,389,231**	**1,085,948**	**443,861**	**98,724**	**263,052**	**110,461**	**51,667**	**1,142,776**	**242,973**

VIRGINIA

American Lung Association in Virginia

9221 Forest Hill Avenue
Richmond, VA 23235
(804) 267-1900
www.lungusa.org/virginia

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ALEXANDRIA CITY	33	1	1	12.2	F
ARLINGTON	52	2	0	18.3	F
BRISTOL CITY	DNC	DNC	DNC	DNC	DNC
CAROLINE	29	0	0	9.7	F
CHARLES CITY	24	0	0	8.0	F
CHESTERFIELD	15	1	0	5.5	F
FAIRFAX	78	3	2	28.8	F
FAUQUIER	4	0	0	1.3	C
FREDERICK	6	0	0	2.0	C
HAMPTON CITY	16	0	0	5.3	F
HANOVER	28	1	0	9.8	F
HENRICO	36	2	0	13.0	F
HENRY	*	*	*	*	*
LOUDOUN	33	1	0	11.5	F
LYNCHBURG CITY	DNC	DNC	DNC	DNC	DNC
MADISON	11	0	0	3.7	F
NORFOLK CITY	DNC	DNC	DNC	DNC	DNC
PAGE	6	0	0	2.0	C
PRINCE WILLIAM	12	2	0	5.0	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALEXANDRIA CITY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ARLINGTON	4	0	0	1.3	C	14.0	PASS
BRISTOL CITY	2	0	0	0.7	B	13.9	PASS
CAROLINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHARLES CITY	4	0	0	1.3	C	12.3	PASS
CHESTERFIELD	2	0	0	0.7	B	13.3	PASS
FAIRFAX	19	0	0	6.3	F	13.7	PASS
FAUQUIER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FREDERICK	*	*	*	*	*	DNC	INC
HAMPTON CITY	2	0	0	0.7	B	11.9	PASS
HANOVER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENRICO	8	0	0	2.7	D	13.2	PASS
HENRY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LOUDOUN	5	0	0	1.7	C	13.2	PASS
LYNCHBURG CITY	4	0	0	1.3	C	13.0	PASS
MADISON	*	*	*	*	*	DNC	INC
NORFOLK CITY	3	0	0	1.0	C	12.4	PASS
PAGE	2	0	0	0.7	B	12.9	PASS
PRINCE WILLIAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC

HIGH OZONE DAYS/2005–2007

PARTICLE POLLUTION DAYS/2005–2007

						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ROANOKE CITY	DNC	DNC	DNC	DNC	DNC	6	0	0	2.0	C	14.5	PASS
ROANOKE	15	0	0	5.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROCKBRIDGE	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROCKINGHAM	*	*	*	*	*	*	*	*	*	*	DNC	INC
SALEM CITY	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
STAFFORD	26	2	1	10.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SUFFOLK CITY	24	0	0	8.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VIRGINIA BEACH CITY	DNC	DNC	DNC	DNC	DNC	7	0	0	2.3	D	12.1	PASS
WYTHE	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

WASHINGTON

American Lung Association in Washington

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(206) 441-5100
www.lungusa.org/washington

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ASOTIN	21,111	4,713	3,887	428	1,496	592	329	6,645	1,464
BENTON	159,414	42,208	17,882	3,837	10,806	4,004	1,957	42,244	9,073
CHELAN	70,993	17,622	11,172	1,602	4,885	1,898	1,017	20,906	4,574
CLALLAM	70,474	13,275	15,921	1,207	5,186	2,135	1,259	24,664	5,500
CLARK	418,070	109,162	43,911	9,924	28,560	10,379	4,921	108,037	23,031
COWLITZ	100,467	24,423	13,536	2,220	6,988	2,645	1,350	28,469	6,167
KING	1,859,284	402,035	198,167	36,549	134,635	49,199	23,332	511,961	109,294
KITTITAS	38,542	7,027	4,480	639	2,933	1,014	454	10,308	2,157
KLICKITAT	20,097	4,612	3,227	419	1,413	561	306	6,228	1,371
LEWIS	73,645	17,203	11,851	1,564	5,167	2,004	1,073	22,076	4,828
MASON	56,384	11,876	9,643	1,080	4,073	1,582	852	17,480	3,825
OKANOGAN	39,653	9,399	6,444	854	2,760	1,095	599	12,180	2,681
PIERCE	773,165	196,191	81,137	17,836	53,369	19,329	9,117	200,750	42,738
SKAGIT	116,397	27,700	17,262	2,518	8,143	3,098	1,610	33,648	7,309
SNOHOMISH	676,898	170,361	63,873	15,488	46,866	16,961	7,883	174,910	37,182
SPOKANE	456,175	107,280	57,275	9,753	32,169	11,902	5,868	126,128	27,098
THURSTON	238,555	53,096	29,256	4,827	17,091	6,349	3,125	67,208	14,452
WHATCOM	192,999	41,808	23,865	3,801	13,979	5,070	2,434	53,109	11,328
YAKIMA	233,062	71,376	26,480	6,489	14,924	5,480	2,680	57,869	12,401
TOTALS	**5,615,385**	**1,331,367**	**639,269**	**121,035**	**395,442**	**145,298**	**70,167**	**1,524,820**	**326,470**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ASOTIN	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
BENTON	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
CHELAN	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
CLALLAM	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARK	1	0	0	0.3	B	*	*	*	*	*	DNC	INC
COWLITZ	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KING	8	3	0	4.2	F	4	1	0	1.8	C	9.0	PASS
KITTITAS	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
KLICKITAT	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEWIS	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MASON	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OKANOGAN	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
PIERCE	4	1	0	1.8	C	14	1	0	5.2	F	10.2	PASS
SKAGIT	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SNOHOMISH	*	*	*	*	*	18	1	0	6.5	F	9.5	PASS
SPOKANE	1	0	0	0.3	B	3	0	0	1.0	C	9.8	PASS
THURSTON	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WHATCOM	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YAKIMA	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

WEST VIRGINIA

American Lung Association in West Virginia

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Charleston, WV 25339-3980
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www.lungusa.org/westvirginia

AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
BERKELEY	99,734	26,133	10,630	2,376	6,598	2,471	1,173	25,736	5,485
BROOKE	23,661	4,482	4,556	407	1,723	707	401	8,003	1,774
CABELL	94,435	19,407	15,334	1,764	6,738	2,621	1,373	28,583	6,213
GREENBRIER	34,586	7,239	6,168	658	2,456	998	555	11,188	2,471
HANCOCK	30,189	6,098	5,675	554	2,164	893	508	10,124	2,248
HARRISON	68,309	15,081	11,009	1,371	4,779	1,904	1,024	21,010	4,605
KANAWHA	191,306	40,821	31,633	3,711	13,510	5,448	2,974	60,518	13,319
MARION	56,728	11,393	9,560	1,036	4,072	1,606	858	17,670	3,861
MARSHALL	33,148	6,808	5,510	619	2,364	958	525	10,653	2,348
MERCER	61,350	13,033	10,664	1,185	4,340	1,740	953	19,371	4,259
MONONGALIA	87,516	15,631	8,905	1,421	6,445	2,265	964	22,543	4,662
OHIO	44,398	8,979	8,414	816	3,183	1,298	732	14,654	3,243
RALEIGH	79,170	16,257	12,677	1,478	5,648	2,237	1,192	24,574	5,374
SUMMERS	13,202	2,184	2,480	199	990	397	218	4,422	972
WOOD	86,088	18,763	14,057	1,706	6,044	2,426	1,316	26,873	5,904
TOTALS	**1,003,820**	**212,309**	**157,272**	**19,301**	**71,055**	**27,968**	**14,766**	**305,923**	**66,738**

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BERKELEY	9	0	0	3.0	D	8	0	0	2.7	D	15.8	FAIL
BROOKE	DNC	DNC	DNC	DNC	DNC	19	0	0	6.3	F	16.4	FAIL
CABELL	46	0	0	15.3	F	13	0	0	4.3	F	16.6	FAIL
GREENBRIER	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HANCOCK	20	0	0	6.7	F	12	0	0	4.0	F	15.2	FAIL
HARRISON	DNC	DNC	DNC	DNC	DNC	6	0	0	2.0	C	14.2	PASS
KANAWHA	24	0	0	8.0	F	25	0	0	8.3	F	16.6	FAIL
MARION	DNC	DNC	DNC	DNC	DNC	5	0	0	1.7	C	15.3	FAIL
MARSHALL	DNC	DNC	DNC	DNC	DNC	15	0	0	5.0	F	15.2	FAIL
MERCER	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
MONONGALIA	20	0	0	6.7	F	7	0	0	2.3	D	14.4	PASS
OHIO	38	2	0	13.7	F	8	0	0	2.7	D	14.6	PASS
RALEIGH	DNC	DNC	DNC	DNC	DNC	2	0	0	0.7	B	13.0	PASS
SUMMERS	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
WOOD	35	0	0	11.7	F	10	0	0	3.3	F	15.4	FAIL

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

WISCONSIN

American Lung Association in Wisconsin

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
ASHLAND	16,296	3,722	2,564	338	1,149	442	233	4,839	1,054
BROWN	243,132	59,891	27,182	5,445	16,895	6,176	2,957	64,581	13,792
COLUMBIA	55,280	12,523	7,981	1,138	3,890	1,500	778	16,273	3,538
DANE	476,785	104,819	45,303	9,529	34,711	12,121	5,406	122,888	25,809
DODGE	87,786	18,849	12,181	1,714	6,323	2,377	1,200	25,463	5,498
DOOR	27,811	5,194	5,798	472	2,009	850	496	9,754	2,176
FLORENCE	4,768	889	945	81	344	145	83	1,653	368
FOND DU LAC	99,124	22,342	14,081	2,031	7,009	2,676	1,375	28,903	6,269
FOREST	9,807	2,134	2,095	194	696	282	164	3,234	718
GRANT	48,792	10,133	7,948	921	3,557	1,347	704	14,676	3,187
GREEN	35,727	8,453	5,205	768	2,472	965	506	10,520	2,295
JEFFERSON	80,213	18,325	10,192	1,666	5,691	2,112	1,042	22,395	4,812
KENOSHA	162,921	42,597	18,099	3,872	11,074	4,071	1,962	42,696	9,134
KEWAUNEE	20,533	4,554	3,151	414	1,454	563	296	6,154	1,341
LA CROSSE	111,411	24,159	14,244	2,196	8,102	2,931	1,417	30,803	6,577
MANITOWOC	80,928	17,763	12,798	1,615	5,702	2,260	1,213	24,905	5,458
MARATHON	129,958	31,029	17,529	2,821	8,998	3,456	1,771	37,263	8,085
MILWAUKEE	951,252	250,810	111,147	22,801	64,514	23,775	11,593	250,687	53,731

AT-RISK GROUPS

				Lung Diseases					
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema	CV Disease	Diabetes
ONEIDA	36,243	6,900	7,471	627	2,617	1,095	635	12,533	2,791
OUTAGAMIE	173,703	43,404	20,176	3,946	11,989	4,421	2,147	46,528	9,968
OZAUKEE	85,602	19,459	12,267	1,769	5,903	2,386	1,273	26,192	5,749
POLK	44,265	10,179	6,713	925	3,083	1,213	644	13,296	2,907
RACINE	195,099	49,435	23,931	4,494	13,276	5,040	2,526	53,786	11,618
ROCK	159,623	39,789	20,560	3,617	10,965	4,137	2,081	44,238	9,552
SAUK	58,477	13,867	8,671	1,261	4,063	1,569	821	17,090	3,721
SHEBOYGAN	114,504	26,620	15,916	2,420	8,005	3,070	1,578	33,153	7,195
ST. CROIX	81,131	21,041	7,606	1,913	5,551	1,996	918	20,496	4,343
TAYLOR	19,312	4,407	3,094	401	1,351	531	285	5,858	1,283
VERNON	29,014	7,384	4,737	671	1,950	782	429	8,712	1,918
VILAS	22,083	3,950	5,629	359	1,620	693	425	8,168	1,836
WALWORTH	100,800	22,921	13,155	2,084	7,181	2,653	1,311	28,150	6,047
WASHINGTON	128,211	30,486	15,827	2,771	8,898	3,382	1,692	36,064	7,789
WAUKESHA	379,333	88,365	51,183	8,033	26,125	10,356	5,407	112,562	24,580
WAUPACA	52,045	11,728	8,655	1,066	3,648	1,446	785	16,028	3,518
WINNEBAGO	162,154	35,321	20,402	3,211	11,708	4,295	2,093	45,277	9,697
TOTALS	**4,484,123**	**1,073,442**	**564,436**	**97,587**	**312,524**	**117,115**	**58,251**	**1,245,819**	**268,353**

WISCONSIN

American Lung Association in Wisconsin

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HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ASHLAND	0	0	0	0.0	A
BROWN	11	1	0	4.2	F
COLUMBIA	12	0	0	4.0	F
DANE	10	0	0	3.3	F
DODGE	13	0	0	4.3	F
DOOR	38	7	0	16.2	F
FLORENCE	5	0	0	1.7	C
FOND DU LAC	16	0	0	5.3	F
FOREST	4	0	0	1.3	C
GRANT	DNC	DNC	DNC	DNC	DNC
GREEN	*	*	*	*	*
JEFFERSON	13	0	0	4.3	F
KENOSHA	34	2	0	12.3	F
KEWAUNEE	31	2	0	11.3	F
LA CROSSE	DNC	DNC	DNC	DNC	DNC
MANITOWOC	36	4	0	14.0	F
MARATHON	5	0	0	1.7	C
MILWAUKEE	26	3	0	10.2	F

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ASHLAND	0	0	0	0.0	A	6.2	PASS
BROWN	12	0	0	4.0	F	11.9	PASS
COLUMBIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DANE	14	0	0	4.7	F	12.7	PASS
DODGE	9	0	0	3.0	D	11.3	PASS
DOOR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FLORENCE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FOND DU LAC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FOREST	0	0	0	0.0	A	7.4	PASS
GRANT	8	0	0	2.7	D	12.2	PASS
GREEN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KENOSHA	6	0	0	2.0	C	12.9	PASS
KEWAUNEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LA CROSSE	2	0	0	0.7	B	DNC	INC
MANITOWOC	4	0	0	1.3	C	10.9	PASS
MARATHON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MILWAUKEE	17	0	0	5.7	F	14.9	PASS

	HIGH OZONE DAYS/2005–2007					PARTICLE POLLUTION DAYS/2005–2007						
						24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ONEIDA	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OUTAGAMIE	9	0	0	3.0	D	9	0	0	3.0	D	11.5	PASS
OZAUKEE	31	3	0	11.8	F	6	0	0	2.0	C	12.2	PASS
POLK	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RACINE	19	3	0	7.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROCK	15	0	0	5.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SAUK	6	0	0	2.0	C	4	0	0	1.3	C	10.6	PASS
SHEBOYGAN	42	6	0	17.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST. CROIX	6	0	0	2.0	C	3	0	0	1.0	C	10.1	PASS
TAYLOR	DNC	DNC	DNC	DNC	DNC	0	0	0	0.0	A	8.4	PASS
VERNON	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VILAS	3	0	0	1.0	C	0	0	0	0.0	A	6.8	PASS
WALWORTH	18	0	0	6.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WAUKESHA	12	0	0	4.0	F	10	0	0	3.3	F	14.3	PASS
WAUPACA	DNC	DNC	DNC	DNC	DNC	*	*	*	*	*	DNC	INC
WINNEBAGO	*	*	*	*	*	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

WYOMING

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AT-RISK GROUPS

				Lung Diseases					
County	**Total Population**	**Under 18**	**65 & Over**	**Pediatric Asthma**	**Adult Asthma**	**Chronic Bronchitis**	**Emphysema**	**CV Disease**	**Diabetes**
CAMPBELL	40,433	11,002	2,312	1,000	2,387	961	410	9,539	1,996
CONVERSE	12,868	3,051	1,617	277	786	347	178	3,735	813
FREMONT	37,479	9,324	5,397	848	2,260	998	526	10,905	2,381
LARAMIE	86,353	22,112	10,428	2,010	5,199	2,197	1,085	23,298	5,010
SHERIDAN	27,998	6,170	4,353	561	1,745	786	423	8,668	1,903
SUBLETTE	7,925	1,855	846	169	489	209	101	2,193	471
SWEETWATER	39,305	10,389	3,255	944	2,333	975	451	10,029	2,136
TETON	20,002	3,952	1,671	359	1,301	531	238	5,386	1,137
UINTA	20,195	5,780	1,668	525	1,161	489	229	5,049	1,078
TOTALS	**292,558**	**73,635**	**31,547**	**6,694**	**17,660**	**7,492**	**3,640**	**78,801**	**16,924**

HIGH OZONE DAYS/2005–2007

County	Orange	Red	Purple	Wgt. Avg	Grade
CAMPBELL	4	0	0	1.3	C
CONVERSE	DNC	DNC	DNC	DNC	DNC
FREMONT	*	*	*	*	*
LARAMIE	DNC	DNC	DNC	DNC	DNC
SHERIDAN	DNC	DNC	DNC	DNC	DNC
SUBLETTE	3	0	0	1.0	C
SWEETWATER	*	*	*	*	*
TETON	1	0	0	0.3	B
UINTA	*	*	*	*	*

PARTICLE POLLUTION DAYS/2005–2007

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CAMPBELL	0	0	0	0.0	A	DNC	INC
CONVERSE	0	0	0	0.0	A	DNC	INC
FREMONT	1	0	0	0.3	B	7.6	PASS
LARAMIE	0	0	0	0.0	A	4.3	PASS
SHERIDAN	1	0	0	0.3	B	9.5	PASS
SUBLETTE	1	0	0	0.3	B	DNC	INC
SWEETWATER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TETON	1	0	0	0.3	B	DNC	INC
UINTA	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2005-2007), multiplying the sums of each level by the assigned standard weights, i.e. 1=orange, 1.5=red, 2.0=purple and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant is not collected in that county. (4) Grades are as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

We will breathe easier when the air over every
American city is clean and pure.
We will breathe easier when the air in our public spaces,
workplaces and children's homes is free of secondhand smoke.
We will breathe easier when Americans are free from the addictive grip
of cigarettes and the debilitating effects of lung disease.
We will breathe easier when our nation's children no longer battle
airborne poisons or the fear of an asthma attack.
Until then, we are fighting for air.