



AMERICAN LUNG ASSOCIATION®

STATE
OF THE **AIR** 2010



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OF THE **AIR** 2010

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Finally, we dedicate this report to a colleague and long-time advocate for clean, healthy air who passed away in February: A. Blakeman Early. Blake's dedication, knowledge, and sense of humor are sorely missed.

The American Lung Association assumes sole responsibility for the content of the *American Lung Association State of the Air 2010*.

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The State of the Air 2010

State of the Air 2010 shows that

cleaning up air pollution produces healthier air

across the nation.

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The number of cities reporting their lowest levels of year-round particle pollution ever.

The *State of the Air 2010* shows that the air quality in many places has improved, but that over 175 million people—roughly 58 percent—still suffer pollution levels that are too often dangerous to breathe. Unhealthy air remains a threat to the lives and health of millions of people in the United States, despite great progress. Even as the nation explores the complex challenges of global warming and energy, air pollution lingers as a widespread and dangerous reality.

The *State of the Air 2010* report looks at levels of ozone and particle pollution found in monitoring sites across the United States in 2006, 2007, and 2008. The report uses the most current quality-assured nationwide data available for these analyses. For particle pollution, the report examines fine particulate matter (PM_{2.5}) in two different ways: averaged year-round (annual average) and over short-term levels (24-hour). For both ozone and short-term particle pollution, the analysis used a weighted average number of days that allows recognition of places with higher levels of pollution. For the year-round particle pollution rankings, the report uses averages calculated and reported by the U.S. Environmental Protection Agency. For comparison, the *State of the Air 2009* report covered data from 2005, 2006 and 2007.¹

The strongest improvement came in the year-round (annual) particle pollution levels, but most of the cities with the highest ozone and short-term particle levels improved as well. These results show that cleaning up major sources of air pollution produces healthier air. However, the continuing problem demonstrates that more remains to be done, especially in cleaning up coal-fired power plants and existing diesel engines. The results also show the need for stronger limits on national air

¹ A complete discussion of the sources of data and the methodology is included in Appendix: Methodology.

pollution levels—a fight that the American Lung Association has long led as a key to healthier air.

For the first time, the *State of the Air 2010* report includes population estimates for another at-risk group, people living in poverty. As discussed under Health Effects, people who have low incomes face higher risk of harm from air pollution. The population estimates here are based in the poverty definition used by the U.S. Census Bureau.

Year-round particle pollution

The *State of the Air 2010* finds great progress in cutting year-round particle pollution, compared to the

2009 report. Thanks to reductions in emissions from coal-fired power plants and the transition to cleaner diesel fuels and engines, cleaner air shows up repeatedly in the monitoring data, especially in the eastern U.S.

Twenty of the 25 metropolitan areas with the worst year-round pollution reported much lower levels of particle pollution in *State of the Air 2010* compared to the 2009 report. Sixteen metropolitan areas reported their lowest levels ever: Pittsburgh-New Castle, PA; Cincinnati-Middletown-Wilmington, OH-KY-IN; St Louis-St. Charles-Farmington, MO-IL; Charleston, WV; Detroit-Warren-Flint, MI; Weirton-Steubenville, WV-OH; Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN; Atlanta-Sandy Springs-Gainesville, GA-AL; Huntington-Ashland, WV-KY-OH; Cleveland-Akron-Elyria, OH; Macon-Warner Robins-Fort Valley, GA; Hagerstown-Martinsburg, MD-WV; Knoxville-Sevierville-La Follette, TN; Indianapolis-Anderson-Columbus, IN; Parkersburg-Marietta, WV-OH; and York-Hanover-Gettysburg, PA.

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The number of cities averaging fewer days of unhealthy particle pollution from 2006 to 2008.

The other cities that improved over the 2009 report were: Birmingham-Hoover-Cullman, AL (which equaled its lowest level ever); Hanford-Corcoran, CA; Houston-Baytown-Huntsville, TX; and Augusta-Richmond County, GA.

A new city moved to the top of the most-polluted by year-round particle levels list. Phoenix-Mesa-Scottsdale, AZ, moved up after new monitoring data in Pinal County reported the highest readings in the nation. Pinal County and Maricopa County comprise the Phoenix-Mesa-Scottsdale, AZ metropolitan area.

Some cities on this list had higher levels of pollution compared to the 2009 report. Most of the areas with worse year-round levels of particle pollution were in California, with even Los Angeles showing a slightly higher level. Those cities include: Phoenix-Mesa-Scottsdale, AZ; Bakersfield, CA; Los Angeles-Long Beach-Riverside, CA; Visalia-Porterville, CA; Fresno-Madera, CA; and Modesto, CA.

For the first time, six cities on the most-polluted list received passing grades, meaning they met the current, but inadequate, standard for year-round particulate matter, set at 15 micrograms per cubic meter. Those cities are: Hagerstown-Martinsburg, MD-WV; Knoxville-Sevierville-La Follette, TN; Augusta-Richmond County, GA; Indianapolis-Anderson-Columbus, IN; Parkersburg-Marietta, WV-OH; and York-Hanover-Gettysburg, PA. The EPA is reviewing the substantial evidence that the standard is much too lenient and, consequently, fails to provide adequate protection for public health. The Lung Association won a court decision in 2009 requiring EPA to review that evidence. EPA is promising to propose a standard in November 2010.

Short-term particle pollution

of particle pollution on average in the *State of the Air 2010* report compared to the 2009 report. Improvements occurred

Seventeen of the 25 metropolitan areas on this list of the most polluted experienced fewer days of unhealthy levels

all across the nation. Improving were: Pittsburgh-New Castle, PA; Los Angeles-Long Beach-Riverside, CA; Birmingham-Hoover-Cullman, AL; Sacramento-Arden-Arcade-Yuba City, CA-NV; Salt Lake City-Ogden-Clearfield, UT; Hanford-Corcoran, CA; Merced, CA; Chicago-Naperville-Michigan City, IL-IN-WI; San Diego-Carlsbad-San Marcos, CA; Washington-Baltimore-Northern VA, DC-MD-VA; New York City-Newark-Bridgeport, NY-NJ-CT-PA; Logan, UT-ID; Eugene-Springfield, OR; Harrisburg-Carlisle-Lebanon, PA; San Jose-San Francisco-Oakland, CA; Indianapolis-Anderson-Columbus, IN; and Allentown-Bethlehem-Easton, PA-NJ.

Seven of the most polluted cities reported more days of unhealthy levels on average than in the previous report, while one—Philadelphia-Camden-Vineland, PA-NJ-DE-MD—remained unchanged. The metro areas with worse pollution scores were: Bakersfield, Fresno-Madera, Visalia-Porterville, Modesto, and Stockton—all in California—as well as Provo-Orem, UT and Phoenix-Mesa-Scottsdale, AZ.

Bakersfield, CA ranked as the city most polluted by short-term levels of particle pollution, its first time atop this list. Last year's previous number one—Pittsburgh—improved enough to drop to third place.

Ozone

Fourteen of the 25 most polluted metropolitan areas reported fewer days of unhealthy ozone levels on average in the 2010 report compared to the 2009 report. Ten metropolitan areas had higher averages and one remained unchanged.

Improving were cities across the nation: Sacramento-Arden-Arcade-Yuba City, CA-NV; Houston-Baytown-Huntsville, TX; Charlotte-Gastonia-Salisbury, NC; Phoenix-Mesa-Scottsdale, AZ; Dallas-Fort Worth, TX; El Centro, CA; New York City-Newark-Bridgeport, NY-NJ-CT-PA; Washington-Baltimore-Northern VA, DC-MD-VA; Cincinnati-Middletown-Wilmington, OH-KY-IN; Atlanta-Sandy Springs-Gainesville, GA-AL; Birmingham-Hoover-Cullman, AL; Las Vegas-Paradise-

175.3 Million

The number of people in the US who live in counties where the outdoor air got an F.

23.8 Million

The number of people in the US who live in counties where the outdoor air failed all three tests.

Pahrump, NV; Philadelphia-Camden-Vineland, PA-NJ-DE-MD; and Baton Rouge-Pierre Part, LA.

All of the cities seeing a higher average number of days were all in California, including; Los Angeles-Long Beach-Riverside; Bakersfield; Visalia-Porterville; Fresno-Madera; Hanford-Corcoran; San Diego-Carlsbad-San Marcos; San Luis Obispo-Paso Robles; Merced; Modesto; and Chico.

Los Angeles-Long Beach-Riverside, CA remains firmly atop the list of cities most polluted by ozone pollution. Los Angeles experienced a slight increase in the weighted average number of days, though still marked its second-best level since the first *State of the Air* reported on ozone levels for 1996 to 1999.

Cleanest cities Fargo-Wahpeton, ND-MN and Lincoln, NE, emerged as the cleanest cities in the U.S, the only cities

to appear on all three lists of cleanest cities. Twelve cities ranked cleanest for both particle pollution measures, though not for ozone: Amarillo, TX; Bangor, ME; Billings, MT; Cape Coral-Ft. Myers, FL; Cheyenne, WY; Ft. Collins-Loveland, CO; Pueblo, CO; Salinas, CA; San Luis Obispo-Paso Robles, CA; Santa Fe-Espanola, NM; Sarasota-Bradenton-Punta Gorda, FL; and Tucson, AZ. Five were among the cleanest cities for ozone and for one of the two particle pollution measures: Bismarck, ND; Brownsville-Harlingen-Raymondville, TX; Duluth, MN-WI; Honolulu, HI; and Port St. Lucie-Sebastian-Vero Beach, FL.

People at risk Looking at the nation as a whole, the *American Lung Association State of the Air 2010* finds—

- **Nearly six of ten people (58%) in the United States lives in counties that have unhealthful levels of either ozone or particle pollution.**

Almost 175.3 million Americans live in the 445 counties where they are exposed to unhealthful levels of air pollu-

tion in the form of either ozone or short-term or year-round levels of particles.

- **Over half the people in the United States (56%) live in areas with unhealthful levels of ozone.** Counties that were graded F for ozone levels have a combined population of almost 167.3 million. These people live in the 414 counties where the monitored air quality places them at risk for decreased 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.
- **Nearly one-quarter (23%) of people in the United States live in an area with unhealthful short-term levels of particle pollution.** Nearly 70.4 million Americans live in 94 counties that experienced too many days with unhealthy spikes in particle pollution, a decrease 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.
- **Roughly one in ten (9.6%) people in the United States live in an area with unhealthful year-round levels of particle pollution.** Almost 28.9 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.
- **Roughly one in 13 people—some 23.8 million in the United States—live in 18 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 3.9 million children and over 10.7 million adults with asthma live in parts of the United States with very high levels of ozone. Nearly 4.6 million adults and nearly 1.7 million children with asthma live in areas with high levels of short-term particle pollution. Nearly 1.8 million adults and over 721,000 children with asthma live in counties with unhealthful levels of year-round particle pollution.
- **Older and Younger**—Over 19.8 million adults age 65 and over and nearly 41.7 million children age 18 and under live in counties with unhealthful ozone levels. Nearly 8.2 million seniors and over 17.6 million children live in counties with unhealthful short-term levels of particle pollution. Over 3.1 million seniors and nearly 7.7 million children live in counties with unhealthful levels of year-round particle pollution.
- **Chronic Bronchitis and Emphysema**—Over 5.4 million people with chronic bronchitis and nearly 2.1 million with emphysema live in counties with unhealthful ozone levels. Nearly 2.3 million people with chronic bronchitis and over 845,000 with emphysema live in counties with unhealthful levels of short-term particle pollution. Nearly 1.0 million people with chronic bronchitis and more than 330,000 with emphysema live in counties with unhealthful year-round levels of particle pollution.
- **Cardiovascular Disease**—Nearly 18.6 million people with cardiovascular diseases live in counties with unhealthful levels of short-term particle pollution; nearly 7.4 million 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**—Nearly 4.5 million people with diabetes live in counties with unhealthful levels of short-term particle pollution; nearly 1.9 million 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.
- **Poverty**—Over 20.8 million people with incomes meeting the federal poverty definition live in counties with unhealthful levels of ozone. Over 9.8 million people in poverty live in counties with unhealthful levels of short-term particle pollution, and nearly 4.4 million live in counties with unhealthful year-round levels of particle pollution. Evidence shows that people who have low incomes may face higher risk from air pollution.

What needs to be done to get healthy air

Many major challenges require the Administration and Congress to take steps to protect the health of the public. Here are a few 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 and expand clean-up requirements for power plants nationwide. Congress should also pass the Clean Air Act Amendments of 2010, S. 2995, a bill that will cut life-threatening emissions from power plants.
- **Clean up the existing fleet of dirty diesel** vehicles and heavy equipment. Rules EPA put in effect over the past several years mean that new diesel vehicles and equipment must be much cleaner. Still, the vast majority of diesel trucks, buses and heavy equipment (such as bulldozers) will likely be in use for thousands more miles, spewing dangerous diesel exhaust into communities and

neighborhoods. The good news is that affordable technology exists to cut emissions by 90 percent. Congress needs to fund EPA's diesel cleanup ("retrofit") program. Congress should also require that clean diesel equipment should be used in federally-funded construction programs.

- **Strengthen the ozone standards.** The Lung Association urges the EPA to adopt a much tighter, more protective national air quality standard for ozone, set at 60 parts per billion. The EPA is currently considering strengthening the standard adopted in March 2008, which they now believe was not strong enough to protect health against the widespread harm from ozone smog. The 2008 decision set 75 ppb as the standard, despite the unanimous recommendations of EPA's official science advisors that such a level would allow too much ozone to meet the requirements of the Clean Air Act. The American Lung Association challenged the 2008 decision in court, along with several states, public health and environmental groups. In January 2010, the EPA proposed a range for the new standard that met the earlier recommendations of the expert panel and the nation's leading public health organizations. EPA will announce the decision on the new standard in August 2010.
- **Strengthen the particle pollution standards.** In 2006, EPA failed to strengthen the annual standard for fine particles, despite the near unanimous recommendation by their official science advisors. EPA lowered the 24-hour standard, though not to the level the Lung Association recommended. EPA can save thousands of lives each year by dramatically strengthening the annual average and the 24-hour standards. In 2009, the Lung Association challenged that 2006 standard in the U.S. Circuit Court and won. EPA will issue a new proposal for the particle pollution standards in November 2010.
- **Clean up harmful emissions from tailpipes in cars.** EPA needs to set new pollution standards for cars and automobile fuels to reduce nitrogen oxides, hydrocarbons, and particle pollution emissions.

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 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. To find your local air pollution control agency, go to www.4cleanair.org.
- **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 support the steps to strengthen the Clean Air Act to clean up power plants. Log on at www.lungusa.org to see how easy that can be.

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

| In Counties where the Grades were: | Chronic Diseases | | | | | | | Age Groups | | Total Population | Number of Counties |
|---|------------------|------------------|--------------------|-----------|------------|------------|------------|------------|-------------|------------------|--------------------|
| | Adult Asthma | Pediatric Asthma | Chronic Bronchitis | Emphysema | CV Disease | Diabetes | Poverty | Under 18 | 65 and Over | | |
| Grade A (0.0) | 1,431,045 | 538,770 | 753,544 | 288,600 | 6,250,128 | 1,512,821 | 3,228,313 | 5,723,307 | 2,860,846 | 23,087,491 | 114 |
| Grade B (0.3-0.9) | 2,691,951 | 960,511 | 1,362,344 | 524,175 | 11,332,037 | 2,660,422 | 4,596,285 | 10,203,451 | 5,128,559 | 41,428,716 | 174 |
| Grade C (1.0-2.0) | 3,147,072 | 1,098,267 | 1,644,294 | 643,300 | 13,785,258 | 3,259,333 | 5,798,918 | 11,666,775 | 6,391,419 | 49,173,334 | 145 |
| Grade D (2.1-3.2) | 1,424,175 | 539,427 | 747,274 | 279,599 | 6,136,573 | 1,558,701 | 2,972,611 | 5,730,283 | 2,651,199 | 22,976,485 | 46 |
| Grade F (3.3+) | 4,563,627 | 1,659,325 | 2,270,972 | 845,600 | 18,591,429 | 4,451,899 | 9,817,153 | 17,626,836 | 8,160,951 | 70,364,400 | 94 |
| National Population in Counties with PM _{2.5} Monitors | 13,732,816 | 4,976,063 | 7,033,360 | 2,683,455 | 58,254,368 | 13,977,830 | 27,511,690 | 52,860,236 | 26,265,620 | 214,763,357 | 644 |

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

| In Counties where the Grades were: | Chronic Diseases | | | | | | | Age Groups | | Total Population | Number of Counties |
|---|------------------|------------------|--------------------|-----------|------------|------------|------------|------------|-------------|------------------|--------------------|
| | Adult Asthma | Pediatric Asthma | Chronic Bronchitis | Emphysema | CV Disease | Diabetes | Poverty | Under 18 | 65 and Over | | |
| Pass | 9,769,611 | 3,461,755 | 4,994,517 | 1,924,368 | 41,564,886 | 9,851,469 | 18,406,379 | 36,773,916 | 18,930,906 | 151,315,340 | 483 |
| Fail | 1,789,925 | 721,700 | 907,245 | 330,935 | 7,357,186 | 1,884,302 | 4,387,525 | 7,666,525 | 3,133,109 | 28,856,635 | 23 |
| National Population in Counties with PM _{2.5} Monitors | 13,732,816 | 4,976,063 | 7,033,360 | 2,683,455 | 58,254,368 | 13,977,830 | 27,511,690 | 52,860,236 | 26,265,620 | 214,763,357 | 644 |

People at Risk from Ozone

| | | Chronic Diseases | | | | | Age Groups | | Total Population | Number of Counties |
|---|-----------|------------------|------------------|--------------------|-----------|------------|------------|-------------|------------------|--------------------|
| | | Adult Asthma | Pediatric Asthma | Chronic Bronchitis | Emphysema | Poverty | Under 18 | 65 and Over | | |
| Grade A | (0.0) | 536,586 | 186,444 | 282,356 | 110,483 | 967,871 | 1,980,576 | 1,111,564 | 8,440,255 | 49 |
| Grade B | (0.3-0.9) | 590,051 | 229,608 | 317,863 | 123,585 | 1,243,600 | 2,439,097 | 1,239,771 | 9,729,598 | 60 |
| Grade C | (1.0-2.0) | 1,094,162 | 385,679 | 596,341 | 240,468 | 2,200,951 | 4,097,001 | 2,504,508 | 17,649,385 | 111 |
| Grade D | (2.1-3.2) | 646,298 | 222,060 | 341,007 | 136,108 | 1,193,926 | 2,358,921 | 1,393,883 | 10,116,082 | 56 |
| Grade F | (3.3+) | 10,749,030 | 3,924,615 | 5,442,903 | 2,053,967 | 20,809,913 | 41,690,791 | 19,815,294 | 167,254,009 | 414 |
| National Population in Counties with Ozone Monitors | | 14,126,196 | 5,108,044 | 7,239,827 | 2,765,142 | 27,436,753 | 54,262,212 | 27,076,958 | 220,847,465 | 749 |

Note: The State of the Air 2010 covers the period 2006-2008. 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})

| 2010 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} | CV Disease ⁹ | Diabetes ¹⁰ | Poverty ¹¹ |
|------------------------|---|-------------------------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------------------------|--------------------------|-------------------------|------------------------|-----------------------|
| 1 | Bakersfield, CA | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 181,207 | 44,207 | 156,128 |
| 2 | Fresno-Madera, CA | 1,057,486 | 311,788 | 104,922 | 29,351 | 62,100 | 31,280 | 10,965 | 248,680 | 60,964 | 222,540 |
| 3 | Pittsburgh-New Castle, PA | 2,441,464 | 500,897 | 420,508 | 47,153 | 178,047 | 88,152 | 38,601 | 780,756 | 180,882 | 285,428 |
| 4 | Los Angeles-Long Beach-Riverside, CA | 17,786,419 | 4,695,757 | 1,900,610 | 442,040 | 1,094,827 | 556,680 | 200,338 | 4,484,079 | 1,104,703 | 2,394,160 |
| 5 | Birmingham-Hoover-Cullman, AL | 1,198,932 | 290,401 | 157,265 | 27,338 | 70,565 | 39,978 | 15,778 | 336,620 | 102,410 | 151,234 |
| 6 | Sacramento--Arden-Arcade--Yuba City, CA-NV | 2,417,404 | 591,377 | 293,951 | 55,670 | 153,359 | 78,640 | 29,653 | 647,176 | 160,164 | 285,352 |
| 7 | Salt Lake City-Ogden-Clearfield, UT | 1,717,261 | 518,277 | 150,699 | 48,788 | 100,197 | 50,204 | 16,978 | 393,363 | 74,859 | 141,927 |
| 8 | Visalia-Porterville, CA | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 96,539 | 23,644 | 90,369 |
| 9 | Modesto, CA | 510,694 | 145,476 | 53,728 | 13,695 | 30,520 | 15,491 | 5,581 | 124,778 | 30,713 | 72,561 |
| 10 | Hanford-Corcoran, CA | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 32,288 | 7,759 | 22,566 |
| 11 | Merced, CA | 246,117 | 76,722 | 24,433 | 7,222 | 14,091 | 7,080 | 2,490 | 56,327 | 13,791 | 52,005 |
| 12 | Philadelphia-Camden-Vineland, PA-NJ-DE-MD | 6,398,896 | 1,528,290 | 846,470 | 143,868 | 443,728 | 214,554 | 84,875 | 1,808,716 | 412,970 | 712,300 |
| 13 | Provo-Orem, UT | 540,820 | 188,783 | 34,748 | 17,771 | 29,278 | 13,810 | 3,948 | 100,258 | 18,511 | 62,642 |
| 14 | Phoenix-Mesa-Scottsdale, AZ | 4,281,899 | 1,168,524 | 493,850 | 110,000 | 304,097 | 133,169 | 49,604 | 1,089,057 | 234,900 | 564,558 |
| 15 | Stockton, CA | 672,388 | 194,385 | 68,391 | 18,299 | 39,916 | 20,227 | 7,204 | 162,098 | 39,865 | 108,919 |
| 16 | Chicago-Naperville-Michigan City, IL-IN-WI | 9,793,036 | 2,504,341 | 1,087,551 | 235,751 | 580,310 | 314,388 | 115,977 | 2,564,659 | 605,408 | 1,139,254 |
| 17 | San Diego-Carlsbad-San Marcos, CA | 3,001,072 | 744,470 | 337,004 | 70,082 | 188,661 | 95,863 | 34,760 | 774,396 | 190,719 | 364,576 |
| 18 | Washington-Baltimore-Northern Virginia, DC-MD-VA-WV | 8,249,194 | 1,984,957 | 894,778 | 186,856 | 585,428 | 271,393 | 99,323 | 2,208,468 | 520,827 | 624,420 |
| 18 | New York-Newark-Bridgeport, NY-NJ-CT-PA | 22,154,752 | 5,178,014 | 2,889,985 | 487,436 | 1,472,232 | 743,282 | 290,311 | 6,225,658 | 1,409,941 | 2,585,219 |
| 18 | Logan, UT-ID | 125,070 | 39,979 | 10,051 | 3,764 | 7,117 | 3,411 | 1,065 | 25,688 | 4,849 | 14,174 |
| 21 | Eugene-Springfield, OR | 346,560 | 69,455 | 49,662 | 6,538 | 23,760 | 12,190 | 4,864 | 103,115 | 19,293 | 53,423 |
| 22 | Harrisburg-Carlisle-Lebanon, PA | 660,042 | 145,638 | 97,953 | 13,710 | 47,390 | 22,934 | 9,456 | 197,208 | 45,243 | 59,172 |
| 23 | San Jose-San Francisco-Oakland, CA | 7,354,555 | 1,657,339 | 889,331 | 156,016 | 480,165 | 248,277 | 93,911 | 2,050,091 | 509,263 | 662,858 |
| 23 | Indianapolis-Anderson-Columbus, IN | 2,035,327 | 532,625 | 232,310 | 50,140 | 137,759 | 65,257 | 24,517 | 537,022 | 142,759 | 234,047 |
| 23 | Allentown-Bethlehem-Easton, PA-NJ | 808,210 | 182,515 | 120,493 | 17,181 | 57,072 | 27,849 | 11,508 | 239,635 | 55,042 | 72,641 |

Notes:

1. Cities are ranked using the highest weighted average for any county within that Combined or Metropolitan Statistical Area.
2. **Total Population** represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those **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 2008 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 2008 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 2008, 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. **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).
10. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to county population estimates (U.S. Census).
11. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.

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

| 2010 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} | CV Disease ⁹ | Diabetes ¹⁰ | Poverty ¹¹ |
|------------------------|---|-------------------------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------------------------|--------------------------|-------------------------|------------------------|-----------------------|
| 1 | Phoenix-Mesa-Scottsdale, AZ | 4,281,899 | 1,168,524 | 493,850 | 110,000 | 304,097 | 133,169 | 49,604 | 1,089,057 | 234,900 | 564,558 |
| 2 | Bakersfield, CA | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 181,207 | 44,207 | 156,128 |
| 3 | Los Angeles-Long Beach-Riverside, CA | 17,786,419 | 4,695,757 | 1,900,610 | 442,040 | 1,094,827 | 556,680 | 200,338 | 4,484,079 | 1,104,703 | 2,394,160 |
| 3 | Visalia-Porterville, CA | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 96,539 | 23,644 | 90,369 |
| 5 | Pittsburgh-New Castle, PA | 2,441,464 | 500,897 | 420,508 | 47,153 | 178,047 | 88,152 | 38,601 | 780,756 | 180,882 | 285,428 |
| 6 | Fresno-Madera, CA | 1,057,486 | 311,788 | 104,922 | 29,351 | 62,100 | 31,280 | 10,965 | 248,680 | 60,964 | 222,540 |
| 7 | Birmingham-Hoover-Cullman, AL | 1,198,932 | 290,401 | 157,265 | 27,338 | 70,565 | 39,978 | 15,778 | 336,620 | 102,410 | 151,234 |
| 8 | Hanford-Corcoran, CA | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 32,288 | 7,759 | 22,566 |
| 9 | Cincinnati-Middletown-Wilmington, OH-KY-IN | 2,198,337 | 549,333 | 264,870 | 51,712 | 157,199 | 72,080 | 27,598 | 598,538 | 159,753 | 244,738 |
| 9 | St. Louis-St. Charles-Farmington, MO-IL | 2,903,894 | 697,769 | 378,775 | 65,686 | 183,117 | 97,327 | 38,410 | 819,824 | 200,971 | 327,896 |
| 11 | Charleston, WV | 303,944 | 66,579 | 47,792 | 6,267 | 22,796 | 10,760 | 4,586 | 94,143 | 28,970 | 47,793 |
| 11 | Detroit-Warren-Flint, MI | 5,354,225 | 1,308,684 | 656,566 | 123,194 | 395,818 | 178,282 | 69,051 | 1,489,633 | 371,145 | 742,617 |
| 11 | Weirton-Steubenville, WV-OH | 122,054 | 23,865 | 23,413 | 2,247 | 9,324 | 4,528 | 2,075 | 41,043 | 11,747 | 18,869 |
| 14 | Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN | 1,380,591 | 334,788 | 174,598 | 31,519 | 100,030 | 46,144 | 18,053 | 387,276 | 104,392 | 175,744 |
| 14 | Modesto, CA | 510,694 | 145,476 | 53,728 | 13,695 | 30,520 | 15,491 | 5,581 | 124,778 | 30,713 | 72,561 |
| 16 | Atlanta-Sandy Springs-Gainesville, GA-AL | 5,729,304 | 1,539,475 | 489,978 | 144,921 | 352,973 | 177,744 | 59,961 | 1,394,748 | 405,484 | 677,521 |
| 16 | Houston-Baytown-Huntsville, TX | 5,829,620 | 1,636,150 | 485,730 | 154,019 | 305,885 | 177,361 | 59,438 | 1,387,414 | 399,750 | 790,893 |
| 16 | Huntington-Ashland, WV-KY-OH | 284,234 | 61,064 | 45,266 | 5,749 | 21,366 | 9,953 | 4,194 | 86,407 | 24,878 | 51,840 |
| 19 | Cleveland-Akron-Elyria, OH | 2,887,492 | 674,060 | 415,419 | 63,454 | 210,320 | 99,014 | 40,752 | 851,201 | 228,028 | 370,946 |
| 19 | Macon-Warner Robins-Fort Valley, GA | 390,674 | 101,778 | 46,661 | 9,580 | 24,200 | 12,584 | 4,808 | 104,349 | 30,300 | 63,795 |
| 21 | Hagerstown-Martinsburg, MD-WV | 263,753 | 62,949 | 34,072 | 5,925 | 19,009 | 8,708 | 3,366 | 72,491 | 19,603 | 26,016 |
| 21 | Knoxville-Sevierville-La Follette, TN | 1,041,955 | 229,952 | 154,126 | 21,647 | 72,575 | 35,954 | 14,714 | 307,808 | 86,888 | 151,230 |
| 23 | Augusta-Richmond County, GA-SC | 534,218 | 135,645 | 65,742 | 12,769 | 33,240 | 17,488 | 6,776 | 146,046 | 41,759 | 91,978 |
| 24 | Indianapolis-Anderson-Columbus, IN | 2,035,327 | 532,625 | 232,310 | 50,140 | 137,759 | 65,257 | 24,517 | 537,022 | 142,759 | 234,047 |
| 25 | Parkersburg-Marietta, WV-OH | 160,678 | 34,222 | 26,995 | 3,221 | 12,066 | 5,742 | 2,499 | 50,725 | 14,845 | 25,740 |
| 25 | York-Hanover-Gettysburg, PA | 525,702 | 119,487 | 73,383 | 11,248 | 37,477 | 18,007 | 7,258 | 153,182 | 35,016 | 40,986 |

Notes:

1. Cities are ranked using the highest design value for any county within that Combined or Metropolitan Statistical Area.
2. **Total Population** represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those **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 2008 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 2008 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 2008, 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. **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).
10. **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to county population estimates (U.S. Census).
11. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.

People at Risk In 25 Most Ozone-Polluted Cities

| 2010 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} | Poverty ⁹ |
|------------------------|---|-------------------------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------------------------|--------------------------|----------------------|
| 1 | Los Angeles-Long Beach-Riverside, CA | 17,786,419 | 4,695,757 | 1,900,610 | 442,040 | 1,094,827 | 556,680 | 200,338 | 2,394,160 |
| 2 | Bakersfield, CA | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 156,128 |
| 3 | Visalia-Porterville, CA | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 90,369 |
| 4 | Fresno-Madera, CA | 1,057,486 | 311,788 | 104,922 | 29,351 | 62,100 | 31,280 | 10,965 | 222,540 |
| 5 | Sacramento--Arden-Arcade--Yuba City, CA-NV | 2,417,404 | 591,377 | 293,951 | 55,670 | 153,359 | 78,640 | 29,653 | 285,352 |
| 6 | Hanford-Corcoran, CA | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 22,566 |
| 7 | Houston-Baytown-Huntsville, TX | 5,829,620 | 1,636,150 | 485,730 | 154,019 | 305,885 | 177,361 | 59,438 | 790,893 |
| 8 | San Diego-Carlsbad-San Marcos, CA | 3,001,072 | 744,470 | 337,004 | 70,082 | 188,661 | 95,863 | 34,760 | 364,576 |
| 9 | San Luis Obispo-Paso Robles, CA | 265,297 | 49,431 | 38,323 | 4,653 | 18,160 | 9,359 | 3,670 | 30,243 |
| 10 | Charlotte-Gastonia-Salisbury, NC-SC | 2,338,289 | 597,972 | 247,933 | 56,291 | 133,010 | 75,049 | 27,301 | 281,161 |
| 11 | Phoenix-Mesa-Scottsdale, AZ | 4,281,899 | 1,168,524 | 493,850 | 110,000 | 304,097 | 133,169 | 49,604 | 564,558 |
| 12 | Merced, CA | 246,117 | 76,722 | 24,433 | 7,222 | 14,091 | 7,080 | 2,490 | 52,005 |
| 13 | Dallas-Fort Worth, TX | 6,622,032 | 1,831,927 | 579,393 | 172,450 | 348,930 | 201,876 | 68,125 | 820,338 |
| 14 | Knoxville-Sevierville-La Follette, TN | 1,041,955 | 229,952 | 154,126 | 21,647 | 72,575 | 35,954 | 14,714 | 151,230 |
| 15 | El Centro, CA | 163,972 | 47,801 | 17,493 | 4,500 | 9,663 | 4,855 | 1,732 | 32,833 |
| 16 | New York-Newark-Bridgeport, NY-NJ-CT-PA | 22,154,752 | 5,178,014 | 2,889,985 | 487,436 | 1,472,232 | 743,282 | 290,311 | 2,585,219 |
| 16 | Washington-Baltimore-Northern Virginia, DC-MD-VA-WV | 8,249,194 | 1,984,957 | 894,778 | 186,856 | 585,428 | 271,393 | 99,323 | 624,420 |
| 18 | Cincinnati-Middletown-Wilmington, OH-KY-IN | 2,198,337 | 549,333 | 264,870 | 51,712 | 157,199 | 72,080 | 27,598 | 244,738 |
| 19 | Atlanta-Sandy Springs-Gainesville, GA-AL | 5,729,304 | 1,539,475 | 489,978 | 144,921 | 352,973 | 177,744 | 59,961 | 677,521 |
| 19 | Birmingham-Hoover-Cullman, AL | 1,198,932 | 290,401 | 157,265 | 27,338 | 70,565 | 39,978 | 15,778 | 151,234 |
| 21 | Las Vegas-Paradise-Pahrump, NV | 1,910,121 | 501,919 | 207,091 | 47,248 | 119,491 | 60,364 | 22,013 | 212,098 |
| 22 | Modesto, CA | 510,694 | 145,476 | 53,728 | 13,695 | 30,520 | 15,491 | 5,581 | 72,561 |
| 22 | Philadelphia-Camden-Vineland, PA-NJ-DE-MD | 6,398,896 | 1,528,290 | 846,470 | 143,868 | 443,728 | 214,554 | 84,875 | 712,300 |
| 24 | Chico, CA | 220,337 | 45,934 | 33,068 | 4,324 | 14,641 | 7,514 | 2,996 | 44,569 |
| 25 | Baton Rouge-Pierre Part, LA | 797,208 | 202,763 | 82,256 | 19,088 | 48,156 | 25,357 | 9,029 | 122,432 |

Notes:

1. Cities are ranked using the highest weighted average for any county within that Combined or Metropolitan Statistical Area.
2. Total Population represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those **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 2008 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 2008 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 2008, 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. **Poverty** estimates come from the U.S. Census Bureau and are for all ages.

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

| 2010 Rank ¹ | County | ST | Total Population ² | At-Risk Groups | | | | | | | | | High PM _{2.5} Days in Unhealthy Ranges, 2006-2008 | |
|------------------------|----------------|----|-------------------------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------------------------|--------------------------|-------------------------|------------------------|-----------------------|--|---------------------|
| | | | | Under 18 ³ | 65 and Over ³ | Pediatric Asthma ^{4,8} | Adult Asthma ^{5,8} | Chronic Bronchitis ^{5,8} | Emphysema ^{7,8} | CV Disease ⁹ | Diabetes ¹⁰ | Poverty ¹¹ | Weighted Avg. ¹² | Grade ¹³ |
| 1 | Kern | CA | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 181,207 | 44,207 | 156,128 | 55.2 | F |
| 2 | Fresno | CA | 909,153 | 270,512 | 89,615 | 25,465 | 53,191 | 26,798 | 9,390 | 213,027 | 52,230 | 197,265 | 53.3 | F |
| 3 | Allegheny | PA | 1,215,103 | 250,672 | 204,705 | 23,597 | 88,545 | 43,690 | 18,952 | 385,161 | 89,099 | 145,977 | 45.5 | F |
| 4 | Riverside | CA | 2,100,516 | 583,297 | 241,428 | 54,909 | 126,317 | 63,620 | 23,196 | 513,861 | 125,986 | 260,109 | 27.3 | F |
| 5 | Jefferson | AL | 659,503 | 157,990 | 89,377 | 14,873 | 38,956 | 22,217 | 8,909 | 188,555 | 57,398 | 88,637 | 25.0 | F |
| 6 | Los Angeles | CA | 9,862,049 | 2,549,168 | 1,054,932 | 239,969 | 611,881 | 311,413 | 112,035 | 2,508,754 | 618,355 | 1,482,051 | 19.7 | F |
| 7 | Sacramento | CA | 1,394,154 | 362,492 | 158,340 | 34,124 | 86,442 | 44,138 | 16,274 | 359,465 | 88,749 | 182,573 | 19.5 | F |
| 8 | Salt Lake | UT | 1,022,651 | 302,184 | 89,440 | 28,446 | 60,222 | 30,200 | 10,192 | 236,479 | 44,953 | 89,216 | 18.2 | F |
| 9 | Tulare | CA | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 96,539 | 23,644 | 90,369 | 15.3 | F |
| 10 | Stanislaus | CA | 510,694 | 145,476 | 53,728 | 13,695 | 30,520 | 15,491 | 5,581 | 124,778 | 30,713 | 72,561 | 13.0 | F |
| 11 | Kings | CA | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 32,288 | 7,759 | 22,566 | 12.7 | F |
| 12 | San Bernardino | CA | 2,015,355 | 590,810 | 170,130 | 55,617 | 118,301 | 59,184 | 19,520 | 458,534 | 111,974 | 288,756 | 11.2 | F |
| 12 | Merced | CA | 246,117 | 76,722 | 24,433 | 7,222 | 14,091 | 7,080 | 2,490 | 56,327 | 13,791 | 52,005 | 11.2 | F |
| 14 | Philadelphia | PA | 1,447,395 | 361,859 | 185,962 | 34,064 | 100,391 | 46,961 | 18,156 | 390,839 | 88,611 | 331,349 | 11.0 | F |
| 15 | Utah | UT | 530,837 | 185,393 | 33,761 | 17,452 | 28,728 | 13,536 | 3,851 | 98,073 | 18,088 | 61,648 | 10.7 | F |
| 16 | Pinal | AZ | 327,301 | 85,283 | 42,819 | 8,028 | 23,791 | 10,272 | 3,936 | 84,882 | 18,309 | 43,350 | 10.2 | F |
| 17 | San Joaquin | CA | 672,388 | 194,385 | 68,391 | 18,299 | 39,916 | 20,227 | 7,204 | 162,098 | 39,865 | 108,919 | 9.2 | F |
| 18 | Cook | IL | 5,294,664 | 1,313,534 | 624,187 | 123,651 | 311,719 | 171,660 | 64,274 | 1,408,857 | 329,408 | 767,182 | 8.7 | F |
| 19 | San Diego | CA | 3,001,072 | 744,470 | 337,004 | 70,082 | 188,661 | 95,863 | 34,760 | 774,396 | 190,719 | 364,576 | 8.5 | F |
| 20 | Union | NJ | 523,249 | 129,721 | 65,627 | 12,211 | 33,748 | 17,336 | 6,769 | 145,343 | 33,320 | 45,220 | 8.3 | F |
| 20 | Baltimore City | MD | 636,919 | 153,154 | 75,404 | 14,417 | 45,370 | 20,875 | 7,808 | 171,278 | 41,126 | 116,585 | 8.3 | F |
| 20 | Cache | UT | 112,616 | 35,915 | 8,563 | 3,381 | 6,381 | 3,047 | 922 | 22,639 | 4,237 | 13,020 | 8.3 | F |
| 23 | Orange | CA | 3,010,759 | 765,649 | 342,841 | 72,075 | 188,534 | 96,726 | 35,888 | 790,757 | 195,691 | 294,758 | 8.2 | F |
| 24 | Lane | OR | 346,560 | 69,455 | 49,662 | 6,538 | 23,760 | 12,190 | 4,864 | 103,115 | 19,293 | 53,423 | 8.0 | F |
| 25 | Dauphin | PA | 256,562 | 59,937 | 35,138 | 5,642 | 18,135 | 8,797 | 3,564 | 75,118 | 17,200 | 27,090 | 7.3 | F |
| 25 | Washington | PA | 206,407 | 41,852 | 35,648 | 3,940 | 15,099 | 7,464 | 3,264 | 66,055 | 15,299 | 20,690 | 7.3 | F |
| 25 | Plumas | CA | 20,275 | 3,525 | 4,041 | 332 | 1,440 | 778 | 360 | 7,082 | 1,791 | 2,408 | 7.3 | F |

Notes:

- Counties are ranked by weighted average. See note 12 below.
- Total Population** represents the at-risk populations in counties with PM_{2.5} monitors.
- 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.
- Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2008 based on national rates (NHIS) applied to county population estimates (U.S. Census).
- Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2008 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
- Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2008, based on national rates (NHIS) applied to county population estimates (U.S. Census).
- 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).
- Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.
- 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).
- Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to county population estimates (U.S. Census).
- Poverty estimates come from the U.S. Census Bureau and are for all ages.
- The **Weighted Average** was derived by counting the number of days in each unhealthy range (orange, red, purple, maroon) in each year (2006-2008), 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.
- Grade** is assigned by weighted average as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

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

| 2010 Rank ¹ | County | ST | Total Population ² | At-Risk Groups | | | | | | | | | PM _{2.5} Annual, 2006-2008 | |
|------------------------|----------------|----|-------------------------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------------------------|--------------------------|-------------------------|------------------------|-----------------------|-------------------------------------|---------------------|
| | | | | Under 18 ³ | 65 and Over ³ | Pediatric Asthma ^{4,8} | Adult Asthma ^{5,8} | Chronic Bronchitis ^{6,8} | Emphysema ^{7,8} | CV Disease ⁹ | Diabetes ¹⁰ | Poverty ¹¹ | Design Value ¹² | Grade ¹³ |
| 1 | Pinal | AZ | 327,301 | 85,283 | 42,819 | 8,028 | 23,791 | 10,272 | 3,936 | 84,882 | 18,309 | 43,350 | 21.6 | FAIL |
| 2 | Kern | CA | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 181,207 | 44,207 | 156,128 | 21.5 | FAIL |
| 3 | Riverside | CA | 2,100,516 | 583,297 | 241,428 | 54,909 | 126,317 | 63,620 | 23,196 | 513,861 | 125,986 | 260,109 | 19.7 | FAIL |
| 3 | Tulare | CA | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 96,539 | 23,644 | 90,369 | 19.7 | FAIL |
| 5 | Allegheny | PA | 1,215,103 | 250,672 | 204,705 | 23,597 | 88,545 | 43,690 | 18,952 | 385,161 | 89,099 | 145,977 | 18.3 | FAIL |
| 6 | Fresno | CA | 909,153 | 270,512 | 89,615 | 25,465 | 53,191 | 26,798 | 9,390 | 213,027 | 52,230 | 197,265 | 17.7 | FAIL |
| 7 | Jefferson | AL | 659,503 | 157,990 | 89,377 | 14,873 | 38,956 | 22,217 | 8,909 | 188,555 | 57,398 | 88,637 | 17.3 | FAIL |
| 7 | San Bernardino | CA | 2,015,355 | 590,810 | 170,130 | 55,617 | 118,301 | 59,184 | 19,520 | 458,534 | 111,974 | 288,756 | 17.3 | FAIL |
| 9 | Kings | CA | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 32,288 | 7,759 | 22,566 | 17 | FAIL |
| 10 | Hamilton | OH | 851,494 | 206,018 | 114,701 | 19,394 | 61,384 | 28,595 | 11,457 | 242,599 | 64,838 | 113,411 | 15.7 | FAIL |
| 10 | Madison | IL | 268,078 | 61,931 | 37,811 | 5,830 | 16,217 | 9,045 | 3,628 | 76,653 | 18,072 | 32,953 | 15.7 | FAIL |
| 12 | Los Angeles | CA | 9,862,049 | 2,549,168 | 1,054,932 | 239,969 | 611,881 | 311,413 | 112,035 | 2,508,754 | 618,355 | 1,482,051 | 15.6 | FAIL |
| 13 | Wayne | MI | 1,949,929 | 507,861 | 234,544 | 47,808 | 141,145 | 63,463 | 24,562 | 529,981 | 131,973 | 393,147 | 15.4 | FAIL |
| 13 | Kanawha | WV | 191,018 | 41,029 | 31,892 | 3,862 | 14,381 | 6,848 | 2,991 | 60,630 | 18,639 | 29,656 | 15.4 | FAIL |
| 13 | Brooke | WV | 23,520 | 4,396 | 4,588 | 414 | 1,825 | 883 | 406 | 8,018 | 2,459 | 2,674 | 15.4 | FAIL |
| 16 | Clark | IN | 106,673 | 25,813 | 13,601 | 2,430 | 7,416 | 3,540 | 1,377 | 29,603 | 7,886 | 11,286 | 15.3 | FAIL |
| 16 | Stanislaus | CA | 510,694 | 145,476 | 53,728 | 13,695 | 30,520 | 15,491 | 5,581 | 124,778 | 30,713 | 72,561 | 15.3 | FAIL |
| 18 | Clayton | GA | 273,718 | 80,762 | 18,664 | 7,603 | 16,334 | 8,035 | 2,517 | 61,071 | 17,757 | 39,619 | 15.2 | FAIL |
| 18 | Harris | TX | 3,984,349 | 1,145,274 | 316,399 | 107,812 | 206,787 | 119,643 | 39,499 | 929,844 | 267,659 | 603,105 | 15.2 | FAIL |
| 18 | Cabell | WV | 94,631 | 19,658 | 15,551 | 1,851 | 7,157 | 3,313 | 1,396 | 28,724 | 8,822 | 18,725 | 15.2 | FAIL |
| 21 | Cobb | GA | 698,158 | 182,460 | 59,274 | 17,176 | 43,312 | 22,154 | 7,564 | 175,077 | 50,882 | 62,563 | 15.1 | FAIL |
| 21 | Cuyahoga | OH | 1,283,925 | 301,457 | 195,113 | 28,378 | 93,253 | 44,264 | 18,682 | 385,175 | 103,383 | 199,694 | 15.1 | FAIL |
| 21 | Bibb | GA | 155,216 | 41,727 | 20,251 | 3,928 | 9,484 | 4,994 | 1,990 | 42,225 | 12,257 | 32,923 | 15.1 | FAIL |
| 24 | Loudon | TN | 46,445 | 9,901 | 9,661 | 932 | 3,262 | 1,666 | 788 | 15,289 | 4,269 | 5,106 | 14.9 | PASS |
| 24 | Beaver | PA | 172,476 | 35,214 | 31,681 | 3,315 | 12,565 | 6,308 | 2,850 | 56,769 | 13,220 | 19,600 | 14.9 | PASS |
| 24 | Berkeley | WV | 102,044 | 26,497 | 11,108 | 2,494 | 7,294 | 3,261 | 1,199 | 26,568 | 8,215 | 11,253 | 14.9 | PASS |

Notes:

- Counties are ranked by design value. See note 12 below.
- Total Population** represents the at-risk populations in counties with PM_{2.5} monitors.
- 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.
- Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2008 based on national rates (NHIS) applied to county population estimates (U.S. Census).
- Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2008 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
- Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2008, based on national rates (NHIS) applied to county population estimates (U.S. Census).
- 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).
- Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.
- 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).
- Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to county population estimates (U.S. Census).
- Poverty estimates come from the U.S. Census Bureau and are for all ages.
- 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. Design values for the annual PM_{2.5} concentrations by county were collected from data previously summarized by the EPA and were downloaded on December 1, 2009 from EPA's website at <http://www.epa.gov/air/airtrends/values.html>.
- Grades** are based on EPA's determination of meeting or failure to meet the NAAQS for annual PM_{2.5} levels during 2006-2008. 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

| 2010 Rank ¹ | County | ST | Total Population ² | At-Risk Groups | | | | | | | High Ozone Days in Unhealthy Ranges, 2006–2008 | |
|------------------------|-----------------|----|-------------------------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------------------------|--------------------------|----------------------|--|---------------------|
| | | | | Under 18 ³ | 65 and Over ³ | Pediatric Asthma ^{4,8} | Adult Asthma ^{5,8} | Chronic Bronchitis ^{6,8} | Emphysema ^{7,8} | Poverty ⁹ | Weighted Avg. ¹⁰ | Grade ¹¹ |
| 1 | San Bernardino | CA | 2,015,355 | 590,810 | 170,130 | 55,617 | 118,301 | 59,184 | 19,520 | 288,756 | 141.8 | F |
| 2 | Riverside | CA | 2,100,516 | 583,297 | 241,428 | 54,909 | 126,317 | 63,620 | 23,196 | 260,109 | 132.8 | F |
| 3 | Kern | CA | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 156,128 | 115.7 | F |
| 4 | Tulare | CA | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 90,369 | 110.2 | F |
| 5 | Los Angeles | CA | 9,862,049 | 2,549,168 | 1,054,932 | 239,969 | 611,881 | 311,413 | 112,035 | 1,482,051 | 92.3 | F |
| 6 | Fresno | CA | 909,153 | 270,512 | 89,615 | 25,465 | 53,191 | 26,798 | 9,390 | 197,265 | 66.2 | F |
| 7 | El Dorado | CA | 176,075 | 37,896 | 19,950 | 3,567 | 11,707 | 6,118 | 2,301 | 13,692 | 48.3 | F |
| 8 | Nevada | CA | 97,118 | 17,384 | 17,481 | 1,636 | 6,832 | 3,661 | 1,624 | 8,848 | 46.7 | F |
| 9 | Sacramento | CA | 1,394,154 | 362,492 | 158,340 | 34,124 | 86,442 | 44,138 | 16,274 | 182,573 | 44.7 | F |
| 10 | Kings | CA | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 22,566 | 40.0 | F |
| 11 | Placer | CA | 341,945 | 74,348 | 52,148 | 6,999 | 22,569 | 11,699 | 4,776 | 22,873 | 39.3 | F |
| 12 | Harris | TX | 3,984,349 | 1,145,274 | 316,399 | 107,812 | 206,787 | 119,643 | 39,499 | 603,105 | 35.7 | F |
| 13 | Mariposa | CA | 17,976 | 3,112 | 3,377 | 293 | 1,265 | 669 | 296 | 2,388 | 34.2 | F |
| 14 | San Diego | CA | 3,001,072 | 744,470 | 337,004 | 70,082 | 188,661 | 95,863 | 34,760 | 364,576 | 33.8 | F |
| 15 | San Luis Obispo | CA | 265,297 | 49,431 | 38,323 | 4,653 | 18,160 | 9,359 | 3,670 | 30,243 | 32.0 | F |
| 16 | Ventura | CA | 797,740 | 206,833 | 91,279 | 19,470 | 49,794 | 25,737 | 9,699 | 68,486 | 31.3 | F |
| 17 | Rowan | NC | 139,225 | 32,568 | 19,841 | 3,066 | 8,067 | 4,711 | 1,911 | 21,042 | 30.0 | F |
| 18 | Maricopa | AZ | 3,954,598 | 1,083,241 | 451,031 | 101,972 | 280,306 | 122,897 | 45,668 | 521,208 | 29.0 | F |
| 19 | Merced | CA | 246,117 | 76,722 | 24,433 | 7,222 | 14,091 | 7,080 | 2,490 | 52,005 | 28.2 | F |
| 20 | Tarrant | TX | 1,750,091 | 493,382 | 149,164 | 46,445 | 91,590 | 53,034 | 17,837 | 208,934 | 27.5 | F |
| 21 | Sevier | TN | 84,835 | 18,967 | 12,886 | 1,785 | 5,887 | 2,933 | 1,219 | 11,097 | 26.3 | F |
| 22 | Mecklenburg | NC | 890,515 | 237,056 | 73,754 | 22,316 | 49,226 | 27,682 | 9,234 | 95,508 | 26.2 | F |
| 23 | Imperial | CA | 163,972 | 47,801 | 17,493 | 4,500 | 9,663 | 4,855 | 1,732 | 32,833 | 24.7 | F |
| 24 | Fairfield | CT | 895,030 | 223,180 | 118,119 | 21,009 | 57,917 | 29,990 | 12,062 | 71,553 | 24.2 | F |
| 24 | Harford | MD | 240,351 | 59,315 | 28,123 | 5,584 | 16,965 | 7,957 | 3,033 | 13,606 | 24.2 | F |

Notes:

- Counties are ranked by weighted average. See note 10 below.
- Total Population** represents the at-risk populations in counties with ozone monitors.
- 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.
- Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2008 based on national rates (NHIS) applied to county population estimates (U.S. Census).
- Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2008 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
- Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2008, based on national rates (NHIS) applied to county population estimates (U.S. Census).
- 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).
- Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.
- Poverty** estimates come from the U.S. Census Bureau and are for all ages.
- The **Weighted Average** was derived by counting the number of days in each unhealthy range (orange, red, purple) in each year (2006-2008), 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.
- 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 | 153,105 |
| Amarillo, TX | 243,838 |
| Athens-Clarke County, GA | 189,264 |
| Austin-Round Rock, TX | 1,652,602 |
| Bangor, ME | 148,651 |
| Billings, MT | 152,005 |
| Bloomington-Normal, IL | 165,298 |
| Brownsville-Harlingen-Raymondville, TX | 413,336 |
| Cape Coral-Fort Myers, FL | 593,136 |
| Champaign-Urbana, IL | 224,191 |
| Cheyenne, WY | 87,542 |
| Claremont-Lebanon, NH-VT | 213,995 |
| Colorado Springs, CO | 617,714 |
| Corpus Christi-Kingsville, TX | 446,503 |
| Fargo-Wahpeton, ND-MN | 218,305 |
| Farmington, NM | 122,500 |
| Fayetteville, NC | 356,105 |
| Fort Collins-Loveland, CO | 292,825 |
| Grand Junction, CO | 143,171 |

| Metropolitan Statistical Area | Population |
|------------------------------------|------------|
| Gulfport-Biloxi-Pascagoula, MS | 387,725 |
| Hattiesburg, MS | 140,781 |
| Jackson-Yazoo City, MS | 565,749 |
| Lafayette-Acadiana, LA | 542,509 |
| Lincoln, NE | 295,486 |
| Longview-Marshall, TX | 268,340 |
| McAllen-Edinburg-Pharr, TX | 726,604 |
| Oklahoma City-Shawnee, OK | 1,275,758 |
| Pueblo, CO | 156,737 |
| Salinas, CA | 408,238 |
| San Luis Obispo-Paso Robles, CA | 265,297 |
| Santa Fe-Espanola, NM | 184,629 |
| Sarasota-Bradenton-Punta Gorda, FL | 837,883 |
| Springfield, IL | 207,389 |
| Springfield, MO | 426,144 |
| St. Joseph, MO-KS | 126,359 |
| Syracuse-Auburn, NY | 723,617 |
| Topeka, KS | 229,619 |
| Tucson, AZ | 1,012,018 |

Note:

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 unhealthy PM_{2.5} levels.

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

| Rank ² | Design Value ³ | Metropolitan Statistical Area | Population |
|-------------------|---------------------------|---|------------|
| 1 | 4.4 | Cheyenne, WY | 87,542 |
| 2 | 4.8 | Santa Fe-Espanola, NM | 184,629 |
| 3 | 5.2 | Honolulu, HI | 905,034 |
| 4 | 5.6 | Anchorage, AK | 364,701 |
| 4 | 5.6 | Great Falls, MT | 82,026 |
| 6 | 5.8 | Tucson, AZ | 1,012,018 |
| 7 | 6.3 | Amarillo, TX | 243,838 |
| 8 | 6.7 | Albuquerque, NM | 845,913 |
| 9 | 6.8 | Flagstaff, AZ | 128,558 |
| 10 | 6.9 | Bismarck, ND | 104,944 |
| 11 | 7.1 | Salinas, CA | 408,238 |
| 12 | 7.3 | Fort Collins-Loveland, CO | 292,825 |
| 13 | 7.6 | Duluth, MN-WI | 274,571 |
| 14 | 7.7 | Pueblo, CO | 156,737 |
| 15 | 7.8 | Cape Coral-Fort Myers, FL | 593,136 |
| 16 | 7.9 | Palm Bay-Melbourne-Titusville, FL | 536,521 |
| 16 | 7.9 | Sarasota-Bradenton-Punta Gorda, FL | 837,883 |
| 18 | 8.0 | Billings, MT | 152,005 |
| 18 | 8.0 | Fargo-Wahpeton, ND-MN | 218,305 |
| 18 | 8.0 | Port St. Lucie-Sebastian-Vero Beach, FL | 536,083 |
| 21 | 8.1 | Lincoln, NE | 295,486 |
| 21 | 8.1 | San Luis Obispo-Paso Robles, CA | 265,297 |
| 23 | 8.3 | Bangor, ME | 148,651 |
| 23 | 8.3 | Burlington-South Burlington, VT | 208,460 |
| 23 | 8.3 | Midland-Odessa, TX | 261,435 |

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 EPA to determine whether the air quality in a county meets the standard. Design values for the annual PM_{2.5} concentrations by county were collected from data previously summarized by the EPA and were downloaded on December 1, 2009 from EPA's website at <http://www.epa.gov/air/airtrends/values.html>.

Cleanest U.S. Cities for Ozone Air Pollution¹

| Metropolitan Statistical Area | Population |
|---|------------|
| Bismarck, ND | 104,944 |
| Brownsville-Harlingen-Raymondville, TX | 413,336 |
| Coeur d'Alene, ID | 137,475 |
| Duluth, MN-WI | 274,571 |
| Fargo-Wahpeton, ND-MN | 218,305 |
| Fayetteville-Springdale-Rogers, AR-MO | 443,976 |
| Honolulu, HI | 905,034 |
| Laredo, TX | 236,941 |
| Lincoln, NE | 295,486 |
| Port St. Lucie-Sebastian-Vero Beach, FL | 536,083 |
| Rochester, MN | 182,924 |
| Sioux Falls, SD | 232,930 |

Note:

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

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

| COUNTY | ST | COUNTY | ST | COUNTY | ST |
|------------------------|----|-------------------|----|--------------|----|
| Anchorage Municipality | AK | Lafayette Parish | LA | Sullivan | NH |
| Baldwin | AL | Rapides Parish | LA | Grant | NM |
| Arkansas | AR | Tangipahoa Parish | LA | Santa Fe | NM |
| Ashley | AR | Middlesex | MA | Chaves | NM |
| Faulkner | AR | Aroostook | ME | Lea | NM |
| Polk | AR | Cumberland | ME | San Juan | NM |
| Sebastian | AR | Hancock | ME | Onondaga | NY |
| Cochise | AZ | Kennebec | ME | St. Lawrence | NY |
| Pima | AZ | Penobscot | ME | Medina | OH |
| Humboldt | CA | Genesee | MI | Caddo | OK |
| Mendocino | CA | Manistee | MI | Mayes | OK |
| Monterey | CA | Missaukee | MI | Oklahoma | OK |
| San Luis Obispo | CA | Buchanan | MO | Ottawa | OK |
| Santa Cruz | CA | Cass | MO | Josephine | OR |
| Boulder | CO | Clay | MO | Umatilla | OR |
| El Paso | CO | Greene | MO | Oconee | SC |
| Elbert | CO | Jackson | MO | Brown | SD |
| Larimer | CO | Ste. Genevieve | MO | Roane | TN |
| Mesa | CO | Bolivar | MS | Brewster | TX |
| Pueblo | CO | Forrest | MS | Cameron | TX |
| Citrus | FL | Harrison | MS | Dallas | TX |
| Lee | FL | Hinds | MS | Harrison | TX |
| Sarasota | FL | Jackson | MS | Hidalgo | TX |
| Clarke | GA | Jones | MS | Nueces | TX |
| Maui | HI | Lee | MS | Potter | TX |
| Montgomery | IA | Yellowstone | MT | Travis | TX |
| Van Buren | IA | Cumberland | NC | Page | VA |
| Adams | IL | Duplin | NC | Bennington | VT |
| Champaign | IL | Haywood | NC | Campbell | WY |
| Jersey | IL | Orange | NC | Converse | WY |
| Lake | IL | Watauga | NC | Fremont | WY |
| Lasalle | IL | Billings | ND | Laramie | WY |
| Mclean | IL | Cass | ND | Sheridan | WY |
| Sangamon | IL | Mercer | ND | Teton | WY |
| St. Clair | IL | Hall | NE | | |
| Johnson | KS | Lancaster | NE | | |
| Linn | KS | Scotts Bluff | NE | | |
| Shawnee | KS | Belknap | NH | | |
| Sumner | KS | Grafton | NH | | |
| Campbell | KY | Rockingham | NH | | |

Notes:

1. This list represents counties with the lowest levels of short term PM_{2.5} air pollution. Monitors in these counties reported no days with unhealthy PM_{2.5} levels.

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

| 2010 Rank ² | County | ST | Design Value ³ |
|------------------------|------------------------|----|---------------------------|
| 1 | Elbert | CO | 4.4 |
| 1 | Laramie | WY | 4.4 |
| 3 | Santa Fe | NM | 4.8 |
| 3 | Billings | ND | 4.8 |
| 3 | Sandoval | NM | 4.8 |
| 6 | Maui | HI | 4.9 |
| 7 | Hancock | ME | 5.1 |
| 7 | Essex | NY | 5.1 |
| 9 | Honolulu | HI | 5.2 |
| 10 | Lake | CA | 5.3 |
| 11 | Jackson | SD | 5.4 |
| 12 | Custer | SD | 5.5 |
| 13 | Anchorage Municipality | AK | 5.6 |
| 13 | Cascade | MT | 5.6 |
| 15 | Pima | AZ | 5.8 |
| 16 | St. Lawrence | NY | 6.0 |
| 17 | Douglas | CO | 6.3 |
| 17 | Ashland | WI | 6.3 |
| 17 | Potter | TX | 6.3 |
| 20 | Inyo | CA | 6.4 |
| 20 | Chaves | NM | 6.4 |
| 22 | Mendocino | CA | 6.5 |
| 22 | Mercer | ND | 6.5 |
| 22 | Scotts Bluff | NE | 6.5 |
| 25 | Tooele | UT | 6.7 |
| 25 | Santa Cruz | CA | 6.7 |
| 25 | Bernalillo | NM | 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 EPA to determine whether the air quality in a county meets the standard. Design values for the annual PM_{2.5} concentrations by county were collected from data previously summarized by the EPA and were downloaded on December 1, 2009 from EPA's website at <http://www.epa.gov/air/airtrends/values.html>.

Cleanest Counties for Ozone Air Pollution¹

| County | State | |
|---------------|-------|---|
| Washington | AR | Fayetteville-Springdale-Rogers, AR-MO |
| Humboldt | CA | |
| Lake | CA | |
| Marin | CA | San Jose-San Francisco-Oakland, CA |
| Mendocino | 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 |
| Honolulu | HI | Honolulu, HI |
| Palo Alto | IA | |
| Polk | IA | Des Moines-Newton-Pella, IA |
| Butte | ID | |
| Kootenai | ID | Coeur d'Alene, ID |
| Becker | MN | |
| Carlton | MN | Duluth, MN-WI |
| Lyon | MN | |
| Olmsted | MN | Rochester, MN |
| Scott | MN | Minneapolis-St. Paul-St. Cloud, MN-WI |
| St. Louis | MN | Duluth, MN-WI |
| Flathead | MT | |
| Swain | NC | |
| Billings | ND | |

| County | State | |
|------------|-------|--|
| Burke | ND | |
| Burleigh | ND | Bismarck, ND |
| Cass | ND | Fargo-Wahpeton, ND-MN |
| Dunn | ND | |
| Mckenzie | ND | |
| Mercer | ND | |
| Oliver | ND | |
| Douglas | NE | Omaha-Council Bluffs-Fremont, NE-IA |
| Lancaster | NE | Lincoln, NE |
| Grant | NM | |
| Luna | NM | |
| Columbia | OR | Portland-Vancouver-Beaverton, OR-WA |
| Jackson | SD | |
| Minnehaha | SD | Sioux Falls, SD |
| Brewster | TX | |
| Cameron | TX | Brownsville-Harlingen-Raymondville, TX |
| Webb | TX | Laredo, TX |
| San Juan | UT | |
| Clallam | WA | |
| Clark | WA | Portland-Vancouver-Beaverton, OR-WA |
| Ashland | WI | |
| Washington | WI | Milwaukee-Racine-Waukesha, WI |
| Waukesha | WI | Milwaukee-Racine-Waukesha, WI |
| Sweetwater | WY | |

Note:

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

Health Effects of Ozone and Particle Pollution

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 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 large Black/African American populations.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
- **Lower levels of ozone and particle pollution pose bigger threat than previously thought.** Lower levels of these all-too-common pollutants triggered asthma attacks and increased the risk of emergency room visits and hospital admissions for asthma in one study.⁸ Another study found that low levels of these pollutants increased the risk of hospital treatment for pneumonia and COPD.⁹

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.

Ozone

Ozone (O₃) 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 are 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.

Lifeguards in Galveston, Texas, provided evidence of the impact of even short-term exposure to ozone on healthy, active adults in a study published in 2008. Testing the breathing capacity of these outdoor workers several times a day, researchers found that many lifeguards had greater obstruction in their airways when ozone levels were high. Because of this research, Galveston became the first city in the nation to install an air quality warning flag system on the beach.¹⁰

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.¹¹ Another study, published the same week, looked at 23 European cities and found similar effects on mortality from short-term exposure to ozone.¹²

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.¹³ Writing a commentary on these reviews, the late 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.”¹⁴

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.¹⁵

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.¹⁶

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.¹⁷

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.¹⁸ 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.¹⁹

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.²⁰ Breathing ozone may also increase the response to allergens in people with allergies. A large study published in 2009 found that children were more likely to suffer from hay fever and respiratory allergies when ozone and PM_{2.5} levels were high.²¹

Low levels of ozone may be deadly. A large study of 48 U.S. cities looked at the association between ozone and all-cause mortality during the summer months. Ozone concentrations by city in the summer months ranged from 16 percent to 80 percent lower than EPA currently considers safe. Researchers found that ozone at those lower levels was associated with deaths from cardiovascular disease, strokes, and respiratory causes.²²

Particle Pollution

Ever look at dirty truck exhaust?

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

What Is Particle Pollution?

Particle pollution refers to a mix of very tiny solid and liquid particles that are in the air we breathe. But nothing about particle pollution is simple. 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_{10-2.5}. 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 diameter²³ 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."²⁴ 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 unhealthy mix in the winter in the Northeast, Southern California, the Northwest, and North Central U.S.²⁵

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.²⁶ 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 (SO₂), nitrogen oxides (NO_x) and volatile organic compounds with water and other compounds in the atmosphere.²⁷ 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.²⁸

Good news came last 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 added to their life expectancy on average.²⁹ This study added 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 after reductions.³⁰

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.³¹

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.³²

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.³³

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.³⁴ 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.³⁵

Particle pollution also diminishes lung function, causes greater use of asthma medications and increased rates of school absen-

teeism, 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;^{36,37,38,39}
- increased mortality in infants and young children;⁴⁰
- increased numbers of heart attacks, especially among the elderly and in people with heart conditions;⁴¹
- inflammation of lung tissue in young, healthy adults;⁴²
- increased hospitalization for cardiovascular disease, including strokes and congestive heart failure;^{43,44,45}
- increased emergency room visits for patients suffering from acute respiratory ailments;⁴⁶
- increased hospitalization for asthma among children;^{47,48,49} and
- increased severity of asthma attacks in children.⁵⁰

Again, the impact of even short-term exposure to particle pollution on healthy adults showed up in the Galveston lifeguard study, in addition to the harmful effects of ozone pollution. Lifeguards had reduced lung volume at the end of the day when fine particle levels were high.⁵¹

Year-Round Exposure

Breathing high levels of particle pollution day in and day out also can be deadly, as landmark studies in the 1990s conclusively showed.⁵² Chronic exposure to particle pollution can shorten life by one to three years.⁵³ 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 liv-

ing near roads with heavy truck or trailer traffic;^{54,55}

- slowed lung function growth in children and teenagers;^{56,57}
- significant damage to the small airways of the lungs;⁵⁸
- increased risk of dying from lung cancer; and⁵⁹
- increased risk of death from cardiovascular disease.⁶⁰

Alarming, 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 estimated number of people killed each year by particle pollution: 18,000 premature deaths annually, with a range of 5,600 to 32,000 deaths.⁶¹

Research into risks to the health 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.⁶²

The Environmental Protection Agency released the most thorough review of the current research on particle pollution in December 2009.⁶³ The Agency had engaged a panel of expert scientists, the Clean Air Scientific Advisory Committee, to help them assess the evidence, in particular research published between 2002 and May 2009. EPA concluded in the published Integrated Science Assessment that particle pollution caused multiple, serious threats to health. Their findings are highlighted in the box below.

EPA Concludes Fine Particle Pollution Poses Serious Health Threats

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

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

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 50.⁶⁴

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.⁶⁵ 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.⁶⁶

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.⁶⁷ In addition, the body's defenses that help adults fight off infections are still developing in young bodies.⁶⁸ Children have more respiratory infections than adults, which also seems to increase their susceptibility to air pollution.⁶⁹

Furthermore, children don't behave like adults, and their behavior also affects their vulnerability. They are outside for longer periods and are usually more active when outdoors. Consequently, they inhale more polluted outdoor air than adults typically do.⁷⁰

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 on 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.⁷¹

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.⁷² 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.⁷³

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.⁷⁴ 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.⁷⁵ A third study in the Czech Republic found evidence that the mother's exposure to air pollution may even alter the immune systems of the fetus.⁷⁶

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.⁷⁷

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.⁷⁸

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.⁷⁹ An accompanying editorial warned, "Air pollution is one of the most under-appreciated contributors to asthma exacerbation."⁸⁰

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.⁸¹

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.⁸²

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.⁸³ 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.⁸⁴

Cleaning Up Pollution Can Reduce Risk to Children

There is also real-world evidence that reducing air pollution can help protect children. Two 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.⁸⁵

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.⁸⁶

In this country, the 1996 Olympics in Atlanta, Georgia remain 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.⁸⁷

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,⁸⁸ including a workshop the American Lung Association held in 2001 that focused on urban air pollution and health inequities.⁸⁹

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,⁹⁰ while others found greater responsiveness for Whites and Hispanics, but not Blacks/African-Americans,⁹¹ or for Blacks/African-Americans but not other races or ethnic groups.⁹² Other researchers have found greater risk for Blacks/African-Americans from air toxics, including those pollutants that also come from traffic sources.⁹³

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.⁹⁴ 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.⁹⁵ A 2008 study of Washington, DC found that while poor air quality and worsened asthma went hand-in-hand in areas where Medicaid enrollment was high, the areas with the highest Medicaid enrollment did not always have the strongest association of high air pollution and asthma attacks.⁹⁶ However, two other recent studies in France have found no association with lower income and asthma attacks.⁹⁷

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, Blacks/African Americans, Mexican Americans and people living near a central city have higher incidence of diabetes.⁹⁸

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.⁹⁹ In Southern California, a 2007 study found that air pollution can 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.^{100,101} 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.¹⁰² Another study found an increase in risk of heart attacks from being in traffic, whether driving or taking public transportation.¹⁰³

The Health Effects Institute published an extensive review of research on risks from traffic exposure in January, 2010. The

review concluded that being within 300 to 500 meters of traffic can worsen asthma in children, and may even cause children's asthma. The review also found evidence of premature death, cardiovascular disease, respiratory symptoms, and other health effects.¹⁰⁴

How to Protect Yourself from Ozone, 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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Description of Methodology

Statistical Methodology: The Air Quality Data

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 2006-2008 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 December 1, 2009 from EPA's website at <http://www.epa.gov/air/airtrends/values.html>.

Ozone Data Analysis

The 2006, 2007, and 2008 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 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 2006, 2007, and 2008, 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

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

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 EPA based on the EPA Air Quality Index:

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

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

Following receipt of the above information, the American Lung Association identified the number of days each county,

with at least one ozone monitor, experienced air quality designated as orange (Unhealthy for Sensitive Groups), red (Unhealthy), or purple (Very Unhealthy).

Short-term Particle Pollution Data Analysis

A.S.L. & Associates identified the maximum daily 24-hour AQS PM_{2.5} concentration for each county in 2006, 2007, and 2008 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 EPA based on the EPA Air Quality Index, adjusted by the American Lung Association as discussed below:

| 24-hour PM _{2.5} Concentration | Air Quality Index Levels |
|---|---|
| from 0.0 µg/m ³ to 15.4 µg/m ³ | ■ Good (Green) |
| from 15.5 µg/m ³ to 35.0 µg/m ³ | ■ Moderate (Yellow) |
| from 35.1 µg/m ³ to 65.4 µg/m ³ | ■ Unhealthy for Sensitive Groups (Orange) |
| from 65.5 µg/m ³ to 150.4 µg/m ³ | ■ Unhealthy (Red) |
| from 150.5 µg/m ³ to 250.4 µg/m ³ | ■ Very Unhealthy (Purple) |
| greater than or equal to 250.5 µg/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/m³ from 65 µg/m³. As of December 2009, 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/m³ to 65.4 µg/m³.

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 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 (Unhealthy for Sensitive Groups), red (Unhealthy), purple (Very Unhealthy) or maroon (Hazardous).

Description of County Grading System

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

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

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

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

- All counties with a weighted average of zero (corresponding to no exceedances of the standard over the three-year period) were given a grade of "A."
- For ozone, an "F" grade was set to generally correlate with the number of unhealthy air days that would place a county in nonattainment for the ozone standard.
- For short-term particle pollution, fewer unhealthy air days are required for an F than for nonattainment under the PM_{2.5} standard. The national air quality standard is set to allow 2 percent of the days during the 3 years to exceed 35 µg/m³ (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 only about 1 percent of the days to be over 35 µg/m³ (called a "99th percentile" form) of the PM_{2.5}. The American Lung Association supports using the tighter limits in a 99th percentile form as a more appropriate standard that is intended to protect the public from short-term spikes in pollution.

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

Weighted averages allow comparisons to be drawn based on severity of air pollution. For example, if one county had 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 2008 or 1997 ozone standard. EPA is currently reconsidering the 2008 standard based on evidence that that standard failed to protect the health of the public.

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 2008 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 EPA's determination of violations of the national ambient air quality standard for annual PM_{2.5} of 15 µg/m³, as reported online and downloaded from the www.epa.gov/airtrends/values.html on December 1, 2009. Counties that EPA listed as being

in attainment of the standard were given grades of “Pass.” Counties EPA listed as being in nonattainment were given grades of “Fail.” Where insufficient data existed for EPA to determine attainment or nonattainment, those counties received a grade of “Incomplete.”

Design value is the calculated concentration of a pollutant based on the form of the national ambient air quality standard and is used by EPA to determine whether or not the air quality in a county meets the standard. Counties were ranked by design value. Metropolitan areas were ranked by the highest design value among the counties within a given Metropolitan Statistical Area as of 2008 as defined by the 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.

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. and Associates. Questions about the annual PM design values were referred to Mr. Schmidt of EPA, who 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. 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. The primary exceptions to this are asthma and diabetes, as state-specific estimates for adult asthma and diabetes are available through one national survey discussed below, and poverty, for which estimates are available at the county level.

Population Estimates

The U.S. Census Bureau estimated data on the total population of each county in the United States for 2008. The Census Bureau also estimated the age specific breakdown of the population and the number of individuals living in poverty by county. These estimates are the best information on population demographics available between decennial censuses.

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

Prevalence Estimates

Chronic Bronchitis, Emphysema, and Pediatric Asthma.

In 2008, the National Health Interview Survey (NHIS) estimated the nationwide annual prevalence of diagnosed chronic bronchitis at 9.8 million; the nationwide lifetime prevalence of diagnosed emphysema was estimated at 3.8 million. The NHIS estimated the prevalence of diagnosed pediatric asthma (under age 18) to be over 7.0 million.

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 2009. 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, and pediatric asthma are estimated by applying age-specific national prevalence rates from the 2008 NHIS to age-specific county-level resident populations obtained from the U.S. Census Bureau web site. Prevalence estimates for chronic bronchitis and emphysema 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 and Diabetes. In 2008, 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 BRFSS

indicated that 8.8% of adults in the United States had ever been diagnosed with diabetes in 2008.

The prevalence estimate for adult asthma and diabetes is calculated for those 18-44, 45-64 and 65+. Local area prevalence of adult asthma and diabetes is estimated by applying age-specific state prevalence rates from the 2008 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 (NHLBI). 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 and diabetes 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.

References

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- Office of Management and Budget. Update of Statistical Areas Definitions and Guidance on Their Uses. OMB Bulletin 09-01 November 20, 2008.
- National Heart Lung and Blood Institute. Cardiovascular Disease Prevalence Estimates from 2005-2006 National Health and Nutrition Examination Survey. Unpublished data prepared by Dr. Michael Mussolino upon special request to NHLBI.
- U.S. Census Bureau. Small Area Income and Poverty Estimates. State and County Data, 2008.

State Tables

| | | | | | | | |
|--------------------------------|----|-------------------------|-----|--------------------------|-----|--------------------------|-----|
| Alabama | 42 | Illinois | 74 | Montana | 106 | Rhode Island | 140 |
| Alaska | 44 | Indiana | 76 | Nebraska | 108 | South Carolina | 142 |
| Arizona | 46 | Iowa | 80 | Nevada | 110 | South Dakota | 146 |
| Arkansas | 48 | Kansas | 82 | New Hampshire | 112 | Tennessee | 148 |
| California | 50 | Kentucky | 84 | New Jersey | 114 | Texas | 150 |
| Colorado | 54 | Louisiana | 88 | New Mexico | 116 | Utah | 154 |
| Connecticut | 56 | Maine | 90 | New York | 118 | Vermont | 156 |
| Delaware | 58 | Maryland | 92 | North Carolina | 122 | Virginia | 158 |
| District of Columbia | 60 | Massachusetts | 94 | North Dakota | 126 | Washington | 162 |
| Florida | 62 | Michigan | 96 | Ohio | 128 | West Virginia | 164 |
| Georgia | 66 | Minnesota | 100 | Oklahoma | 132 | Wisconsin | 166 |
| Hawaii | 70 | Mississippi | 102 | Oregon | 134 | Wyoming | 170 |
| Idaho | 72 | Missouri | 104 | Pennsylvania | 136 | | |

State Table Notes

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

Notes for all state data tables

1. **Total Population** is based on 2008 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}. Do not use them as population denominators for disease estimates—that will lead to incorrect estimates.
3. **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2008 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 2008 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 2008 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 for adults 18 and over, based on national rates (2005 NHANES, provided by NHLBI) applied to county population estimates (US 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 state rates (BRFSS) applied to county population estimates (US Census).
9. **Poverty** estimates include all ages and come from the U.S. Census Bureau's Small Area Estimates Branch, 2008.
10. 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.

Notes for all state grades tables

1. Not all counties have monitors for either ozone or particle pollution. If a county does not have a monitor, that county's name is not on the list in these tables. The decision about monitors in the county is made by the state and the U.S. Environmental Protection Agency, not by the American Lung Association.
2. **Asterisk (*)** indicates that monitoring is underway for that pollutant in that county, but that the data are incomplete for all three years. Those counties are not graded or received an Incomplete.
3. **DNC (Data Not Collected)** indicates that data on that particular pollutant is not collected in that county.
4. The **Weighted Average (Wgt. Avg)** was derived by adding the three years of individual level data (2006-2008), multiplying the sums of each level by the assigned standard weights (i.e. 1=orange, 1.5=red, 2.0=purple and 2.5=maroon) and calculating the average. Grades are assigned based on the weighted averages as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.
5. The **Design Value** is the calculated concentration of a pollutant based on the form of the National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the standard. 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 December 1, 2009 from EPA's website at <http://www.epa.gov/air/airtrends/values.html>. The numbers refer to micrograms per cubic meter, or µg/m³. Counties with design values of 15 or lower received a grade of "Pass." Counties with design values of 15.1 or higher received a grade of "Fail."

American Lung Association in Alabama

P.O. Box 3188
 Bessemer, AL 35023
 (205) 491-1241
www.lungusa.org/alabama

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | Total | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Baldwin | 174,439 | 40,755 | 28,539 | 3,837 | 10,405 | 5,965 | 2,561 | 52,214 | 15,753 | 17,110 |
| Clay | 13,809 | 2,910 | 2,542 | 274 | 849 | 492 | 220 | 4,398 | 1,324 | 2,288 |
| Colbert | 54,663 | 11,938 | 9,196 | 1,124 | 3,325 | 1,926 | 836 | 16,974 | 5,136 | 6,861 |
| Dekalb | 68,515 | 16,947 | 10,004 | 1,595 | 4,010 | 2,274 | 934 | 19,486 | 5,892 | 12,690 |
| Elmore | 78,106 | 19,207 | 9,020 | 1,808 | 4,573 | 2,526 | 933 | 20,593 | 6,252 | 8,171 |
| Escambia | 37,490 | 8,616 | 5,497 | 811 | 2,245 | 1,276 | 522 | 10,919 | 3,308 | 8,490 |
| Etowah | 103,303 | 23,724 | 16,672 | 2,233 | 6,192 | 3,559 | 1,520 | 31,096 | 9,401 | 16,923 |
| Houston | 98,488 | 24,499 | 14,867 | 2,306 | 5,754 | 3,302 | 1,388 | 28,633 | 8,673 | 14,641 |
| Jefferson | 659,503 | 157,990 | 89,377 | 14,873 | 38,956 | 22,217 | 8,909 | 188,555 | 57,398 | 88,637 |
| Lawrence | 34,166 | 7,785 | 4,699 | 733 | 2,049 | 1,168 | 468 | 9,903 | 3,014 | 5,068 |
| Madison | 319,510 | 77,290 | 40,320 | 7,276 | 18,808 | 10,616 | 4,121 | 88,703 | 27,010 | 35,200 |
| Mobile | 406,309 | 106,825 | 49,885 | 10,056 | 23,252 | 13,170 | 5,131 | 110,280 | 33,617 | 74,067 |
| Montgomery | 224,810 | 57,541 | 27,354 | 5,417 | 12,989 | 7,283 | 2,793 | 60,477 | 18,392 | 37,511 |
| Morgan | 115,959 | 27,622 | 16,595 | 2,600 | 6,865 | 3,932 | 1,611 | 33,708 | 10,245 | 14,284 |
| Russell | 50,504 | 12,767 | 7,283 | 1,202 | 2,934 | 1,678 | 693 | 14,433 | 4,378 | 11,599 |
| Shelby | 187,784 | 49,941 | 17,285 | 4,701 | 10,682 | 5,936 | 2,080 | 47,415 | 14,560 | 10,728 |
| Sumter | 13,266 | 3,081 | 2,155 | 290 | 793 | 449 | 190 | 3,896 | 1,171 | 4,249 |
| Talladega | 80,279 | 18,666 | 11,323 | 1,757 | 4,788 | 2,726 | 1,103 | 23,216 | 7,051 | 14,305 |
| Tuscaloosa | 179,448 | 41,266 | 19,871 | 3,885 | 10,728 | 5,834 | 2,076 | 46,716 | 14,150 | 29,379 |
| Walker | 68,970 | 15,576 | 11,308 | 1,466 | 4,155 | 2,391 | 1,026 | 20,937 | 6,328 | 11,839 |
| Totals | 2,969,321 | 724,946 | 393,792 | 68,244 | 174,349 | 98,720 | 39,115 | 832,552 | 253,051 | 424,040 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Baldwin | 23 | 0 | 0 | 7.7 | F |
| Clay | * | * | * | * | * |
| Colbert | 9 | 0 | 0 | 3.0 | D |
| Dekalb | DNC | DNC | DNC | DNC | DNC |
| Elmore | 3 | 0 | 0 | 1.0 | C |
| Escambia | DNC | DNC | DNC | DNC | DNC |
| Etowah | 4 | 0 | 0 | 1.3 | C |
| Houston | 2 | 0 | 0 | 0.7 | B |
| Jefferson | 55 | 8 | 0 | 22.3 | F |
| Lawrence | * | * | * | * | * |
| Madison | 16 | 1 | 0 | 5.8 | F |
| Mobile | 31 | 0 | 0 | 10.3 | F |
| Montgomery | 10 | 0 | 0 | 3.3 | F |
| Morgan | 19 | 0 | 0 | 6.3 | F |
| Russell | 8 | 0 | 0 | 2.7 | D |
| Shelby | 38 | 3 | 0 | 14.2 | F |
| Sumter | 2 | 0 | 0 | 0.7 | B |
| Talladega | * | * | * | * | * |
| Tuscaloosa | 14 | 0 | 0 | 4.7 | F |
| Walker | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 10.5 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.2 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.2 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 11 | 0 | 0 | 3.7 | F | 14.0 | PASS |
| 2 | 1 | 0 | 1.2 | C | 12.0 | PASS |
| 75 | 0 | 0 | 25.0 | F | 17.3 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 12.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.4 | PASS |
| 8 | 1 | 0 | 3.2 | D | 13.3 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.7 | PASS |
| 8 | 2 | 0 | 3.7 | F | 14.5 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.2 | PASS |
| * | * | * | * | * | * | INC |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| 3 | 0 | 0 | 1.0 | C | 12.7 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.2 | PASS |

American Lung Association in Alaska

500 West International Airport Road, #A
 Anchorage, AK 99518-1105
 (907) 276-5864
www.lungusa.org/alaska

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|------------------------------|------------------|----------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Anchorage Municipality | 279,243 | 72,681 | 19,705 | 6,842 | 19,478 | 8,719 | 2,777 | 66,864 | 13,625 | 19,638 |
| Fairbanks North Star Borough | 97,970 | 26,616 | 5,645 | 2,506 | 6,793 | 2,905 | 838 | 21,330 | 4,380 | 7,004 |
| Juneau City And Borough | 30,988 | 6,914 | 2,488 | 651 | 2,238 | 1,054 | 360 | 8,360 | 1,682 | 2,047 |
| Matanuska-Susitna Borough | 85,458 | 22,025 | 6,454 | 2,073 | 5,976 | 2,697 | 881 | 20,912 | 4,263 | 7,808 |
| Yukon-Koyukuk Borough | 5,701 | 1,494 | 482 | 141 | 392 | 185 | 65 | 1,485 | 300 | 1,410 |
| Totals | 499,360 | 129,730 | 34,774 | 12,213 | 34,878 | 15,560 | 4,921 | 118,951 | 24,250 | 37,907 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------------------------|---------------|------------|---------------|-----------------|--------------|
| Anchorage Municipality | DNC | DNC | DNC | DNC | DNC |
| Fairbanks North Star Borough | DNC | DNC | DNC | DNC | DNC |
| Juneau City and Borough | DNC | DNC | DNC | DNC | DNC |
| Matanuska-Susitna Borough | DNC | DNC | DNC | DNC | DNC |
| Yukon-Koyukuk Borough | 1 | 0 | 0 | 0.3 | B |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 5.6 | PASS |
| 11 | 1 | 0 | 4.2 | F | 11.2 | PASS |
| 7 | 0 | 0 | 2.3 | D | 7.4 | PASS |
| 5 | 0 | 0 | 1.7 | C | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Arizona

102 West McDowell Road
 Phoenix, AZ 85003-1213
 (602) 258-7505
www.lungusa.org/arizona

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | Total | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Cochise | 129,006 | 30,821 | 23,064 | 2,901 | 9,144 | 4,457 | 2,009 | 39,992 | 8,918 | 19,628 |
| Coconino | 128,558 | 32,928 | 10,572 | 3,100 | 9,381 | 4,063 | 1,353 | 31,731 | 6,761 | 20,099 |
| Gila | 52,166 | 11,959 | 11,440 | 1,126 | 3,663 | 1,873 | 925 | 17,603 | 3,979 | 8,224 |
| La Paz | 20,086 | 3,601 | 6,756 | 339 | 1,449 | 800 | 471 | 8,245 | 1,905 | 5,162 |
| Maricopa | 3,954,598 | 1,083,241 | 451,031 | 101,972 | 280,306 | 122,897 | 45,668 | 1,004,175 | 216,591 | 521,208 |
| Navajo | 112,757 | 33,574 | 13,882 | 3,161 | 7,648 | 3,436 | 1,343 | 28,749 | 6,255 | 25,447 |
| Pima | 1,012,018 | 239,325 | 154,281 | 22,529 | 73,719 | 34,066 | 14,133 | 293,183 | 64,420 | 153,040 |
| Pinal | 327,301 | 85,283 | 42,819 | 8,028 | 23,791 | 10,272 | 3,936 | 84,882 | 18,309 | 43,350 |
| Santa Cruz | 42,923 | 12,963 | 5,619 | 1,220 | 2,843 | 1,329 | 543 | 11,369 | 2,499 | 7,905 |
| Yavapai | 215,503 | 42,732 | 49,972 | 4,023 | 15,841 | 7,993 | 3,956 | 75,130 | 16,958 | 27,395 |
| Yuma | 194,322 | 54,752 | 36,804 | 5,154 | 13,242 | 6,205 | 2,882 | 56,264 | 12,509 | 40,456 |
| Totals | 6,189,238 | 1,631,179 | 806,240 | 153,553 | 441,028 | 197,391 | 77,219 | 1,651,323 | 359,104 | 871,914 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Cochise | 1 | 0 | 0 | 0.3 | B |
| Coconino | 4 | 0 | 0 | 1.3 | C |
| Gila | 34 | 0 | 0 | 11.3 | F |
| La Paz | 7 | 0 | 0 | 2.3 | D |
| Maricopa | 84 | 2 | 0 | 29.0 | F |
| Navajo | 1 | 0 | 0 | 0.3 | B |
| Pima | 11 | 0 | 0 | 3.7 | F |
| Pinal | 39 | 0 | 0 | 13.0 | F |
| Santa Cruz | DNC | DNC | DNC | DNC | DNC |
| Yavapai | * | * | * | * | * |
| Yuma | 14 | 0 | 0 | 4.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 6.8 | PASS |
| 1 | 0 | 0 | 0.3 | B | 6.8 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 1 | 0 | 0.8 | B | 12.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 5.8 | PASS |
| 29 | 1 | 0 | 10.2 | F | 21.6 | FAIL |
| 4 | 1 | 0 | 1.8 | C | 13.7 | PASS |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |

American Lung Association in Arkansas

P.O. Box 34043
 Little Rock, AR 72203-4043
 (870) 489-1470
www.lungusa.org/arkansas

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Arkansas | 19,236 | 4,458 | 3,199 | 420 | 1,221 | 673 | 295 | 5,973 | 1,535 | 3,791 |
| Ashley | 22,233 | 5,305 | 3,316 | 499 | 1,399 | 760 | 318 | 6,587 | 1,690 | 4,022 |
| Crittenden | 52,554 | 15,573 | 5,494 | 1,466 | 3,059 | 1,611 | 600 | 13,214 | 3,380 | 10,616 |
| Faulkner | 106,823 | 26,283 | 10,506 | 2,474 | 6,592 | 3,351 | 1,136 | 26,245 | 6,643 | 16,448 |
| Garland | 97,465 | 21,062 | 20,725 | 1,983 | 6,237 | 3,496 | 1,675 | 32,307 | 8,268 | 15,406 |
| Jackson | 16,936 | 3,563 | 2,557 | 335 | 1,100 | 590 | 242 | 5,052 | 1,291 | 3,697 |
| Newton | 8,298 | 1,697 | 1,510 | 160 | 545 | 303 | 136 | 2,717 | 698 | 1,915 |
| Phillips | 21,603 | 6,362 | 3,269 | 599 | 1,258 | 691 | 301 | 6,102 | 1,566 | 7,420 |
| Polk | 20,257 | 4,798 | 3,880 | 452 | 1,267 | 706 | 327 | 6,422 | 1,646 | 3,899 |
| Pope | 59,952 | 14,099 | 8,405 | 1,327 | 3,757 | 1,991 | 791 | 16,772 | 4,273 | 8,940 |
| Pulaski | 376,797 | 96,790 | 45,615 | 9,111 | 23,181 | 12,351 | 4,794 | 103,309 | 26,474 | 60,677 |
| Sebastian | 122,274 | 32,268 | 15,872 | 3,038 | 7,431 | 3,977 | 1,586 | 33,658 | 8,618 | 20,814 |
| Union | 43,213 | 10,171 | 7,045 | 957 | 2,726 | 1,496 | 650 | 13,199 | 3,387 | 8,340 |
| Washington | 195,803 | 52,248 | 18,779 | 4,918 | 11,765 | 6,000 | 2,048 | 47,163 | 11,953 | 28,162 |
| White | 74,845 | 17,598 | 10,750 | 1,657 | 4,687 | 2,489 | 998 | 21,061 | 5,365 | 11,857 |
| Totals | 1,238,289 | 312,275 | 160,922 | 29,396 | 76,225 | 40,485 | 15,897 | 339,781 | 86,787 | 206,004 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Arkansas | DNC | DNC | DNC | DNC | DNC |
| Ashley | DNC | DNC | DNC | DNC | DNC |
| Crittenden | 25 | 3 | 0 | 9.8 | F |
| Faulkner | DNC | DNC | DNC | DNC | DNC |
| Garland | DNC | DNC | DNC | DNC | DNC |
| Jackson | DNC | DNC | DNC | DNC | DNC |
| Newton | 4 | 0 | 0 | 1.3 | C |
| Phillips | DNC | DNC | DNC | DNC | DNC |
| Polk | 6 | 0 | 0 | 2.0 | C |
| Pope | DNC | DNC | DNC | DNC | DNC |
| Pulaski | 24 | 0 | 0 | 8.0 | F |
| Sebastian | DNC | DNC | DNC | DNC | DNC |
| Union | DNC | DNC | DNC | DNC | DNC |
| Washington | 0 | 0 | 0 | 0.0 | A |
| White | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 11.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | 12.1 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.4 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.7 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.6 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 11.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.4 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.1 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.6 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.8 | PASS |
| * | * | * | * | * | * | INC |
| 1 | 0 | 0 | 0.3 | B | 11.2 | PASS |

American Lung Association in California

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|--------------|------------------|-----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Alameda | 1,474,368 | 347,294 | 160,789 | 32,693 | 94,756 | 48,721 | 17,779 | 395,838 | 98,066 | 150,203 |
| Amador | 38,238 | 6,228 | 7,462 | 586 | 2,723 | 1,438 | 641 | 12,816 | 3,212 | 3,333 |
| Butte | 220,337 | 45,934 | 33,068 | 4,324 | 14,641 | 7,514 | 2,996 | 63,315 | 15,671 | 44,569 |
| Calaveras | 46,843 | 8,464 | 8,523 | 797 | 3,278 | 1,745 | 771 | 15,524 | 3,905 | 5,336 |
| Colusa | 21,204 | 6,105 | 2,450 | 575 | 1,264 | 645 | 242 | 5,288 | 1,305 | 2,816 |
| Contra Costa | 1,029,703 | 249,240 | 124,036 | 23,463 | 65,998 | 34,368 | 13,216 | 286,262 | 71,348 | 96,183 |
| El Dorado | 176,075 | 37,896 | 19,950 | 3,567 | 11,707 | 6,118 | 2,301 | 50,538 | 12,618 | 13,692 |
| Fresno | 909,153 | 270,512 | 89,615 | 25,465 | 53,191 | 26,798 | 9,390 | 213,027 | 52,230 | 197,265 |
| Glenn | 28,237 | 7,759 | 3,461 | 730 | 1,719 | 882 | 338 | 7,301 | 1,807 | 4,713 |
| Humboldt | 129,000 | 26,222 | 16,670 | 2,468 | 8,642 | 4,447 | 1,690 | 36,746 | 9,107 | 24,794 |
| Imperial | 163,972 | 47,801 | 17,493 | 4,500 | 9,663 | 4,855 | 1,732 | 38,843 | 9,511 | 32,833 |
| Inyo | 17,136 | 3,702 | 2,779 | 348 | 1,150 | 614 | 266 | 5,417 | 1,365 | 1,964 |
| Kern | 800,458 | 238,789 | 71,678 | 22,479 | 46,597 | 23,265 | 7,790 | 181,207 | 44,207 | 156,128 |
| Kings | 149,518 | 40,715 | 11,487 | 3,833 | 8,930 | 4,349 | 1,308 | 32,288 | 7,759 | 22,566 |
| Lake | 64,866 | 13,981 | 10,479 | 1,316 | 4,325 | 2,278 | 968 | 19,868 | 4,976 | 11,462 |
| Los Angeles | 9,862,049 | 2,549,168 | 1,054,932 | 239,969 | 611,881 | 311,413 | 112,035 | 2,508,754 | 618,355 | 1,482,051 |
| Madera | 148,333 | 41,276 | 15,307 | 3,886 | 8,910 | 4,482 | 1,575 | 35,653 | 8,734 | 25,275 |
| Marin | 248,794 | 47,992 | 39,344 | 4,518 | 17,228 | 9,250 | 3,960 | 81,284 | 20,524 | 17,007 |
| Mariposa | 17,976 | 3,112 | 3,377 | 293 | 1,265 | 669 | 296 | 5,948 | 1,492 | 2,388 |
| Mendocino | 86,221 | 19,013 | 13,091 | 1,790 | 5,722 | 3,025 | 1,267 | 26,228 | 6,579 | 15,032 |
| Merced | 246,117 | 76,722 | 24,433 | 7,222 | 14,091 | 7,080 | 2,490 | 56,327 | 13,791 | 52,005 |
| Monterey | 408,238 | 111,869 | 41,550 | 10,531 | 24,728 | 12,506 | 4,412 | 99,791 | 24,517 | 49,360 |
| Napa | 133,433 | 30,039 | 19,339 | 2,828 | 8,750 | 4,567 | 1,856 | 38,965 | 9,720 | 11,511 |
| Nevada | 97,118 | 17,384 | 17,481 | 1,636 | 6,832 | 3,661 | 1,624 | 32,666 | 8,239 | 8,848 |
| Orange | 3,010,759 | 765,649 | 342,841 | 72,075 | 188,534 | 96,726 | 35,888 | 790,757 | 195,691 | 294,758 |
| Placer | 341,945 | 74,348 | 52,148 | 6,999 | 22,569 | 11,699 | 4,776 | 99,841 | 24,827 | 22,873 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------------|-------------------|------------------|------------------|------------------|------------------|--------------------|----------------|-------------------------|------------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Plumas | 20,275 | 3,525 | 4,041 | 332 | 1,440 | 778 | 360 | 7,082 | 1,791 | 2,408 |
| Riverside | 2,100,516 | 583,297 | 241,428 | 54,909 | 126,317 | 63,620 | 23,196 | 513,861 | 125,986 | 260,109 |
| Sacramento | 1,394,154 | 362,492 | 158,340 | 34,124 | 86,442 | 44,138 | 16,274 | 359,465 | 88,749 | 182,573 |
| San Benito | 54,699 | 15,905 | 4,925 | 1,497 | 3,256 | 1,668 | 585 | 13,325 | 3,295 | 5,628 |
| San Bernardino | 2,015,355 | 590,810 | 170,130 | 55,617 | 118,301 | 59,184 | 19,520 | 458,534 | 111,974 | 288,756 |
| San Diego | 3,001,072 | 744,470 | 337,004 | 70,082 | 188,661 | 95,863 | 34,760 | 774,396 | 190,719 | 364,576 |
| San Francisco | 808,976 | 118,957 | 119,205 | 11,198 | 57,919 | 29,704 | 11,458 | 246,762 | 61,055 | 89,423 |
| San Joaquin | 672,388 | 194,385 | 68,391 | 18,299 | 39,916 | 20,227 | 7,204 | 162,098 | 39,865 | 108,919 |
| San Luis Obispo | 265,297 | 49,431 | 38,323 | 4,653 | 18,160 | 9,359 | 3,670 | 78,385 | 19,440 | 30,243 |
| San Mateo | 712,690 | 160,197 | 95,081 | 15,080 | 46,848 | 24,544 | 9,759 | 207,653 | 51,894 | 45,990 |
| Santa Barbara | 405,396 | 95,684 | 52,593 | 9,007 | 25,952 | 13,259 | 5,055 | 109,506 | 27,044 | 49,422 |
| Santa Clara | 1,764,499 | 427,432 | 192,846 | 40,237 | 112,189 | 57,444 | 20,880 | 465,457 | 115,075 | 131,334 |
| Santa Cruz | 253,137 | 54,445 | 26,749 | 5,125 | 16,736 | 8,638 | 3,121 | 69,965 | 17,366 | 32,460 |
| Shasta | 180,214 | 39,783 | 27,484 | 3,745 | 11,887 | 6,209 | 2,564 | 53,356 | 13,314 | 31,309 |
| Siskiyou | 44,542 | 8,675 | 8,444 | 817 | 3,074 | 1,649 | 750 | 14,885 | 3,755 | 7,182 |
| Solano | 407,515 | 102,651 | 45,748 | 9,663 | 25,664 | 13,234 | 4,926 | 108,476 | 26,912 | 35,393 |
| Sonoma | 466,741 | 103,187 | 61,269 | 9,714 | 30,821 | 16,139 | 6,371 | 136,104 | 34,007 | 47,726 |
| Stanislaus | 510,694 | 145,476 | 53,728 | 13,695 | 30,520 | 15,491 | 5,581 | 124,778 | 30,713 | 72,561 |
| Sutter | 92,207 | 24,502 | 11,586 | 2,307 | 5,676 | 2,903 | 1,111 | 24,023 | 5,936 | 14,048 |
| Tehama | 61,550 | 14,766 | 9,413 | 1,390 | 3,949 | 2,052 | 849 | 17,626 | 4,387 | 10,009 |
| Tulare | 426,276 | 135,427 | 40,821 | 12,749 | 24,202 | 12,169 | 4,249 | 96,539 | 23,644 | 90,369 |
| Tuolumne | 55,644 | 9,339 | 10,919 | 879 | 3,946 | 2,091 | 940 | 18,729 | 4,702 | 6,350 |
| Ventura | 797,740 | 206,833 | 91,279 | 19,470 | 49,794 | 25,737 | 9,699 | 212,173 | 52,697 | 68,486 |
| Yolo | 197,658 | 45,119 | 19,143 | 4,247 | 12,612 | 6,249 | 2,051 | 48,192 | 11,706 | 27,807 |
| Totals | 36,579,326 | 9,324,002 | 4,092,673 | 877,727 | 2,283,373 | 1,165,464 | 426,540 | 9,461,862 | 2,335,582 | 4,752,046 |

CALIFORNIA

American Lung Association in California

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

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|--------------|--------|-----|--------|----------|-------|
| Alameda | 15 | 3 | 0 | 6.5 | F |
| Amador | 42 | 7 | 0 | 17.5 | F |
| Butte | 57 | 3 | 0 | 20.5 | F |
| Calaveras | 49 | 7 | 0 | 19.8 | F |
| Colusa | 2 | 0 | 0 | 0.7 | B |
| Contra Costa | 24 | 0 | 0 | 8.0 | F |
| El Dorado | 104 | 26 | 1 | 48.3 | F |
| Fresno | 148 | 31 | 2 | 66.2 | F |
| Glenn | 2 | 0 | 0 | 0.7 | B |
| Humboldt | 0 | 0 | 0 | 0.0 | A |
| Imperial | 71 | 2 | 0 | 24.7 | F |
| Inyo | 31 | 0 | 0 | 10.3 | F |
| Kern | 228 | 74 | 4 | 115.7 | F |
| Kings | 103 | 10 | 1 | 40.0 | F |
| Lake | 0 | 0 | 0 | 0.0 | A |
| Los Angeles | 169 | 60 | 9 | 92.3 | F |
| Madera | 40 | 2 | 0 | 14.3 | F |
| Marin | 0 | 0 | 0 | 0.0 | A |
| Mariposa | 95 | 5 | 0 | 34.2 | F |
| Mendocino | 0 | 0 | 0 | 0.0 | A |
| Merced | 69 | 9 | 1 | 28.2 | F |
| Monterey | 1 | 0 | 0 | 0.3 | B |
| Napa | 2 | 0 | 0 | 0.7 | B |
| Nevada | 122 | 12 | 0 | 46.7 | F |
| Orange | 37 | 4 | 0 | 14.3 | F |
| Placer | 97 | 14 | 0 | 39.3 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 8 | 0 | 0 | 2.7 | D | 9.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 11 | 4 | 0 | 5.7 | F | 13.4 | PASS |
| 2 | 0 | 0 | 0.7 | B | 8.4 | PASS |
| 3 | 0 | 0 | 1.0 | C | * | INC |
| 17 | 0 | 0 | 5.7 | F | 9.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 139 | 14 | 0 | 53.3 | F | 17.7 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 7.5 | PASS |
| 8 | 2 | 0 | 3.7 | F | 12.0 | PASS |
| 6 | 0 | 1 | 2.7 | D | 6.4 | PASS |
| 128 | 25 | 0 | 55.2 | F | 21.5 | FAIL |
| 35 | 2 | 0 | 12.7 | F | 17.0 | FAIL |
| 1 | 1 | 0 | 0.8 | B | 5.3 | PASS |
| 53 | 4 | 0 | 19.7 | F | 15.6 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 6.5 | PASS |
| 32 | 1 | 0 | 11.2 | F | * | INC |
| 0 | 0 | 0 | 0.0 | A | 7.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 2 | 0 | 2.7 | D | 7.2 | PASS |
| 23 | 1 | 0 | 8.2 | F | * | INC |
| 3 | 0 | 0 | 1.0 | C | 9.6 | PASS |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------------|--------|-----|--------|----------|-------|
| Plumas | * | * | * | * | * |
| Riverside | 242 | 87 | 13 | 132.8 | F |
| Sacramento | 92 | 24 | 3 | 44.7 | F |
| San Benito | 21 | 0 | 0 | 7.0 | F |
| San Bernardino | 227 | 107 | 19 | 141.8 | F |
| San Diego | 91 | 7 | 0 | 33.8 | F |
| San Francisco | 0 | 0 | 0 | 0.0 | A |
| San Joaquin | 39 | 5 | 0 | 15.5 | F |
| San Luis Obispo | 93 | 2 | 0 | 32.0 | F |
| San Mateo | 0 | 0 | 0 | 0.0 | A |
| Santa Barbara | 18 | 0 | 0 | 6.0 | F |
| Santa Clara | 15 | 2 | 0 | 6.0 | F |
| Santa Cruz | 0 | 0 | 0 | 0.0 | A |
| Shasta | 30 | 1 | 0 | 10.5 | F |
| Siskiyou | 0 | 0 | 0 | 0.0 | A |
| Solano | 17 | 2 | 0 | 6.7 | F |
| Sonoma | 0 | 0 | 0 | 0.0 | A |
| Stanislaus | 51 | 7 | 2 | 21.8 | F |
| Sutter | 43 | 3 | 0 | 15.8 | F |
| Tehama | 65 | 1 | 0 | 22.2 | F |
| Tulare | 253 | 49 | 2 | 110.2 | F |
| Tuolumne | 43 | 5 | 0 | 16.8 | F |
| Ventura | 85 | 6 | 0 | 31.3 | F |
| Yolo | 23 | 1 | 0 | 8.2 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 13 | 6 | 0 | 7.3 | F | 12.6 | PASS |
| 76 | 4 | 0 | 27.3 | F | 19.7 | FAIL |
| 54 | 3 | 0 | 19.5 | F | * | INC |
| * | * | * | * | * | * | INC |
| 26 | 5 | 0 | 11.2 | F | 17.3 | FAIL |
| 21 | 3 | 0 | 8.5 | F | 13.2 | PASS |
| 8 | 0 | 0 | 2.7 | D | 9.4 | PASS |
| 26 | 1 | 0 | 9.2 | F | 13.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.1 | PASS |
| 1 | 1 | 0 | 0.8 | B | 9.0 | PASS |
| 1 | 0 | 0 | 0.3 | B | 10.0 | PASS |
| 21 | 0 | 0 | 7.0 | F | 11.0 | PASS |
| 0 | 0 | 0 | 0.0 | A | 6.7 | PASS |
| 2 | 2 | 1 | 2.3 | D | 9.6 | PASS |
| * | * | * | * | * | * | INC |
| 13 | 0 | 0 | 4.3 | F | 9.8 | PASS |
| 1 | 0 | 0 | 0.3 | B | 8.4 | PASS |
| 36 | 2 | 0 | 13.0 | F | 15.3 | FAIL |
| 12 | 6 | 0 | 7.0 | F | 10.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 43 | 2 | 0 | 15.3 | F | 19.7 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 10.9 | PASS |
| 9 | 0 | 0 | 3.0 | D | * | INC |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Adams | 430,836 | 123,803 | 34,523 | 11,654 | 24,742 | 12,774 | 4,152 | 98,437 | 17,051 | 51,042 |
| Arapahoe | 554,282 | 139,765 | 58,337 | 13,157 | 33,168 | 18,053 | 6,619 | 147,150 | 25,716 | 53,625 |
| Archuleta | 12,648 | 2,533 | 1,970 | 238 | 802 | 457 | 192 | 3,969 | 702 | 1,424 |
| Boulder | 293,161 | 61,778 | 25,555 | 5,816 | 18,609 | 9,854 | 3,292 | 77,091 | 13,361 | 29,232 |
| Delta | 30,923 | 6,607 | 6,158 | 622 | 1,915 | 1,109 | 516 | 10,101 | 1,807 | 3,640 |
| Denver | 598,707 | 148,235 | 62,198 | 13,954 | 36,161 | 19,015 | 6,680 | 151,477 | 26,430 | 105,987 |
| Douglas | 280,621 | 80,180 | 15,666 | 7,548 | 16,200 | 8,379 | 2,520 | 62,779 | 10,773 | 8,708 |
| El Paso | 596,053 | 154,267 | 57,160 | 14,522 | 35,455 | 18,871 | 6,601 | 150,405 | 26,196 | 61,423 |
| Elbert | 22,929 | 5,065 | 1,939 | 477 | 1,430 | 801 | 285 | 6,487 | 1,126 | 1,258 |
| Garfield | 55,426 | 14,975 | 4,980 | 1,410 | 3,248 | 1,730 | 598 | 13,726 | 2,387 | 4,041 |
| Gunnison | 15,147 | 2,725 | 1,084 | 257 | 1,006 | 505 | 149 | 3,738 | 642 | 1,717 |
| Jefferson | 533,339 | 119,848 | 62,521 | 11,282 | 32,966 | 18,496 | 7,125 | 154,575 | 27,097 | 40,139 |
| La Plata | 50,482 | 9,944 | 5,267 | 936 | 3,251 | 1,745 | 617 | 13,989 | 2,437 | 5,295 |
| Larimer | 292,825 | 62,736 | 31,675 | 5,906 | 18,457 | 9,794 | 3,473 | 78,441 | 13,689 | 33,125 |
| Mesa | 143,171 | 32,891 | 21,779 | 3,096 | 8,768 | 4,839 | 1,991 | 41,467 | 7,340 | 14,876 |
| Montezuma | 25,384 | 6,046 | 4,135 | 569 | 1,531 | 872 | 378 | 7,681 | 1,364 | 4,068 |
| Pueblo | 156,737 | 37,693 | 23,486 | 3,548 | 9,465 | 5,227 | 2,152 | 44,806 | 7,931 | 25,632 |
| San Miguel | 7,552 | 1,327 | 327 | 125 | 504 | 260 | 73 | 1,906 | 325 | 613 |
| Weld | 249,775 | 67,466 | 20,065 | 6,351 | 14,705 | 7,526 | 2,405 | 57,541 | 9,957 | 29,374 |
| Totals | 4,349,998 | 1,077,884 | 438,825 | 101,468 | 262,383 | 140,307 | 49,818 | 1,125,766 | 196,331 | 475,219 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Adams | 7 | 0 | 0 | 2.3 | D |
| Arapahoe | 16 | 0 | 0 | 5.3 | F |
| Archuleta | DNC | DNC | DNC | DNC | DNC |
| Boulder | 21 | 0 | 0 | 7.0 | F |
| Delta | DNC | DNC | DNC | DNC | DNC |
| Denver | 6 | 0 | 0 | 2.0 | C |
| Douglas | 36 | 0 | 0 | 12.0 | F |
| El Paso | 8 | 0 | 0 | 2.7 | D |
| Elbert | DNC | DNC | DNC | DNC | DNC |
| Garfield | * | * | * | * | * |
| Gunnison | DNC | DNC | DNC | DNC | DNC |
| Jefferson | 48 | 2 | 0 | 17.0 | F |
| La Plata | 2 | 0 | 0 | 0.7 | B |
| Larimer | 40 | 1 | 0 | 13.8 | F |
| Mesa | * | * | * | * | * |
| Montezuma | 2 | 0 | 0 | 0.7 | B |
| Pueblo | DNC | DNC | DNC | DNC | DNC |
| San Miguel | DNC | DNC | DNC | DNC | DNC |
| Weld | 11 | 0 | 0 | 3.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 4 | 0 | 0 | 1.3 | C | 10.0 | PASS |
| 2 | 0 | 0 | 0.7 | B | 7.6 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 0 | 0 | 0 | 0.0 | A | 8.2 | PASS |
| * | * | * | * | * | * | INC |
| 8 | 0 | 0 | 2.7 | D | 9.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 6.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 0 | 0 | 0 | 0.0 | A | 4.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 7.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | 9.4 | PASS |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 7.7 | PASS |
| * | * | * | * | * | * | INC |
| 3 | 0 | 0 | 1.0 | C | 9.3 | PASS |

CONNECTICUT

American Lung Association in Connecticut

45 Ash Street
 East Hartford, CT 06108-3272
 (860) 838-4376
www.lungusa.org/connecticut

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Fairfield | 895,030 | 223,180 | 118,119 | 21,009 | 57,917 | 29,990 | 12,062 | 255,174 | 46,563 | 71,553 |
| Hartford | 877,312 | 201,868 | 125,157 | 19,003 | 58,420 | 30,028 | 12,237 | 256,779 | 46,979 | 88,314 |
| Litchfield | 187,745 | 40,206 | 27,670 | 3,785 | 12,569 | 6,696 | 2,791 | 58,019 | 10,634 | 10,399 |
| Middlesex | 164,794 | 35,836 | 23,813 | 3,373 | 11,090 | 5,778 | 2,369 | 49,607 | 9,078 | 8,791 |
| New Haven | 846,101 | 195,441 | 116,806 | 18,398 | 56,656 | 28,648 | 11,448 | 242,533 | 44,270 | 89,679 |
| New London | 264,519 | 60,434 | 35,528 | 5,689 | 17,770 | 8,984 | 3,554 | 75,722 | 13,798 | 17,431 |
| Tolland | 148,406 | 29,404 | 16,441 | 2,768 | 10,529 | 5,110 | 1,833 | 41,174 | 7,400 | 9,076 |
| Totals | 3,383,907 | 786,369 | 463,534 | 74,025 | 224,952 | 115,234 | 46,294 | 979,008 | 178,722 | 295,243 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Fairfield | 54 | 11 | 1 | 24.2 | F |
| Hartford | 13 | 6 | 0 | 7.3 | F |
| Litchfield | 35 | 1 | 1 | 12.8 | F |
| Middlesex | 26 | 5 | 0 | 11.2 | F |
| New Haven | 27 | 6 | 0 | 12.0 | F |
| New London | 21 | 3 | 0 | 8.5 | F |
| Tolland | 27 | 6 | 0 | 12.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 10 | 0 | 0 | 3.3 | F | 12.4 | PASS |
| 5 | 0 | 0 | 1.7 | C | 10.1 | PASS |
| 3 | 0 | 0 | 1.0 | C | 7.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 21 | 0 | 0 | 7.0 | F | 12.2 | PASS |
| 6 | 0 | 0 | 2.0 | C | 10.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Kent | 155,415 | 39,423 | 20,254 | 3,711 | 11,108 | 5,045 | 1,974 | 42,244 | 9,516 | 16,237 |
| New Castle | 529,641 | 126,166 | 63,371 | 11,877 | 38,653 | 17,651 | 6,717 | 146,215 | 32,898 | 49,595 |
| Sussex | 188,036 | 40,640 | 38,063 | 3,826 | 13,506 | 6,715 | 3,145 | 61,354 | 14,046 | 22,146 |
| Totals | 873,092 | 206,229 | 121,688 | 19,414 | 63,267 | 29,411 | 11,836 | 249,813 | 56,460 | 87,978 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Kent | 22 | 0 | 0 | 7.3 | F |
| New Castle | 36 | 1 | 1 | 13.2 | F |
| Sussex | 35 | 0 | 0 | 11.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 2 | 0 | 0 | 0.7 | B | 11.8 | PASS |
| 19 | 0 | 0 | 6.3 | F | 14.2 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.7 | PASS |

DISTRICT OF COLUMBIA

American Lung Association in the District of Columbia

1-800-LUNG USA

www.lungusa.org/districtofcolumbia

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|----------------------|------------------|----------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| District of Columbia | 591,833 | 112,016 | 70,648 | 10,545 | 45,670 | 20,145 | 7,171 | 161,178 | 37,950 | 95,232 |
| Totals | 591,833 | 112,016 | 70,648 | 10,545 | 45,670 | 20,145 | 7,171 | 161,178 | 37,950 | 95,232 |

HIGH OZONE DAYS 2006-2008

| <u>County</u> | <u>Orange</u> | <u>Red</u> | <u>Purple</u> | <u>Wgt. Avg</u> | <u>Grade</u> |
|----------------------|---------------|------------|---------------|-----------------|--------------|
| District Of Columbia | 47 | 4 | 0 | 17.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| <u>24 Hour</u> | | | | | <u>Annual</u> | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| <u>Orange</u> | <u>Red</u> | <u>Purple</u> | <u>Wgt. Avg</u> | <u>Grade</u> | <u>Design Value</u> | <u>Pass/Fail</u> |
| 13 | 1 | 0 | 4.8 | F | 13.1 | PASS |

American Lung Association in Florida

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|--------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Alachua | 241,364 | 45,171 | 25,458 | 4,252 | 12,828 | 8,071 | 2,691 | 62,669 | 14,482 | 45,946 |
| Baker | 26,164 | 6,441 | 2,802 | 606 | 1,290 | 843 | 303 | 6,795 | 1,622 | 3,628 |
| Bay | 163,946 | 37,568 | 23,976 | 3,537 | 8,301 | 5,655 | 2,336 | 48,692 | 11,930 | 19,051 |
| Brevard | 536,521 | 106,610 | 110,037 | 10,036 | 28,411 | 19,743 | 9,266 | 180,788 | 44,527 | 56,466 |
| Broward | 1,751,234 | 405,592 | 253,835 | 38,181 | 88,385 | 60,021 | 24,680 | 515,535 | 126,050 | 208,162 |
| Citrus | 141,416 | 23,003 | 43,393 | 2,165 | 7,906 | 5,610 | 3,110 | 55,934 | 13,779 | 22,058 |
| Collier | 315,258 | 64,221 | 83,410 | 6,046 | 16,710 | 11,689 | 6,155 | 113,332 | 27,777 | 31,866 |
| Columbia | 69,092 | 15,568 | 10,508 | 1,466 | 3,519 | 2,350 | 965 | 20,123 | 4,853 | 11,615 |
| Duval | 850,962 | 218,123 | 91,984 | 20,533 | 41,406 | 27,529 | 10,173 | 225,072 | 54,472 | 101,194 |
| Escambia | 302,939 | 67,754 | 45,932 | 6,378 | 15,459 | 10,418 | 4,307 | 89,590 | 21,760 | 44,908 |
| Highlands | 100,011 | 18,399 | 32,239 | 1,732 | 5,464 | 3,850 | 2,206 | 39,014 | 9,539 | 16,494 |
| Hillsborough | 1,180,784 | 289,608 | 142,324 | 27,263 | 58,391 | 38,774 | 14,745 | 320,797 | 77,410 | 161,731 |
| Holmes | 19,328 | 4,077 | 3,216 | 384 | 1,004 | 669 | 282 | 5,793 | 1,392 | 3,678 |
| Lake | 307,243 | 59,803 | 89,451 | 5,630 | 16,518 | 11,507 | 6,290 | 113,635 | 27,685 | 31,061 |
| Lee | 593,136 | 123,320 | 136,033 | 11,609 | 31,152 | 21,523 | 10,594 | 201,480 | 49,224 | 62,235 |
| Leon | 264,063 | 53,930 | 23,506 | 5,077 | 13,714 | 8,692 | 2,798 | 66,658 | 15,546 | 46,763 |
| Manatee | 315,766 | 66,785 | 72,146 | 6,287 | 16,508 | 11,465 | 5,662 | 107,579 | 26,374 | 37,815 |
| Marion | 329,628 | 65,693 | 81,751 | 6,184 | 17,535 | 12,109 | 6,138 | 114,992 | 28,019 | 51,494 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|-------------------|------------------|------------------|------------------|----------------|--------------------|----------------|-------------------------|------------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Miami-Dade | 2,398,245 | 535,239 | 369,432 | 50,385 | 122,505 | 82,172 | 34,023 | 706,622 | 170,968 | 388,934 |
| Orange | 1,072,801 | 267,809 | 105,719 | 25,211 | 52,615 | 34,240 | 11,965 | 272,579 | 64,938 | 143,902 |
| Osceola | 263,676 | 68,014 | 30,693 | 6,403 | 12,820 | 8,350 | 3,091 | 68,081 | 16,176 | 30,965 |
| Palm Beach | 1,265,293 | 263,530 | 279,830 | 24,808 | 66,354 | 46,034 | 22,369 | 428,508 | 105,112 | 145,947 |
| Pasco | 471,028 | 99,038 | 99,053 | 9,323 | 24,615 | 16,824 | 7,938 | 154,088 | 37,474 | 61,285 |
| Pinellas | 910,260 | 171,115 | 192,193 | 16,108 | 48,857 | 34,392 | 16,379 | 317,698 | 78,877 | 96,869 |
| Polk | 580,594 | 139,886 | 101,822 | 13,168 | 29,069 | 19,589 | 8,633 | 173,401 | 41,924 | 86,702 |
| Santa Rosa | 150,053 | 34,207 | 18,014 | 3,220 | 7,586 | 5,114 | 1,959 | 42,542 | 10,393 | 15,552 |
| Sarasota | 372,057 | 59,946 | 113,273 | 5,643 | 20,829 | 14,918 | 8,264 | 148,862 | 36,896 | 36,035 |
| Seminole | 410,854 | 92,623 | 47,670 | 8,719 | 20,826 | 14,060 | 5,332 | 116,496 | 28,515 | 37,905 |
| St. Lucie | 265,108 | 59,663 | 52,566 | 5,616 | 13,582 | 9,211 | 4,251 | 83,384 | 20,191 | 33,941 |
| Volusia | 498,036 | 96,782 | 103,769 | 9,111 | 26,528 | 18,273 | 8,561 | 166,977 | 40,865 | 62,490 |
| Wakulla | 31,089 | 6,490 | 4,118 | 611 | 1,613 | 1,070 | 413 | 8,904 | 2,144 | 3,773 |
| Totals | 16,197,949 | 3,566,008 | 2,790,153 | 335,692 | 832,301 | 564,765 | 245,879 | 4,976,620 | 1,210,916 | 2,100,465 |

FLORIDA

American Lung Association in Florida

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

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|--------------|--------|-----|--------|----------|-------|
| Alachua | 8 | 0 | 0 | 2.7 | D |
| Baker | 2 | 0 | 0 | 0.7 | B |
| Bay | 14 | 0 | 0 | 4.7 | F |
| Brevard | 6 | 0 | 0 | 2.0 | C |
| Broward | 5 | 0 | 0 | 1.7 | C |
| Citrus | DNC | DNC | DNC | DNC | DNC |
| Collier | 1 | 0 | 0 | 0.3 | B |
| Columbia | 2 | 0 | 0 | 0.7 | B |
| Duval | 14 | 0 | 0 | 4.7 | F |
| Escambia | 37 | 0 | 0 | 12.3 | F |
| Highlands | 7 | 0 | 0 | 2.3 | D |
| Hillsborough | 33 | 2 | 0 | 12.0 | F |
| Holmes | 2 | 0 | 0 | 0.7 | B |
| Lake | 8 | 0 | 0 | 2.7 | D |
| Lee | 3 | 0 | 0 | 1.0 | C |
| Leon | 6 | 0 | 0 | 2.0 | C |
| Manatee | 10 | 0 | 0 | 3.3 | F |
| Marion | 5 | 0 | 0 | 1.7 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 5 | 0 | 0 | 1.7 | C | 9.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 10.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | 7.9 | PASS |
| 7 | 0 | 0 | 2.3 | D | 8.1 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 3 | 0 | 3.2 | D | 9.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | 10.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 2 | 0 | 1.3 | C | 9.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 7.8 | PASS |
| 2 | 1 | 0 | 1.2 | C | 11.7 | PASS |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Miami-Dade | 11 | 1 | 0 | 4.2 | F |
| Orange | 16 | 0 | 0 | 5.3 | F |
| Osceola | 6 | 0 | 0 | 2.0 | C |
| Palm Beach | 4 | 0 | 0 | 1.3 | C |
| Pasco | 12 | 0 | 0 | 4.0 | F |
| Pinellas | 7 | 0 | 0 | 2.3 | D |
| Polk | 13 | 0 | 0 | 4.3 | F |
| Santa Rosa | 32 | 0 | 0 | 10.7 | F |
| Sarasota | 13 | 0 | 0 | 4.3 | F |
| Seminole | 8 | 0 | 0 | 2.7 | D |
| St. Lucie | 0 | 0 | 0 | 0.0 | A |
| Volusia | 2 | 0 | 0 | 0.7 | B |
| Wakulla | 3 | 0 | 0 | 1.0 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 4 | 0 | 0 | 1.3 | C | 8.8 | PASS |
| 2 | 1 | 0 | 1.2 | C | 8.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 7.2 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 1 | 0 | 1.2 | C | 9.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 8.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 7.9 | PASS |
| 0 | 1 | 0 | 0.5 | B | 8.8 | PASS |
| 1 | 0 | 0 | 0.3 | B | 8.0 | PASS |
| 2 | 1 | 0 | 1.2 | C | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Georgia

2452 Spring Road
 Smyrna, GA 30080-3862
 (770) 434-5864
www.lungusa.org/georgia

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Bibb | 155,216 | 41,727 | 20,251 | 3,928 | 9,484 | 4,994 | 1,990 | 42,225 | 12,257 | 32,923 |
| Chatham | 251,120 | 64,054 | 31,445 | 6,030 | 15,700 | 8,098 | 3,114 | 67,255 | 19,527 | 40,699 |
| Chattooga | 26,801 | 5,997 | 3,940 | 565 | 1,744 | 906 | 365 | 7,676 | 2,228 | 4,470 |
| Clarke | 114,737 | 22,621 | 9,846 | 2,129 | 7,933 | 3,587 | 1,036 | 26,093 | 7,587 | 32,560 |
| Clayton | 273,718 | 80,762 | 18,664 | 7,603 | 16,334 | 8,035 | 2,517 | 61,071 | 17,757 | 39,619 |
| Cobb | 698,158 | 182,460 | 59,274 | 17,176 | 43,312 | 22,154 | 7,564 | 175,077 | 50,882 | 62,563 |
| Columbia | 110,627 | 29,884 | 10,144 | 2,813 | 6,755 | 3,522 | 1,254 | 28,380 | 8,246 | 7,287 |
| Coweta | 122,924 | 34,427 | 11,480 | 3,241 | 7,463 | 3,751 | 1,300 | 29,747 | 8,643 | 11,675 |
| Dawson | 22,006 | 5,535 | 2,571 | 521 | 1,384 | 709 | 264 | 5,805 | 1,686 | 2,320 |
| Dekalb | 739,956 | 177,921 | 63,940 | 16,749 | 47,358 | 23,853 | 7,994 | 186,713 | 54,267 | 113,247 |
| Dougherty | 95,754 | 25,778 | 12,604 | 2,427 | 5,863 | 3,052 | 1,210 | 25,705 | 7,462 | 23,375 |
| Douglas | 127,932 | 36,663 | 9,266 | 3,451 | 7,713 | 3,826 | 1,225 | 29,360 | 8,536 | 12,544 |
| Fayette | 106,465 | 24,339 | 12,585 | 2,291 | 6,802 | 3,720 | 1,457 | 31,368 | 9,109 | 4,981 |
| Floyd | 95,980 | 23,829 | 13,797 | 2,243 | 6,042 | 3,156 | 1,281 | 26,867 | 7,798 | 16,862 |
| Fulton | 1,014,932 | 253,320 | 82,006 | 23,847 | 64,183 | 32,288 | 10,655 | 251,177 | 73,012 | 146,956 |
| Glynn | 75,884 | 19,071 | 11,007 | 1,795 | 4,736 | 2,526 | 1,045 | 21,749 | 6,312 | 12,767 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Gwinnett | 789,499 | 229,440 | 50,390 | 21,599 | 47,272 | 23,564 | 7,374 | 179,401 | 52,168 | 75,096 |
| Hall | 184,814 | 53,062 | 18,757 | 4,995 | 11,132 | 5,550 | 1,963 | 44,315 | 12,873 | 25,805 |
| Henry | 191,502 | 57,052 | 14,428 | 5,371 | 11,397 | 5,575 | 1,781 | 42,649 | 12,398 | 15,418 |
| Houston | 133,161 | 35,886 | 14,200 | 3,378 | 8,166 | 4,199 | 1,540 | 34,184 | 9,929 | 14,773 |
| Lowndes | 104,583 | 27,406 | 10,194 | 2,580 | 6,547 | 3,199 | 1,083 | 25,025 | 7,271 | 18,956 |
| Murray | 40,304 | 11,124 | 3,778 | 1,047 | 2,458 | 1,242 | 433 | 9,874 | 2,869 | 5,472 |
| Muscogee | 186,984 | 50,574 | 22,961 | 4,761 | 11,426 | 5,948 | 2,305 | 49,618 | 14,406 | 32,952 |
| Paulding | 133,135 | 40,982 | 8,561 | 3,858 | 7,850 | 3,744 | 1,118 | 27,816 | 8,089 | 10,100 |
| Richmond | 199,486 | 52,044 | 24,195 | 4,899 | 12,371 | 6,386 | 2,438 | 52,876 | 15,353 | 45,383 |
| Rockdale | 83,222 | 22,309 | 8,037 | 2,100 | 5,104 | 2,643 | 948 | 21,337 | 6,199 | 10,534 |
| Sumter | 32,449 | 8,662 | 4,240 | 815 | 1,997 | 1,030 | 404 | 8,624 | 2,504 | 8,757 |
| Walker | 64,799 | 15,213 | 9,398 | 1,432 | 4,142 | 2,188 | 892 | 18,692 | 5,425 | 9,623 |
| Washington | 21,006 | 4,918 | 2,822 | 463 | 1,347 | 702 | 276 | 5,894 | 1,711 | 4,560 |
| Wilkinson | 10,026 | 2,559 | 1,467 | 241 | 622 | 333 | 139 | 2,873 | 834 | 1,908 |
| Totals | 6,207,180 | 1,639,619 | 566,248 | 154,348 | 384,637 | 194,480 | 66,965 | 1,539,446 | 447,338 | 844,185 |

American Lung Association in Georgia

2452 Spring Road
 Smyrna, GA 30080-3862
 (770) 434-5864
www.lungusa.org/georgia

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------|--------|-----|--------|----------|-------|
| Bibb | 27 | 2 | 0 | 10.0 | F |
| Chatham | 1 | 0 | 0 | 0.3 | B |
| Chattooga | 12 | 1 | 0 | 4.5 | F |
| Clarke | 33 | 0 | 0 | 11.0 | F |
| Clayton | DNC | DNC | DNC | DNC | DNC |
| Cobb | 43 | 1 | 0 | 14.8 | F |
| Columbia | 9 | 0 | 0 | 3.0 | D |
| Coweta | 25 | 1 | 0 | 8.8 | F |
| Dawson | 13 | 0 | 0 | 4.3 | F |
| Dekalb | 51 | 8 | 2 | 22.3 | F |
| Dougherty | DNC | DNC | DNC | DNC | DNC |
| Douglas | 46 | 4 | 0 | 17.3 | F |
| Fayette | 35 | 6 | 0 | 14.7 | F |
| Floyd | DNC | DNC | DNC | DNC | DNC |
| Fulton | 45 | 8 | 2 | 20.3 | F |
| Glynn | 1 | 0 | 0 | 0.3 | B |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 17 | 1 | 0 | 6.2 | F | 15.1 | FAIL |
| 3 | 0 | 0 | 1.0 | C | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 5 | 0 | 0 | 1.7 | C | 15.2 | FAIL |
| 7 | 1 | 0 | 2.8 | D | 15.1 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 11 | 1 | 0 | 4.2 | F | 14.3 | PASS |
| 6 | 1 | 0 | 2.5 | D | 13.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 13 | 0 | 0 | 4.3 | F | * | INC |
| 15 | 2 | 0 | 6.0 | F | * | INC |
| 2 | 0 | 0 | 0.7 | B | 11.0 | PASS |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Gwinnett | 49 | 4 | 1 | 19.0 | F |
| Hall | DNC | DNC | DNC | DNC | DNC |
| Henry | 39 | 10 | 0 | 18.0 | F |
| Houston | DNC | DNC | DNC | DNC | DNC |
| Lowndes | DNC | DNC | DNC | DNC | DNC |
| Murray | 23 | 0 | 0 | 7.7 | F |
| Muscogee | 12 | 0 | 0 | 4.0 | F |
| Paulding | 24 | 1 | 0 | 8.5 | F |
| Richmond | 16 | 0 | 0 | 5.3 | F |
| Rockdale | 46 | 9 | 0 | 19.8 | F |
| Sumter | 8 | 0 | 0 | 2.7 | D |
| Walker | DNC | DNC | DNC | DNC | DNC |
| Washington | DNC | DNC | DNC | DNC | DNC |
| Wilkinson | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 14.5 | PASS |
| 2 | 0 | 0 | 0.7 | B | 13.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 2 | 0 | 2.3 | D | * | INC |
| 0 | 1 | 0 | 0.5 | B | 11.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 1 | 0 | 2.2 | D | 14.4 | PASS |
| 3 | 0 | 0 | 1.0 | C | 13.4 | PASS |
| 3 | 0 | 0 | 1.0 | C | 14.8 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | * | INC |
| 2 | 0 | 0 | 0.7 | B | 14.2 | PASS |
| 3 | 0 | 0 | 1.0 | C | * | INC |

American Lung Association in Hawaii

630 Iwilei Road, Suite 575
 Honolulu, HI 96817
 (808) 537-5966
www.lungusa.org/hawaii

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Honolulu | 905,034 | 199,268 | 138,930 | 18,758 | 67,174 | 30,963 | 12,726 | 265,169 | 59,018 | 74,601 |
| Maui | 143,574 | 32,328 | 17,393 | 3,043 | 10,723 | 4,866 | 1,849 | 40,283 | 8,939 | 12,798 |
| Totals | 1,048,608 | 231,596 | 156,323 | 21,801 | 77,896 | 35,829 | 14,575 | 305,452 | 67,958 | 87,399 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Honolulu | 0 | 0 | 0 | 0.0 | A |
| Maui | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 5.2 | PASS |
| 0 | 0 | 0 | 0.0 | A | 4.9 | PASS |

American Lung Association in Idaho

1412 W. Idaho St. Suite 100
 Boise, ID 83702
 (208) 345-5864
www.lungusa.org/idaho

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|------------------|---------------|--------------------|---------------|---------------|-------------------------|---------------|---------------------------|
| | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | | |
| Ada | 380,920 | 100,462 | 38,529 | 9,457 | 24,776 | 12,012 | 4,289 | 96,576 | 18,901 | 33,406 |
| Bannock | 80,812 | 23,134 | 8,364 | 2,178 | 5,080 | 2,467 | 893 | 19,943 | 3,913 | 11,065 |
| Benewah | 9,352 | 2,227 | 1,577 | 210 | 637 | 329 | 147 | 2,952 | 620 | 1,380 |
| Butte | 2,751 | 711 | 455 | 67 | 183 | 96 | 43 | 863 | 182 | 407 |
| Canyon | 183,939 | 57,714 | 19,223 | 5,433 | 11,010 | 5,316 | 1,920 | 42,801 | 8,345 | 27,003 |
| Franklin | 12,454 | 4,064 | 1,488 | 383 | 736 | 364 | 143 | 3,049 | 612 | 1,154 |
| Gem | 16,513 | 4,044 | 2,973 | 381 | 1,097 | 564 | 255 | 5,069 | 1,061 | 2,412 |
| Idaho | 15,448 | 3,089 | 3,066 | 291 | 1,103 | 579 | 272 | 5,320 | 1,133 | 2,788 |
| Kootenai | 137,475 | 33,733 | 19,680 | 3,175 | 9,164 | 4,595 | 1,881 | 39,345 | 8,019 | 12,800 |
| Lemhi | 7,808 | 1,584 | 1,461 | 149 | 559 | 293 | 135 | 2,669 | 567 | 1,195 |
| Shoshone | 12,913 | 2,609 | 2,453 | 246 | 922 | 482 | 223 | 4,401 | 934 | 2,307 |
| Totals | 860,385 | 233,371 | 99,269 | 21,970 | 55,266 | 27,097 | 10,201 | 222,988 | 44,288 | 95,917 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|----------|--------|-----|--------|----------|-------|
| Ada | 20 | 0 | 0 | 6.7 | F |
| Bannock | DNC | DNC | DNC | DNC | DNC |
| Benewah | DNC | DNC | DNC | DNC | DNC |
| Butte | 0 | 0 | 0 | 0.0 | A |
| Canyon | * | * | * | * | * |
| Franklin | DNC | DNC | DNC | DNC | DNC |
| Gem | DNC | DNC | DNC | DNC | DNC |
| Idaho | DNC | DNC | DNC | DNC | DNC |
| Kootenai | 0 | 0 | 0 | 0.0 | A |
| Lemhi | DNC | DNC | DNC | DNC | DNC |
| Shoshone | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| * | * | * | * | * | * | INC |
| 2 | 0 | 0 | 0.7 | B | 9.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| 5 | 0 | 0 | 1.7 | C | * | INC |
| * | * | * | * | * | * | INC |
| 3 | 0 | 0 | 1.0 | C | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 10 | 0 | 0 | 3.3 | F | 11.7 | PASS |

American Lung Association in Illinois

3000 Kelly Lane
 Springfield, IL 62711
 (217) 787-5864
www.lungusa.org/illinois

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|-------------------|------------------|------------------|------------------|----------------|--------------------|----------------|-------------------------|----------------|---------------------------|
| | Total | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Adams | 66,897 | 15,086 | 11,803 | 1,420 | 4,103 | 2,320 | 1,023 | 20,565 | 4,882 | 7,985 |
| Champaign | 193,636 | 38,473 | 19,124 | 3,622 | 12,007 | 6,233 | 1,978 | 47,265 | 10,476 | 32,595 |
| Clark | 16,834 | 3,742 | 2,964 | 352 | 1,037 | 588 | 259 | 5,214 | 1,240 | 2,014 |
| Cook | 5,294,664 | 1,313,534 | 624,187 | 123,651 | 311,719 | 171,660 | 64,274 | 1,408,857 | 329,408 | 767,182 |
| Dupage | 930,528 | 230,196 | 100,835 | 21,670 | 54,905 | 30,785 | 11,479 | 253,078 | 60,111 | 52,767 |
| Effingham | 34,275 | 8,527 | 5,214 | 803 | 2,032 | 1,143 | 480 | 9,901 | 2,347 | 3,643 |
| Hamilton | 8,267 | 1,681 | 1,712 | 158 | 524 | 301 | 142 | 2,757 | 660 | 1,046 |
| Jersey | 22,622 | 4,875 | 3,471 | 459 | 1,399 | 783 | 323 | 6,720 | 1,587 | 2,137 |
| Kane | 507,579 | 149,130 | 43,543 | 14,039 | 27,904 | 15,147 | 5,136 | 119,009 | 27,553 | 44,955 |
| Lake | 712,453 | 195,723 | 68,863 | 18,425 | 40,395 | 22,380 | 8,028 | 180,638 | 42,529 | 53,114 |
| Lasalle | 112,474 | 25,932 | 17,977 | 2,441 | 6,836 | 3,855 | 1,636 | 33,565 | 7,965 | 11,409 |
| Macon | 108,328 | 24,654 | 17,437 | 2,321 | 6,619 | 3,764 | 1,613 | 32,967 | 7,873 | 14,164 |
| Macoupin | 48,138 | 10,398 | 8,071 | 979 | 2,984 | 1,685 | 725 | 14,766 | 3,507 | 5,870 |
| Madison | 268,078 | 61,931 | 37,811 | 5,830 | 16,217 | 9,045 | 3,628 | 76,653 | 18,072 | 32,953 |
| Mchenry | 318,641 | 85,173 | 32,125 | 8,018 | 18,247 | 10,064 | 3,623 | 81,274 | 19,056 | 16,437 |
| Mclean | 165,298 | 37,593 | 16,322 | 3,539 | 9,922 | 5,284 | 1,767 | 41,128 | 9,351 | 17,484 |
| Peoria | 183,655 | 45,056 | 25,586 | 4,241 | 10,903 | 6,078 | 2,442 | 51,540 | 12,145 | 26,464 |
| Randolph | 32,641 | 6,618 | 4,937 | 623 | 2,047 | 1,137 | 459 | 9,654 | 2,267 | 4,163 |
| Rock Island | 146,886 | 33,097 | 23,243 | 3,116 | 8,982 | 5,052 | 2,126 | 43,807 | 10,379 | 17,017 |
| Sangamon | 194,925 | 45,570 | 27,236 | 4,290 | 11,767 | 6,639 | 2,691 | 56,638 | 13,474 | 21,830 |
| St. Clair | 262,291 | 66,660 | 33,180 | 6,275 | 15,355 | 8,520 | 3,306 | 71,095 | 16,709 | 39,322 |
| Will | 681,097 | 192,551 | 57,505 | 18,126 | 37,988 | 20,509 | 6,834 | 159,846 | 36,835 | 43,879 |
| Winnebago | 300,252 | 74,672 | 39,417 | 7,029 | 17,723 | 9,862 | 3,879 | 82,824 | 19,504 | 40,840 |
| Totals | 10,610,459 | 2,670,872 | 1,222,563 | 251,427 | 621,614 | 342,834 | 127,851 | 2,809,761 | 657,929 | 1,259,270 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-------------|--------|-----|--------|----------|-------|
| Adams | 4 | 0 | 0 | 1.3 | C |
| Champaign | 1 | 0 | 0 | 0.3 | B |
| Clark | 2 | 0 | 0 | 0.7 | B |
| Cook | 23 | 2 | 0 | 8.7 | F |
| Dupage | 1 | 0 | 0 | 0.3 | B |
| Effingham | 4 | 0 | 0 | 1.3 | C |
| Hamilton | 4 | 0 | 0 | 1.3 | C |
| Jersey | 6 | 0 | 0 | 2.0 | C |
| Kane | 3 | 0 | 0 | 1.0 | C |
| Lake | 9 | 0 | 0 | 3.0 | D |
| Lasalle | DNC | DNC | DNC | DNC | DNC |
| Macon | 6 | 0 | 0 | 2.0 | C |
| Macoupin | 1 | 0 | 0 | 0.3 | B |
| Madison | 35 | 1 | 0 | 12.2 | F |
| Mchenry | 2 | 0 | 0 | 0.7 | B |
| Mclean | 5 | 0 | 0 | 1.7 | C |
| Peoria | 7 | 0 | 0 | 2.3 | D |
| Randolph | 9 | 0 | 0 | 3.0 | D |
| Rock Island | 1 | 0 | 0 | 0.3 | B |
| Sangamon | 2 | 0 | 0 | 0.7 | B |
| St. Clair | 8 | 2 | 0 | 3.7 | F |
| Will | 2 | 0 | 0 | 0.7 | B |
| Winnebago | 1 | 0 | 0 | 0.3 | B |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 0 | 0 | 0 | 0.0 | A | 11.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 26 | 0 | 0 | 8.7 | F | * | INC |
| 3 | 0 | 0 | 1.0 | C | 12.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 12.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.6 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 10.6 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 2 | 0 | 0 | 0.7 | B | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 10 | 0 | 0 | 3.3 | F | 15.7 | FAIL |
| 1 | 0 | 0 | 0.3 | B | 11.2 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.5 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.0 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.2 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.9 | PASS |
| 0 | 0 | 0 | 0.0 | A | 14.2 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.8 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.8 | PASS |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Allen | 350,523 | 94,318 | 41,146 | 8,879 | 23,517 | 11,210 | 4,296 | 93,135 | 24,806 | 39,724 |
| Boone | 55,027 | 14,421 | 6,483 | 1,358 | 3,734 | 1,788 | 688 | 14,897 | 3,974 | 3,480 |
| Carroll | 19,864 | 4,550 | 2,995 | 428 | 1,409 | 688 | 288 | 5,958 | 1,596 | 1,663 |
| Clark | 106,673 | 25,813 | 13,601 | 2,430 | 7,416 | 3,540 | 1,377 | 29,603 | 7,886 | 11,286 |
| Delaware | 114,685 | 23,390 | 16,813 | 2,202 | 8,319 | 3,930 | 1,550 | 32,960 | 8,743 | 18,404 |
| Dubois | 41,449 | 10,238 | 6,008 | 964 | 2,868 | 1,391 | 575 | 11,976 | 3,204 | 3,044 |
| Elkhart | 199,137 | 56,365 | 22,491 | 5,306 | 13,068 | 6,172 | 2,321 | 50,769 | 13,481 | 24,654 |
| Floyd | 73,780 | 17,462 | 9,518 | 1,644 | 5,189 | 2,508 | 994 | 21,196 | 5,669 | 8,269 |
| Gibson | 32,666 | 7,612 | 4,905 | 717 | 2,304 | 1,121 | 468 | 9,698 | 2,597 | 3,813 |
| Greene | 32,577 | 7,419 | 5,096 | 698 | 2,312 | 1,127 | 477 | 9,808 | 2,627 | 4,361 |
| Hamilton | 269,785 | 79,486 | 21,492 | 7,483 | 17,439 | 8,090 | 2,712 | 63,355 | 16,744 | 11,263 |
| Hancock | 67,282 | 16,866 | 8,438 | 1,588 | 4,629 | 2,215 | 864 | 18,553 | 4,947 | 3,778 |
| Hendricks | 137,240 | 35,734 | 13,896 | 3,364 | 9,292 | 4,348 | 1,551 | 34,942 | 9,255 | 6,866 |
| Henry | 47,162 | 10,320 | 7,766 | 971 | 3,388 | 1,660 | 715 | 14,581 | 3,910 | 5,588 |
| Howard | 83,381 | 20,222 | 12,669 | 1,904 | 5,814 | 2,844 | 1,204 | 24,782 | 6,645 | 10,903 |
| Huntington | 37,570 | 8,741 | 5,658 | 823 | 2,648 | 1,285 | 535 | 11,098 | 2,969 | 3,886 |
| Jackson | 42,193 | 10,406 | 6,129 | 980 | 2,914 | 1,405 | 577 | 12,049 | 3,217 | 4,359 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Johnson | 139,158 | 35,725 | 16,033 | 3,363 | 9,468 | 4,467 | 1,669 | 36,644 | 9,727 | 10,153 |
| Knox | 38,057 | 8,036 | 6,308 | 756 | 2,747 | 1,328 | 563 | 11,547 | 3,084 | 5,949 |
| Lake | 493,800 | 127,626 | 64,372 | 12,014 | 33,680 | 16,257 | 6,504 | 137,886 | 36,854 | 81,485 |
| Laporte | 110,888 | 25,448 | 15,450 | 2,396 | 7,847 | 3,781 | 1,522 | 32,135 | 8,582 | 13,130 |
| Madison | 131,501 | 29,819 | 20,896 | 2,807 | 9,329 | 4,535 | 1,920 | 39,457 | 10,557 | 18,268 |
| Marion | 880,380 | 236,434 | 96,052 | 22,257 | 58,985 | 27,808 | 10,270 | 227,001 | 60,257 | 141,836 |
| Morgan | 70,668 | 17,322 | 8,376 | 1,631 | 4,910 | 2,354 | 904 | 19,598 | 5,231 | 7,361 |
| Perry | 18,929 | 3,886 | 2,817 | 366 | 1,379 | 663 | 269 | 5,647 | 1,507 | 2,059 |
| Porter | 162,181 | 38,139 | 19,205 | 3,590 | 11,405 | 5,447 | 2,072 | 45,149 | 12,036 | 13,728 |
| Posey | 26,079 | 5,791 | 3,407 | 545 | 1,877 | 916 | 368 | 7,804 | 2,094 | 2,587 |
| Shelby | 44,186 | 10,584 | 5,826 | 996 | 3,089 | 1,486 | 590 | 12,558 | 3,354 | 4,695 |
| Spencer | 20,111 | 4,576 | 3,034 | 431 | 1,432 | 702 | 295 | 6,103 | 1,638 | 1,856 |
| St. Joseph | 266,680 | 67,369 | 34,647 | 6,342 | 18,271 | 8,732 | 3,436 | 73,380 | 19,551 | 36,910 |
| Tippecanoe | 164,237 | 35,280 | 15,715 | 3,321 | 11,638 | 5,189 | 1,645 | 39,346 | 10,229 | 27,085 |
| Vanderburgh | 174,729 | 40,419 | 25,619 | 3,805 | 12,310 | 5,927 | 2,422 | 50,685 | 13,527 | 28,309 |
| Vigo | 105,968 | 23,217 | 14,516 | 2,186 | 7,557 | 3,578 | 1,393 | 29,866 | 7,931 | 18,942 |
| Warrick | 57,656 | 13,801 | 7,099 | 1,299 | 4,045 | 1,955 | 765 | 16,439 | 4,398 | 4,379 |
| Totals | 4,616,202 | 1,166,835 | 564,476 | 109,844 | 316,227 | 150,447 | 57,799 | 1,250,605 | 332,825 | 584,073 |

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 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Allen | 11 | 0 | 0 | 3.7 | F |
| Boone | 15 | 0 | 0 | 5.0 | F |
| Carroll | 5 | 0 | 0 | 1.7 | C |
| Clark | 35 | 0 | 0 | 11.7 | F |
| Delaware | 10 | 0 | 0 | 3.3 | F |
| Dubois | DNC | DNC | DNC | DNC | DNC |
| Elkhart | 10 | 0 | 0 | 3.3 | F |
| Floyd | 22 | 3 | 0 | 8.8 | F |
| Gibson | DNC | DNC | DNC | DNC | DNC |
| Greene | 20 | 0 | 0 | 6.7 | F |
| Hamilton | 27 | 0 | 0 | 9.0 | F |
| Hancock | 15 | 0 | 0 | 5.0 | F |
| Hendricks | 10 | 0 | 0 | 3.3 | F |
| Henry | DNC | DNC | DNC | DNC | DNC |
| Howard | DNC | DNC | DNC | DNC | DNC |
| Huntington | 6 | 0 | 0 | 2.0 | C |
| Jackson | 11 | 0 | 0 | 3.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 3 | 0 | 0 | 1.0 | C | 12.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 20 | 0 | 0 | 6.7 | F | 15.3 | FAIL |
| 3 | 0 | 0 | 1.0 | C | 12.3 | PASS |
| 10 | 0 | 0 | 3.3 | F | 13.7 | PASS |
| 5 | 1 | 0 | 2.2 | D | * | INC |
| 6 | 0 | 0 | 2.0 | C | 13.6 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| 2 | 0 | 0 | 0.7 | B | 12.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-------------|--------|-----|--------|----------|-------|
| Johnson | 22 | 0 | 0 | 7.3 | F |
| Knox | DNC | DNC | DNC | DNC | DNC |
| Lake | 21 | 0 | 0 | 7.0 | F |
| Laporte | 12 | 0 | 0 | 4.0 | F |
| Madison | 8 | 0 | 0 | 2.7 | D |
| Marion | 29 | 0 | 0 | 9.7 | F |
| Morgan | 21 | 0 | 0 | 7.0 | F |
| Perry | 19 | 0 | 0 | 6.3 | F |
| Porter | 12 | 0 | 0 | 4.0 | F |
| Posey | 14 | 0 | 0 | 4.7 | F |
| Shelby | 22 | 0 | 0 | 7.3 | F |
| Spencer | DNC | DNC | DNC | DNC | DNC |
| St. Joseph | 6 | 0 | 0 | 2.0 | C |
| Tippecanoe | DNC | DNC | DNC | DNC | DNC |
| Vanderburgh | 39 | 0 | 0 | 13.0 | F |
| Vigo | 10 | 0 | 0 | 3.3 | F |
| Warrick | 23 | 0 | 0 | 7.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 12.9 | PASS |
| 8 | 0 | 0 | 2.7 | D | 13.3 | PASS |
| 3 | 0 | 0 | 1.0 | C | 11.5 | PASS |
| 5 | 0 | 0 | 1.7 | C | 12.6 | PASS |
| 21 | 0 | 0 | 7.0 | F | 14.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 12.2 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 13.0 | PASS |
| 5 | 0 | 0 | 1.7 | C | 12.0 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.2 | PASS |
| 3 | 0 | 0 | 1.0 | C | 13.7 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.2 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Iowa

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Black Hawk | 128,347 | 28,782 | 17,978 | 2,709 | 7,718 | 4,330 | 1,713 | 36,429 | 6,755 | 18,112 |
| Bremer | 23,690 | 5,023 | 4,048 | 473 | 1,431 | 833 | 360 | 7,312 | 1,382 | 1,579 |
| Clinton | 48,942 | 11,450 | 8,115 | 1,078 | 2,847 | 1,702 | 744 | 15,061 | 2,863 | 5,797 |
| Delaware | 17,301 | 4,119 | 2,808 | 388 | 999 | 601 | 262 | 5,314 | 1,011 | 1,613 |
| Harrison | 15,222 | 3,522 | 2,622 | 332 | 887 | 533 | 237 | 4,756 | 907 | 1,612 |
| Johnson | 128,094 | 26,882 | 10,417 | 2,531 | 8,102 | 4,083 | 1,237 | 30,450 | 5,299 | 18,812 |
| Lee | 35,408 | 7,813 | 5,846 | 735 | 2,084 | 1,264 | 553 | 11,199 | 2,134 | 4,916 |
| Linn | 208,574 | 51,914 | 26,754 | 4,887 | 12,110 | 6,841 | 2,667 | 57,231 | 10,604 | 18,880 |
| Montgomery | 10,870 | 2,473 | 2,192 | 233 | 629 | 392 | 187 | 3,631 | 703 | 1,508 |
| Muscatine | 42,504 | 11,032 | 5,203 | 1,039 | 2,412 | 1,396 | 547 | 11,737 | 2,186 | 5,000 |
| Palo Alto | 9,345 | 1,965 | 1,978 | 185 | 558 | 340 | 163 | 3,144 | 607 | 1,022 |
| Polk | 424,778 | 113,063 | 47,435 | 10,643 | 24,184 | 13,483 | 5,019 | 110,456 | 20,279 | 41,185 |
| Pottawattamie | 89,647 | 22,188 | 12,314 | 2,089 | 5,173 | 2,995 | 1,213 | 25,533 | 4,777 | 10,128 |
| Scott | 164,690 | 41,973 | 20,670 | 3,951 | 9,411 | 5,437 | 2,142 | 45,801 | 8,533 | 19,090 |
| Story | 86,754 | 15,909 | 8,935 | 1,498 | 5,701 | 2,836 | 902 | 21,506 | 3,759 | 13,524 |
| Van Buren | 7,676 | 1,733 | 1,449 | 163 | 450 | 272 | 125 | 2,463 | 472 | 1,083 |
| Warren | 45,059 | 10,466 | 6,032 | 985 | 2,666 | 1,520 | 600 | 12,797 | 2,379 | 2,940 |
| Woodbury | 102,559 | 28,333 | 13,339 | 2,667 | 5,705 | 3,280 | 1,316 | 27,835 | 5,195 | 14,147 |
| Wright | 12,903 | 2,948 | 2,724 | 278 | 742 | 470 | 230 | 4,411 | 859 | 1,291 |
| Totals | 1,602,363 | 391,588 | 200,859 | 36,864 | 93,811 | 52,608 | 20,217 | 437,066 | 80,701 | 182,239 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|--------|-----|--------|----------|-------|
| Black Hawk | DNC | DNC | DNC | DNC | DNC |
| Bremer | 2 | 0 | 0 | 0.7 | B |
| Clinton | 2 | 0 | 0 | 0.7 | B |
| Delaware | DNC | DNC | DNC | DNC | DNC |
| Harrison | 3 | 0 | 0 | 1.0 | C |
| Johnson | DNC | DNC | DNC | DNC | DNC |
| Lee | DNC | DNC | DNC | DNC | DNC |
| Linn | 5 | 0 | 0 | 1.7 | C |
| Montgomery | 2 | 0 | 0 | 0.7 | B |
| Muscatine | DNC | DNC | DNC | DNC | DNC |
| Palo Alto | 0 | 0 | 0 | 0.0 | A |
| Polk | 0 | 0 | 0 | 0.0 | A |
| Pottawattamie | DNC | DNC | DNC | DNC | DNC |
| Scott | 1 | 0 | 0 | 0.3 | B |
| Story | 3 | 0 | 0 | 1.0 | C |
| Van Buren | 3 | 0 | 0 | 1.0 | C |
| Warren | 1 | 0 | 0 | 0.3 | B |
| Woodbury | DNC | DNC | DNC | DNC | DNC |
| Wright | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 5 | 0 | 0 | 1.7 | C | 10.9 | PASS |
| * | * | * | * | * | * | INC |
| 11 | 0 | 0 | 3.7 | F | 11.7 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 8 | 0 | 0 | 2.7 | D | 11.3 | PASS |
| * | * | * | * | * | * | INC |
| 4 | 0 | 0 | 1.3 | C | 10.4 | PASS |
| 0 | 0 | 0 | 0.0 | A | 9.5 | PASS |
| 14 | 0 | 0 | 4.7 | F | 12.9 | PASS |
| 2 | 0 | 0 | 0.7 | B | 9.0 | PASS |
| 1 | 0 | 0 | 0.3 | B | 10.0 | PASS |
| 2 | 0 | 0 | 0.7 | B | 10.8 | PASS |
| 15 | 0 | 0 | 5.0 | F | 13.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 10.3 | PASS |
| 2 | 0 | 0 | 0.7 | B | 9.8 | PASS |

American Lung Association in Kansas

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

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|------------------|---------------|--------------------|---------------|---------------|-------------------------|---------------|---------------------------|
| | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | | |
| Douglas | 114,748 | 21,721 | 10,552 | 2,045 | 8,283 | 3,727 | 1,148 | 27,927 | 5,852 | 18,815 |
| Johnson | 534,093 | 138,780 | 55,674 | 13,064 | 34,327 | 17,155 | 6,264 | 139,510 | 30,611 | 24,255 |
| Leavenworth | 74,276 | 18,222 | 7,644 | 1,715 | 4,878 | 2,419 | 870 | 19,528 | 4,271 | 5,616 |
| Linn | 9,616 | 2,128 | 1,804 | 200 | 633 | 344 | 158 | 3,112 | 708 | 1,121 |
| Sedgwick | 482,863 | 133,469 | 55,511 | 12,564 | 30,281 | 15,168 | 5,745 | 125,237 | 27,579 | 58,602 |
| Shawnee | 174,709 | 42,886 | 24,252 | 4,037 | 11,322 | 5,848 | 2,373 | 49,903 | 11,133 | 20,786 |
| Sumner | 23,616 | 5,745 | 3,432 | 541 | 1,523 | 810 | 340 | 7,040 | 1,585 | 2,654 |
| Trego | 2,882 | 581 | 636 | 55 | 192 | 109 | 54 | 1,027 | 237 | 295 |
| Wyandotte | 154,287 | 44,343 | 16,063 | 4,174 | 9,558 | 4,744 | 1,739 | 38,605 | 8,458 | 29,188 |
| Totals | 1,571,090 | 407,875 | 175,568 | 38,395 | 100,996 | 50,324 | 18,691 | 411,889 | 90,434 | 161,332 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-------------|--------|-----|--------|----------|-------|
| Douglas | * | * | * | * | * |
| Johnson | 6 | 0 | 0 | 2.0 | C |
| Leavenworth | 9 | 0 | 0 | 3.0 | D |
| Linn | 4 | 0 | 0 | 1.3 | C |
| Sedgwick | 2 | 0 | 0 | 0.7 | B |
| Shawnee | * | * | * | * | * |
| Sumner | 8 | 0 | 0 | 2.7 | D |
| Trego | 4 | 0 | 0 | 1.3 | C |
| Wyandotte | 12 | 1 | 0 | 4.5 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 9.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.1 | PASS |
| 3 | 0 | 0 | 1.0 | C | 9.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 0 | 0 | 0 | 0.0 | A | 9.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 11.2 | PASS |

American Lung Association in Kentucky

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

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | Total Population | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Bell | 29,055 | 6,452 | 4,393 | 607 | 2,175 | 1,005 | 416 | 8,653 | 2,344 | 8,870 |
| Boone | 115,231 | 31,617 | 10,387 | 2,976 | 8,046 | 3,556 | 1,224 | 28,137 | 7,522 | 6,971 |
| Boyd | 48,560 | 10,319 | 7,704 | 971 | 3,693 | 1,725 | 732 | 15,049 | 4,090 | 8,394 |
| Bullitt | 75,028 | 17,826 | 7,701 | 1,678 | 5,518 | 2,467 | 883 | 19,875 | 5,334 | 6,992 |
| Campbell | 87,038 | 20,614 | 11,393 | 1,941 | 6,406 | 2,930 | 1,156 | 24,678 | 6,669 | 9,749 |
| Carter | 27,454 | 6,470 | 3,660 | 609 | 2,016 | 917 | 360 | 7,691 | 2,074 | 5,566 |
| Christian | 79,820 | 25,516 | 8,362 | 2,402 | 5,179 | 2,293 | 834 | 18,522 | 4,950 | 15,145 |
| Daviess | 94,418 | 23,138 | 13,892 | 2,178 | 6,870 | 3,184 | 1,325 | 27,501 | 7,459 | 12,559 |
| Edmonson | 12,085 | 2,580 | 1,860 | 243 | 913 | 421 | 174 | 3,626 | 982 | 2,481 |
| Fayette | 282,114 | 62,607 | 30,205 | 5,894 | 21,037 | 9,304 | 3,282 | 74,293 | 19,858 | 41,512 |
| Franklin | 48,844 | 10,723 | 6,450 | 1,009 | 3,686 | 1,692 | 668 | 14,270 | 3,861 | 6,196 |
| Greenup | 37,388 | 7,885 | 6,451 | 742 | 2,846 | 1,341 | 589 | 11,893 | 3,239 | 6,264 |
| Hancock | 8,663 | 2,180 | 1,093 | 205 | 627 | 288 | 114 | 2,431 | 658 | 1,131 |
| Hardin | 98,546 | 25,459 | 11,680 | 2,397 | 7,053 | 3,207 | 1,230 | 26,668 | 7,195 | 11,672 |
| Henderson | 45,462 | 10,521 | 6,440 | 990 | 3,377 | 1,564 | 640 | 13,409 | 3,637 | 6,627 |
| Jefferson | 713,877 | 172,448 | 96,731 | 16,234 | 52,292 | 24,086 | 9,705 | 204,985 | 55,513 | 102,122 |
| Jessamine | 46,716 | 11,760 | 4,919 | 1,107 | 3,357 | 1,494 | 536 | 12,026 | 3,221 | 5,429 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Kenton | 157,629 | 40,737 | 17,050 | 3,835 | 11,299 | 5,108 | 1,899 | 41,899 | 11,287 | 17,152 |
| Larue | 13,722 | 3,056 | 2,319 | 288 | 1,025 | 479 | 208 | 4,222 | 1,147 | 2,327 |
| Laurel | 57,586 | 13,973 | 7,332 | 1,315 | 4,195 | 1,905 | 739 | 15,901 | 4,287 | 11,436 |
| Livingston | 9,591 | 1,895 | 1,683 | 178 | 743 | 350 | 154 | 3,103 | 845 | 1,284 |
| Madison | 82,192 | 18,366 | 8,888 | 1,729 | 6,080 | 2,660 | 922 | 21,028 | 5,597 | 12,413 |
| McCracken | 65,109 | 14,624 | 10,574 | 1,377 | 4,883 | 2,297 | 995 | 20,257 | 5,517 | 10,657 |
| Ohio | 23,789 | 5,582 | 3,635 | 525 | 1,751 | 810 | 339 | 7,006 | 1,899 | 4,481 |
| Oldham | 56,874 | 13,401 | 4,791 | 1,262 | 4,230 | 1,893 | 651 | 15,041 | 4,042 | 3,050 |
| Perry | 29,241 | 6,756 | 3,886 | 636 | 2,172 | 998 | 397 | 8,439 | 2,284 | 7,855 |
| Pike | 65,331 | 13,995 | 8,750 | 1,317 | 4,969 | 2,286 | 908 | 19,343 | 5,238 | 16,151 |
| Pulaski | 60,851 | 13,672 | 10,289 | 1,287 | 4,529 | 2,114 | 917 | 18,607 | 5,053 | 14,460 |
| Simpson | 17,019 | 4,102 | 2,375 | 386 | 1,243 | 570 | 230 | 4,851 | 1,312 | 2,387 |
| Trigg | 13,418 | 2,874 | 2,529 | 271 | 1,013 | 479 | 218 | 4,320 | 1,177 | 1,849 |
| Warren | 105,862 | 24,470 | 11,836 | 2,304 | 7,787 | 3,450 | 1,237 | 27,736 | 7,417 | 17,199 |
| Totals | 2,608,513 | 625,618 | 329,258 | 58,893 | 191,010 | 86,873 | 33,682 | 725,460 | 195,710 | 380,381 |

KENTUCKY

American Lung Association in Kentucky

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

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------|--------|-----|--------|----------|-------|
| Bell | 19 | 0 | 0 | 6.3 | F |
| Boone | 6 | 0 | 0 | 2.0 | C |
| Boyd | 11 | 0 | 0 | 3.7 | F |
| Bullitt | 11 | 0 | 0 | 3.7 | F |
| Campbell | 21 | 0 | 0 | 7.0 | F |
| Carter | 2 | 0 | 0 | 0.7 | B |
| Christian | 28 | 0 | 0 | 9.3 | F |
| Daviess | 21 | 0 | 0 | 7.0 | F |
| Edmonson | 15 | 0 | 0 | 5.0 | F |
| Fayette | 7 | 0 | 0 | 2.3 | D |
| Franklin | DNC | DNC | DNC | DNC | DNC |
| Greenup | 17 | 0 | 0 | 5.7 | F |
| Hancock | 23 | 0 | 0 | 7.7 | F |
| Hardin | 16 | 0 | 0 | 5.3 | F |
| Henderson | 16 | 0 | 0 | 5.3 | F |
| Jefferson | 36 | 1 | 0 | 12.5 | F |
| Jessamine | 18 | 0 | 0 | 6.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 1 | 0 | 0.8 | B | 13.8 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 0 | 0 | 1.7 | C | 13.4 | PASS |
| 5 | 0 | 0 | 1.7 | C | 14.0 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 2 | 0 | 0 | 0.7 | B | 11.5 | PASS |
| 5 | 0 | 0 | 1.7 | C | 12.8 | PASS |
| 4 | 0 | 0 | 1.3 | C | 13.1 | PASS |
| * | * | * | * | * | * | INC |
| 5 | 0 | 0 | 1.7 | C | 13.4 | PASS |
| 4 | 0 | 0 | 1.3 | C | 12.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 13.3 | PASS |
| 4 | 0 | 0 | 1.3 | C | 13.2 | PASS |
| 18 | 0 | 0 | 6.0 | F | 14.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Kenton | 17 | 0 | 0 | 5.7 | F |
| Larue | * | * | * | * | * |
| Laurel | DNC | DNC | DNC | DNC | DNC |
| Livingston | 7 | 0 | 0 | 2.3 | D |
| Madison | DNC | DNC | DNC | DNC | DNC |
| McCracken | 9 | 0 | 0 | 3.0 | D |
| Ohio | * | * | * | * | * |
| Oldham | 32 | 0 | 0 | 10.7 | F |
| Perry | 4 | 0 | 0 | 1.3 | C |
| Pike | 9 | 0 | 0 | 3.0 | D |
| Pulaski | 4 | 0 | 0 | 1.3 | C |
| Simpson | 19 | 0 | 0 | 6.3 | F |
| Trigg | 20 | 0 | 0 | 6.7 | F |
| Warren | 7 | 0 | 0 | 2.3 | D |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 2 | 0 | 0 | 0.7 | B | 13.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 12.0 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.1 | PASS |
| 2 | 0 | 0 | 0.7 | B | 13.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | * | INC |
| 3 | 0 | 0 | 1.0 | C | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 7 | 0 | 0 | 2.3 | D | * | INC |

American Lung Association in Louisiana

2325 Severn Avenue, Suite 8
 Metairie, LA 70001-6918
 (504) 828-5864
www.lungusa.org/louisiana

AT-RISK GROUPS

| Parish | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------------------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Ascension Parish | 101,789 | 29,423 | 8,349 | 2,770 | 5,915 | 3,041 | 1,010 | 23,675 | 6,895 | 9,995 |
| Bossier Parish | 110,250 | 29,996 | 12,944 | 2,824 | 6,450 | 3,465 | 1,311 | 28,566 | 8,371 | 14,715 |
| Caddo Parish | 252,895 | 63,910 | 34,877 | 6,016 | 15,030 | 8,306 | 3,344 | 70,526 | 20,757 | 48,885 |
| Calcasieu Parish | 185,618 | 47,702 | 23,246 | 4,490 | 11,015 | 6,031 | 2,345 | 50,409 | 14,831 | 27,833 |
| Concordia Parish | 19,064 | 4,770 | 3,031 | 449 | 1,122 | 642 | 276 | 5,631 | 1,665 | 4,629 |
| East Baton Rouge Parish | 428,360 | 106,487 | 45,403 | 10,024 | 26,065 | 13,732 | 4,918 | 110,460 | 32,284 | 71,714 |
| Iberville Parish | 32,545 | 7,716 | 3,730 | 726 | 2,002 | 1,067 | 393 | 8,694 | 2,546 | 6,310 |
| Jefferson Parish | 436,181 | 103,450 | 59,609 | 9,738 | 26,292 | 14,864 | 6,018 | 126,852 | 37,565 | 55,909 |
| Lafayette Parish | 206,976 | 53,354 | 21,126 | 5,023 | 12,435 | 6,567 | 2,340 | 52,734 | 15,429 | 29,691 |
| Lafourche Parish | 92,572 | 22,558 | 11,090 | 2,124 | 5,620 | 3,035 | 1,147 | 25,028 | 7,347 | 14,452 |
| Livingston Parish | 120,256 | 32,932 | 11,037 | 3,100 | 7,117 | 3,683 | 1,259 | 29,024 | 8,456 | 13,666 |
| Orleans Parish | 311,853 | 64,171 | 38,344 | 6,041 | 19,754 | 10,908 | 4,162 | 90,566 | 26,749 | 69,159 |
| Ouachita Parish | 150,051 | 39,586 | 18,686 | 3,726 | 8,871 | 4,768 | 1,831 | 39,553 | 11,581 | 31,928 |
| Pointe Coupee Parish | 22,401 | 5,383 | 3,303 | 507 | 1,340 | 763 | 318 | 6,602 | 1,955 | 4,637 |
| Rapides Parish | 133,131 | 34,206 | 18,175 | 3,220 | 7,864 | 4,354 | 1,753 | 36,971 | 10,887 | 23,265 |
| St. Bernard Parish | 37,722 | 7,613 | 3,323 | 717 | 2,418 | 1,322 | 460 | 10,569 | 3,132 | 7,597 |
| St. Charles Parish | 51,547 | 13,494 | 5,054 | 1,270 | 3,052 | 1,665 | 604 | 13,525 | 3,994 | 5,921 |
| St. James Parish | 21,231 | 5,431 | 2,685 | 511 | 1,258 | 696 | 273 | 5,847 | 1,725 | 3,314 |
| St. John the Baptist Parish | 46,994 | 13,344 | 4,024 | 1,256 | 2,725 | 1,445 | 498 | 11,463 | 3,366 | 6,834 |
| St. Tammany Parish | 228,456 | 59,124 | 26,731 | 5,566 | 13,491 | 7,469 | 2,871 | 62,223 | 18,382 | 22,529 |
| Tangipahoa Parish | 117,001 | 30,920 | 12,872 | 2,911 | 6,977 | 3,655 | 1,325 | 29,520 | 8,605 | 25,235 |
| Terrebonne Parish | 108,576 | 29,135 | 11,744 | 2,743 | 6,396 | 3,429 | 1,262 | 27,953 | 8,201 | 16,907 |
| West Baton Rouge Parish | 22,553 | 5,732 | 2,392 | 540 | 1,354 | 728 | 265 | 5,910 | 1,736 | 3,543 |
| Totals | 3,238,022 | 810,437 | 381,775 | 76,292 | 194,563 | 105,635 | 39,983 | 872,301 | 256,459 | 518,668 |

HIGH OZONE DAYS 2006-2008

| Parish | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------------------------|--------|-----|--------|----------|-------|
| Ascension Parish | 29 | 2 | 0 | 10.7 | F |
| Bossier Parish | 18 | 0 | 0 | 6.0 | F |
| Caddo Parish | 20 | 0 | 0 | 6.7 | F |
| Calcasieu Parish | 14 | 1 | 0 | 5.2 | F |
| Concordia Parish | DNC | DNC | DNC | DNC | DNC |
| East Baton Rouge Parish | 37 | 5 | 0 | 14.8 | F |
| Iberville Parish | 51 | 2 | 0 | 18.0 | F |
| Jefferson Parish | 22 | 1 | 0 | 7.8 | F |
| Lafayette Parish | 14 | 0 | 0 | 4.7 | F |
| Lafourche Parish | 16 | 1 | 0 | 5.8 | F |
| Livingston Parish | 21 | 0 | 0 | 7.0 | F |
| Orleans Parish | * | * | * | * | * |
| Ouachita Parish | 4 | 0 | 0 | 1.3 | C |
| Pointe Coupee Parish | 30 | 2 | 0 | 11.0 | F |
| Rapides Parish | DNC | DNC | DNC | DNC | DNC |
| St. Bernard Parish | * | * | * | * | * |
| St. Charles Parish | 11 | 0 | 0 | 3.7 | F |
| St. James Parish | 12 | 0 | 0 | 4.0 | F |
| St. John The Baptist Parish | 17 | 0 | 0 | 5.7 | F |
| St. Tammany Parish | * | * | * | * | * |
| Tangipahoa Parish | DNC | DNC | DNC | DNC | DNC |
| Terrebonne Parish | DNC | DNC | DNC | DNC | DNC |
| West Baton Rouge Parish | 18 | 2 | 0 | 7.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 12.6 | PASS |
| 2 | 0 | 0 | 0.7 | B | 10.0 | PASS |
| * | * | * | * | * | * | INC |
| 5 | 0 | 0 | 1.7 | C | 12.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.2 | PASS |
| 4 | 0 | 0 | 1.3 | C | 11.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 10.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 2 | 0 | 0 | 0.7 | B | 10.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.1 | PASS |
| 3 | 0 | 0 | 1.0 | C | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 11.3 | PASS |
| 0 | 1 | 0 | 0.5 | B | 10.0 | PASS |
| 2 | 1 | 0 | 1.2 | C | 12.9 | PASS |

American Lung Association in Maine

122 State Street
 Augusta, ME 04330
 (207) 624-0308
www.lungusa.org/maine

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Androscoggin | 106,877 | 24,177 | 15,471 | 2,276 | 8,507 | 3,677 | 1,503 | 31,489 | 6,720 | 13,547 |
| Aroostook | 71,676 | 14,029 | 12,934 | 1,321 | 5,829 | 2,649 | 1,185 | 23,726 | 5,128 | 10,597 |
| Cumberland | 276,047 | 59,301 | 38,306 | 5,582 | 22,169 | 9,743 | 3,951 | 83,290 | 17,708 | 27,789 |
| Hancock | 53,137 | 10,240 | 8,822 | 964 | 4,343 | 1,966 | 852 | 17,355 | 3,728 | 5,588 |
| Kennebec | 120,959 | 24,895 | 18,026 | 2,344 | 9,817 | 4,325 | 1,790 | 37,315 | 7,965 | 13,864 |
| Knox | 40,686 | 7,931 | 7,297 | 747 | 3,311 | 1,506 | 672 | 13,474 | 2,911 | 5,253 |
| Oxford | 56,741 | 11,492 | 9,201 | 1,082 | 4,594 | 2,063 | 887 | 18,130 | 3,891 | 7,853 |
| Penobscot | 148,651 | 30,208 | 20,590 | 2,844 | 12,210 | 5,243 | 2,085 | 44,334 | 9,413 | 22,543 |
| Piscataquis | 16,961 | 3,230 | 2,989 | 304 | 1,381 | 637 | 284 | 5,708 | 1,231 | 2,707 |
| Sagadahoc | 36,332 | 8,218 | 5,054 | 774 | 2,860 | 1,276 | 525 | 10,999 | 2,341 | 3,540 |
| Washington | 32,499 | 6,565 | 6,048 | 618 | 2,620 | 1,194 | 542 | 10,769 | 2,334 | 6,335 |
| York | 201,686 | 43,543 | 29,499 | 4,099 | 16,105 | 7,168 | 2,979 | 62,014 | 13,233 | 18,720 |
| Totals | 1,162,252 | 243,829 | 174,237 | 22,955 | 93,747 | 41,447 | 17,255 | 358,603 | 76,604 | 138,336 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Androscoggin | 8 | 0 | 0 | 2.7 | D |
| Aroostook | 3 | 0 | 0 | 1.0 | C |
| Cumberland | 6 | 1 | 0 | 2.5 | D |
| Hancock | 18 | 1 | 0 | 6.5 | F |
| Kennebec | 7 | 0 | 0 | 2.3 | D |
| Knox | 7 | 1 | 0 | 2.8 | D |
| Oxford | 2 | 0 | 0 | 0.7 | B |
| Penobscot | 3 | 0 | 0 | 1.0 | B |
| Piscataquis | DNC | DNC | DNC | DNC | DNC |
| Sagadahoc | 4 | 1 | 0 | 1.8 | C |
| Washington | 4 | 0 | 0 | 1.3 | C |
| York | 15 | 1 | 0 | 5.5 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 8.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | 7.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 9.9 | PASS |
| 0 | 0 | 0 | 0.0 | A | 5.1 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 9.4 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.3 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Maryland

1-800-LUNG USA
www.lungusa.org/maryland

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | Total | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Anne Arundel | 512,790 | 122,494 | 58,384 | 11,531 | 36,633 | 17,048 | 6,383 | 140,236 | 33,883 | 24,662 |
| Baltimore City | 636,919 | 153,154 | 75,404 | 14,417 | 45,370 | 20,875 | 7,808 | 171,278 | 41,126 | 116,585 |
| Baltimore | 785,618 | 174,324 | 114,215 | 16,410 | 56,871 | 27,024 | 10,986 | 230,627 | 56,050 | 60,539 |
| Calvert | 88,698 | 21,833 | 9,093 | 2,055 | 6,296 | 2,911 | 1,057 | 23,632 | 5,700 | 4,931 |
| Carroll | 169,353 | 40,617 | 20,520 | 3,824 | 12,050 | 5,686 | 2,195 | 47,465 | 11,532 | 9,350 |
| Cecil | 99,926 | 24,412 | 11,488 | 2,298 | 7,088 | 3,254 | 1,207 | 26,599 | 6,383 | 7,125 |
| Charles | 140,764 | 36,962 | 12,057 | 3,479 | 9,827 | 4,413 | 1,490 | 34,659 | 8,252 | 8,665 |
| Frederick | 225,721 | 57,641 | 23,224 | 5,426 | 15,823 | 7,272 | 2,632 | 58,893 | 14,159 | 12,032 |
| Garrett | 29,698 | 6,398 | 5,053 | 602 | 2,152 | 1,041 | 450 | 9,148 | 2,234 | 4,337 |
| Harford | 240,351 | 59,315 | 28,123 | 5,584 | 16,965 | 7,957 | 3,033 | 66,007 | 15,997 | 13,606 |
| Kent | 20,151 | 3,756 | 3,949 | 354 | 1,506 | 733 | 330 | 6,555 | 1,601 | 2,262 |
| Montgomery | 950,680 | 228,648 | 118,538 | 21,524 | 67,493 | 32,089 | 12,580 | 269,876 | 65,760 | 54,321 |
| Prince George's | 820,852 | 201,473 | 77,368 | 18,966 | 58,516 | 26,440 | 9,153 | 209,837 | 50,079 | 53,210 |
| Washington | 145,384 | 32,931 | 20,243 | 3,100 | 10,489 | 4,867 | 1,915 | 40,811 | 9,816 | 12,819 |
| Worcester | 49,274 | 9,168 | 11,249 | 863 | 3,647 | 1,834 | 890 | 17,043 | 4,201 | 5,072 |
| Totals | 4,916,179 | 1,173,126 | 588,908 | 110,433 | 350,727 | 163,444 | 62,109 | 1,352,666 | 326,773 | 389,516 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------------|--------|-----|--------|----------|-------|
| Anne Arundel | 44 | 2 | 1 | 16.3 | F |
| Baltimore City | 5 | 0 | 0 | 1.7 | C |
| Baltimore | 41 | 6 | 0 | 16.7 | F |
| Calvert | 25 | 0 | 0 | 8.3 | F |
| Carroll | 34 | 2 | 0 | 12.3 | F |
| Cecil | 45 | 4 | 1 | 17.7 | F |
| Charles | 32 | 2 | 0 | 11.7 | F |
| Frederick | 32 | 0 | 0 | 10.7 | F |
| Garrett | 5 | 0 | 0 | 1.7 | C |
| Harford | 62 | 7 | 0 | 24.2 | F |
| Kent | 39 | 2 | 0 | 14.0 | F |
| Montgomery | 30 | 2 | 0 | 11.0 | F |
| Prince George's | 58 | 7 | 0 | 22.8 | F |
| Washington | 17 | 0 | 0 | 5.7 | F |
| Worcester | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 4 | 0 | 0 | 1.3 | C | 13.3 | PASS |
| 25 | 0 | 0 | 8.3 | F | 14.0 | PASS |
| 17 | 0 | 0 | 5.7 | F | 13.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 12.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 11.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 11.3 | PASS |
| 7 | 0 | 0 | 2.3 | D | 11.9 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.2 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

MASSACHUSETTS

American Lung Association in Massachusetts

460 Totten Pond Road, Suite 400
 Waltham, MA 02451-1991
 (781) 314-9006
www.lungusa.org/massachusetts

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Barnstable | 221,049 | 38,609 | 53,032 | 3,635 | 17,279 | 8,518 | 4,246 | 80,447 | 16,396 | 17,569 |
| Berkshire | 129,395 | 24,816 | 23,662 | 2,336 | 9,957 | 4,752 | 2,114 | 42,388 | 8,459 | 15,415 |
| Bristol | 545,823 | 122,838 | 74,700 | 11,564 | 40,419 | 18,573 | 7,363 | 156,629 | 30,624 | 61,702 |
| Dukes | 15,527 | 2,936 | 2,360 | 276 | 1,203 | 575 | 241 | 4,992 | 983 | 1,139 |
| Essex | 736,457 | 172,265 | 101,390 | 16,216 | 53,919 | 25,149 | 10,172 | 214,459 | 42,035 | 67,698 |
| Hampden | 460,840 | 108,871 | 64,235 | 10,249 | 33,617 | 15,491 | 6,222 | 131,424 | 25,760 | 68,255 |
| Hampshire | 154,983 | 24,825 | 19,393 | 2,337 | 12,459 | 5,536 | 2,009 | 44,740 | 8,619 | 14,810 |
| Middlesex | 1,482,478 | 320,756 | 191,243 | 30,195 | 111,122 | 50,832 | 19,631 | 423,697 | 82,417 | 115,388 |
| Norfolk | 659,909 | 148,031 | 91,744 | 13,935 | 48,923 | 22,855 | 9,251 | 195,007 | 38,221 | 38,958 |
| Plymouth | 492,066 | 117,842 | 62,848 | 11,093 | 35,801 | 16,660 | 6,588 | 140,676 | 27,446 | 33,963 |
| Suffolk | 732,684 | 144,497 | 78,499 | 13,602 | 56,330 | 24,122 | 8,079 | 187,532 | 35,694 | 124,624 |
| Worcester | 783,806 | 184,830 | 96,504 | 17,399 | 57,314 | 26,233 | 10,073 | 218,160 | 42,380 | 63,457 |
| Totals | 6,415,017 | 1,411,116 | 859,610 | 132,837 | 478,342 | 219,296 | 85,989 | 1,840,151 | 359,033 | 622,978 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Barnstable | 23 | 4 | 0 | 9.7 | F |
| Berkshire | 16 | 1 | 0 | 5.8 | F |
| Bristol | 13 | 2 | 0 | 5.3 | F |
| Dukes | 12 | 5 | 0 | 6.5 | F |
| Essex | 25 | 2 | 0 | 9.3 | F |
| Hampden | 29 | 5 | 1 | 12.8 | F |
| Hampshire | 30 | 5 | 0 | 12.5 | F |
| Middlesex | 17 | 0 | 0 | 5.7 | F |
| Norfolk | 25 | 0 | 0 | 8.3 | F |
| Plymouth | DNC | DNC | DNC | DNC | DNC |
| Suffolk | 11 | 0 | 0 | 3.7 | F |
| Worcester | 31 | 2 | 0 | 11.3 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 9.7 | PASS |
| 1 | 0 | 0 | 0.3 | B | 8.8 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 9.1 | PASS |
| 5 | 0 | 0 | 1.7 | C | 11.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 8.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 9.3 | PASS |
| 6 | 0 | 0 | 2.0 | C | 11.4 | PASS |
| 2 | 0 | 0 | 0.7 | B | 10.7 | PASS |

American Lung Association in Michigan

25900 Greenfield Road, Suite 401
 Oak Park, MI 48237
 (248) 784-2000
www.lungusa.org/michigan

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Allegan | 112,975 | 28,452 | 13,492 | 2,678 | 8,283 | 3,710 | 1,424 | 30,863 | 7,681 | 12,855 |
| Bay | 107,495 | 23,688 | 16,818 | 2,230 | 8,099 | 3,779 | 1,602 | 32,947 | 8,240 | 13,585 |
| Benzie | 17,396 | 3,785 | 3,384 | 356 | 1,304 | 619 | 285 | 5,607 | 1,399 | 1,773 |
| Berrien | 159,481 | 38,411 | 24,818 | 3,616 | 11,691 | 5,464 | 2,334 | 47,815 | 11,956 | 27,370 |
| Cass | 50,185 | 11,229 | 6,813 | 1,057 | 3,780 | 1,753 | 709 | 14,975 | 3,754 | 6,886 |
| Clinton | 69,726 | 16,830 | 8,601 | 1,584 | 5,164 | 2,347 | 916 | 19,698 | 4,920 | 5,506 |
| Dickinson | 26,812 | 5,688 | 5,240 | 535 | 2,011 | 978 | 456 | 8,946 | 2,246 | 3,199 |
| Genesee | 428,790 | 108,517 | 55,612 | 10,215 | 31,251 | 14,169 | 5,627 | 119,728 | 29,833 | 70,368 |
| Huron | 32,805 | 6,540 | 7,102 | 616 | 2,490 | 1,221 | 590 | 11,349 | 2,846 | 4,245 |
| Ingham | 277,528 | 60,873 | 28,647 | 5,730 | 21,586 | 9,101 | 3,137 | 71,885 | 17,635 | 47,203 |
| Iron | 12,001 | 2,030 | 2,848 | 191 | 940 | 468 | 232 | 4,408 | 1,107 | 1,752 |
| Kalamazoo | 245,912 | 56,402 | 29,555 | 5,309 | 18,706 | 8,132 | 3,024 | 66,491 | 16,409 | 37,744 |
| Kent | 605,213 | 162,410 | 63,610 | 15,289 | 43,752 | 19,042 | 6,921 | 154,320 | 38,174 | 86,929 |
| Leelanau | 21,783 | 4,194 | 4,486 | 395 | 1,665 | 826 | 393 | 7,630 | 1,922 | 1,829 |
| Lenawee | 100,801 | 23,017 | 14,181 | 2,167 | 7,580 | 3,442 | 1,389 | 29,290 | 7,292 | 12,592 |
| Macomb | 830,663 | 192,932 | 114,137 | 18,162 | 62,241 | 28,125 | 11,245 | 238,225 | 59,255 | 76,979 |
| Manistee | 24,640 | 4,862 | 4,834 | 458 | 1,893 | 902 | 414 | 8,169 | 2,041 | 3,177 |
| Mason | 28,782 | 6,034 | 5,557 | 568 | 2,174 | 1,043 | 480 | 9,466 | 2,370 | 4,457 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Missaukee | 15,001 | 3,414 | 2,406 | 321 | 1,122 | 517 | 220 | 4,506 | 1,122 | 2,169 |
| Monroe | 152,949 | 35,880 | 19,069 | 3,378 | 11,446 | 5,170 | 2,009 | 43,273 | 10,789 | 15,370 |
| Muskegon | 174,344 | 43,156 | 22,482 | 4,063 | 12,839 | 5,753 | 2,256 | 48,278 | 11,994 | 30,156 |
| Oakland | 1,202,174 | 284,493 | 147,886 | 26,781 | 89,400 | 41,032 | 16,094 | 345,511 | 86,554 | 102,769 |
| Ottawa | 260,364 | 66,909 | 29,176 | 6,299 | 19,109 | 8,300 | 3,054 | 67,571 | 16,685 | 20,238 |
| Schoolcraft | 8,220 | 1,642 | 1,759 | 155 | 623 | 306 | 147 | 2,842 | 713 | 1,256 |
| St. Clair | 168,894 | 39,752 | 22,763 | 3,742 | 12,585 | 5,730 | 2,293 | 48,599 | 12,119 | 18,618 |
| Washtenaw | 347,376 | 74,386 | 32,516 | 7,002 | 27,303 | 11,383 | 3,770 | 88,396 | 21,651 | 44,592 |
| Wayne | 1,949,929 | 507,861 | 234,544 | 47,808 | 141,145 | 63,463 | 24,562 | 529,981 | 131,973 | 393,147 |
| Totals | 7,432,239 | 1,813,387 | 922,336 | 170,705 | 550,182 | 246,775 | 95,583 | 2,060,769 | 512,680 | 1,046,764 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Missaukee | 9 | 0 | 0 | 3.0 | D |
| Monroe | DNC | DNC | DNC | DNC | DNC |
| Muskegon | 26 | 3 | 0 | 10.2 | F |
| Oakland | 17 | 0 | 0 | 5.7 | F |
| Ottawa | 18 | 1 | 0 | 6.5 | F |
| Schoolcraft | 16 | 2 | 0 | 6.3 | F |
| St. Clair | 18 | 1 | 0 | 6.5 | F |
| Washtenaw | 10 | 0 | 0 | 3.3 | F |
| Wayne | 23 | 1 | 0 | 8.2 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 7.4 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.4 | PASS |
| 2 | 0 | 0 | 0.7 | B | 10.5 | PASS |
| 5 | 0 | 0 | 1.7 | C | 12.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 7 | 0 | 0 | 2.3 | D | 11.9 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.2 | PASS |
| 18 | 0 | 0 | 6.0 | F | 15.4 | FAIL |

American Lung Association in Minnesota

490 Concordia Avenue
 St. Paul, MN 55103-2441
 (651) 227-8014
www.lungusa.org/minnesota

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Anoka | 327,090 | 85,016 | 28,237 | 8,003 | 19,243 | 10,438 | 3,594 | 82,818 | 13,098 | 18,811 |
| Becker | 32,000 | 7,343 | 5,432 | 691 | 1,874 | 1,113 | 488 | 9,851 | 1,651 | 3,654 |
| Carlton | 33,933 | 7,551 | 5,081 | 711 | 2,026 | 1,171 | 482 | 10,054 | 1,661 | 3,532 |
| Cass | 28,732 | 6,278 | 5,544 | 591 | 1,685 | 1,024 | 471 | 9,282 | 1,574 | 4,120 |
| Crow Wing | 62,172 | 14,012 | 11,181 | 1,319 | 3,624 | 2,156 | 957 | 19,166 | 3,224 | 6,987 |
| Dakota | 392,755 | 103,648 | 33,756 | 9,757 | 22,991 | 12,484 | 4,308 | 99,165 | 15,691 | 18,044 |
| Goodhue | 45,897 | 10,439 | 7,143 | 983 | 2,722 | 1,595 | 676 | 13,902 | 2,311 | 3,084 |
| Hennepin | 1,140,988 | 267,430 | 125,014 | 25,175 | 68,646 | 38,088 | 14,049 | 311,286 | 50,065 | 122,354 |
| Lake | 10,609 | 1,969 | 2,194 | 185 | 650 | 401 | 189 | 3,687 | 628 | 1,008 |
| Lyon | 24,844 | 5,797 | 3,705 | 546 | 1,455 | 834 | 341 | 7,128 | 1,176 | 2,472 |
| Mille Lacs | 26,377 | 6,212 | 4,333 | 585 | 1,527 | 891 | 380 | 7,767 | 1,294 | 3,165 |
| Olmsted | 141,360 | 35,970 | 17,036 | 3,386 | 8,192 | 4,590 | 1,754 | 38,063 | 6,176 | 10,517 |
| Ramsey | 501,428 | 121,768 | 65,196 | 11,463 | 29,412 | 16,666 | 6,545 | 139,973 | 22,860 | 65,375 |
| Scott | 128,937 | 38,355 | 8,694 | 3,611 | 7,201 | 3,758 | 1,168 | 28,463 | 4,392 | 5,552 |
| St. Louis | 196,864 | 38,541 | 30,989 | 3,628 | 12,165 | 7,074 | 2,949 | 61,142 | 10,128 | 26,873 |
| Stearns | 147,076 | 33,301 | 17,853 | 3,135 | 8,800 | 4,836 | 1,782 | 39,330 | 6,329 | 14,148 |
| Washington | 229,173 | 59,556 | 20,379 | 5,606 | 13,491 | 7,374 | 2,585 | 59,008 | 9,372 | 10,096 |
| Wright | 119,701 | 34,184 | 10,403 | 3,218 | 6,729 | 3,598 | 1,213 | 28,182 | 4,437 | 6,631 |
| Totals | 3,589,936 | 877,370 | 402,170 | 82,593 | 212,434 | 118,091 | 43,931 | 968,267 | 156,068 | 326,423 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Anoka | 2 | 0 | 0 | 0.7 | B |
| Becker | 0 | 0 | 0 | 0.0 | A |
| Carlton | 0 | 0 | 0 | 0.0 | A |
| Cass | DNC | DNC | DNC | DNC | DNC |
| Crow Wing | 3 | 0 | 0 | 1.0 | C |
| Dakota | DNC | DNC | DNC | DNC | DNC |
| Goodhue | 3 | 0 | 0 | 1.0 | C |
| Hennepin | DNC | DNC | DNC | DNC | DNC |
| Lake | 1 | 0 | 0 | 0.3 | B |
| Lyon | 0 | 0 | 0 | 0.0 | A |
| Mille Lacs | 4 | 0 | 0 | 1.3 | C |
| Olmsted | 0 | 0 | 0 | 0.0 | A |
| Ramsey | DNC | DNC | DNC | DNC | DNC |
| Scott | 0 | 0 | 0 | 0.0 | A |
| St. Louis | 0 | 0 | 0 | 0.0 | A |
| Stearns | 1 | 0 | 0 | 0.3 | B |
| Washington | 5 | 0 | 0 | 1.7 | C |
| Wright | 5 | 0 | 0 | 1.7 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 9.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 9.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | * | INC |
| 2 | 0 | 0 | 0.7 | B | * | INC |
| 3 | 0 | 0 | 1.0 | C | 11.0 | PASS |
| 2 | 0 | 0 | 0.7 | B | 9.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 7.6 | PASS |
| 2 | 0 | 0 | 0.7 | B | 8.4 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

MISSISSIPPI

American Lung Association in Mississippi

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Adams | 31,307 | 7,470 | 5,430 | 703 | 1,684 | 1,095 | 492 | 9,826 | 3,057 | 8,220 |
| Bolivar | 37,195 | 9,728 | 4,259 | 916 | 1,920 | 1,179 | 438 | 9,639 | 2,987 | 12,388 |
| Desoto | 154,748 | 44,964 | 15,054 | 4,233 | 7,670 | 4,676 | 1,657 | 37,446 | 11,610 | 14,427 |
| Forrest | 79,425 | 19,895 | 8,743 | 1,873 | 4,138 | 2,476 | 870 | 19,673 | 6,065 | 17,922 |
| Grenada | 22,995 | 5,804 | 3,323 | 546 | 1,207 | 761 | 313 | 6,530 | 2,026 | 4,790 |
| Hancock | 40,140 | 9,437 | 5,725 | 888 | 2,168 | 1,392 | 579 | 12,048 | 3,756 | 6,923 |
| Harrison | 178,460 | 47,425 | 20,582 | 4,464 | 9,204 | 5,760 | 2,203 | 47,856 | 14,888 | 27,768 |
| Hinds | 247,650 | 66,692 | 27,304 | 6,278 | 12,678 | 7,841 | 2,917 | 64,239 | 19,948 | 55,043 |
| Jackson | 130,694 | 34,430 | 14,990 | 3,241 | 6,770 | 4,254 | 1,632 | 35,421 | 11,031 | 17,201 |
| Jones | 67,198 | 17,246 | 9,736 | 1,623 | 3,503 | 2,198 | 903 | 18,827 | 5,835 | 14,687 |
| Lauderdale | 78,180 | 20,425 | 11,050 | 1,923 | 4,053 | 2,546 | 1,041 | 21,771 | 6,752 | 15,313 |
| Lee | 81,139 | 21,884 | 10,315 | 2,060 | 4,157 | 2,598 | 1,023 | 21,840 | 6,779 | 14,135 |
| Lowndes | 59,284 | 15,917 | 7,658 | 1,498 | 3,047 | 1,916 | 764 | 16,218 | 5,039 | 13,020 |
| Webster | 9,887 | 2,395 | 1,619 | 225 | 527 | 336 | 145 | 2,953 | 916 | 2,034 |
| Totals | 1,218,302 | 323,712 | 145,788 | 30,471 | 62,725 | 39,028 | 14,977 | 324,287 | 100,687 | 223,871 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Adams | 6 | 0 | 0 | 2.0 | C |
| Bolivar | 11 | 0 | 0 | 3.7 | F |
| Desoto | 28 | 2 | 0 | 10.3 | F |
| Forrest | DNC | DNC | DNC | DNC | DNC |
| Grenada | DNC | DNC | DNC | DNC | DNC |
| Hancock | DNC | DNC | DNC | DNC | DNC |
| Harrison | 26 | 0 | 0 | 8.7 | F |
| Hinds | 5 | 0 | 0 | 1.7 | C |
| Jackson | 23 | 0 | 0 | 7.7 | F |
| Jones | DNC | DNC | DNC | DNC | DNC |
| Lauderdale | 6 | 0 | 0 | 2.0 | C |
| Lee | 7 | 0 | 0 | 2.3 | D |
| Lowndes | DNC | DNC | DNC | DNC | DNC |
| Webster | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 10.7 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.9 | PASS |
| 0 | 0 | 0 | 0.0 | A | 13.7 | PASS |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 11.0 | PASS |
| 0 | 0 | 0 | 0.0 | A | 12.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.0 | PASS |
| 0 | 0 | 0 | 0.0 | A | 14.0 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 12.4 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

MISSOURI

American Lung Association in Missouri

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|----------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Boone | 154,365 | 34,332 | 14,498 | 3,232 | 9,829 | 4,944 | 1,616 | 38,109 | 9,477 | 24,438 |
| Buchanan | 89,408 | 20,981 | 13,075 | 1,975 | 5,745 | 3,003 | 1,222 | 25,610 | 6,307 | 12,706 |
| Cass | 98,429 | 25,736 | 11,352 | 2,423 | 6,091 | 3,162 | 1,194 | 26,076 | 6,476 | 7,047 |
| Cedar | 13,652 | 3,105 | 2,871 | 292 | 900 | 484 | 233 | 4,482 | 1,090 | 2,773 |
| Clay | 215,707 | 55,753 | 23,449 | 5,248 | 13,378 | 6,920 | 2,548 | 56,442 | 14,045 | 15,670 |
| Clinton | 21,094 | 4,935 | 3,169 | 465 | 1,367 | 721 | 300 | 6,226 | 1,536 | 2,162 |
| Greene | 266,944 | 59,307 | 37,041 | 5,583 | 17,310 | 8,962 | 3,504 | 74,915 | 18,458 | 39,236 |
| Jackson | 668,417 | 170,392 | 82,351 | 16,040 | 41,929 | 21,906 | 8,517 | 183,273 | 45,483 | 94,390 |
| Jefferson | 217,679 | 54,416 | 23,187 | 5,123 | 13,706 | 7,115 | 2,617 | 58,080 | 14,491 | 17,697 |
| Lincoln | 52,775 | 14,182 | 5,336 | 1,335 | 3,202 | 1,639 | 581 | 13,116 | 3,262 | 5,438 |
| Monroe | 9,127 | 2,097 | 1,610 | 197 | 597 | 318 | 141 | 2,833 | 694 | 1,214 |
| Perry | 18,743 | 4,500 | 2,988 | 424 | 1,202 | 633 | 269 | 5,518 | 1,355 | 2,266 |
| St. Charles | 349,407 | 90,702 | 37,201 | 8,538 | 21,636 | 11,187 | 4,094 | 91,001 | 22,662 | 17,286 |
| St. Louis City | 354,361 | 87,970 | 40,164 | 8,281 | 22,304 | 11,559 | 4,306 | 94,770 | 23,564 | 81,148 |
| St. Louis | 991,830 | 228,054 | 143,155 | 21,468 | 65,043 | 34,509 | 14,325 | 298,247 | 73,903 | 87,531 |
| Ste. Genevieve | 17,720 | 3,893 | 2,688 | 366 | 1,173 | 620 | 259 | 5,366 | 1,325 | 1,794 |
| Totals | 3,539,658 | 860,355 | 444,135 | 80,990 | 225,411 | 117,682 | 45,726 | 984,064 | 244,128 | 412,796 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|----------------|--------|-----|--------|----------|-------|
| Boone | DNC | DNC | DNC | DNC | DNC |
| Buchanan | DNC | DNC | DNC | DNC | DNC |
| Cass | 8 | 0 | 0 | 2.7 | D |
| Cedar | 7 | 0 | 0 | 2.3 | D |
| Clay | 45 | 3 | 0 | 16.5 | F |
| Clinton | 28 | 0 | 0 | 9.3 | F |
| Greene | 7 | 0 | 0 | 2.3 | D |
| Jackson | DNC | DNC | DNC | DNC | DNC |
| Jefferson | 28 | 0 | 0 | 9.3 | F |
| Lincoln | 26 | 2 | 0 | 9.7 | F |
| Monroe | 6 | 0 | 0 | 2.0 | C |
| Perry | 26 | 0 | 0 | 8.7 | F |
| St. Charles | 47 | 2 | 0 | 16.7 | F |
| St. Louis City | 27 | 2 | 0 | 10.0 | F |
| St. Louis | 42 | 5 | 0 | 16.5 | F |
| Ste. Genevieve | 20 | 1 | 0 | 7.2 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 12.0 | PASS |
| 0 | 0 | 0 | 0.0 | A | 10.3 | PASS |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 10.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 11.1 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.9 | PASS |
| 6 | 0 | 0 | 2.0 | C | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | * | INC |
| 10 | 0 | 0 | 3.3 | F | 13.6 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | 12.2 | PASS |

American Lung Association in Montana

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------------|------------------|----------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Cascade | 82,026 | 20,256 | 12,694 | 1,907 | 5,873 | 2,792 | 1,196 | 24,466 | 4,197 | 10,866 |
| Flathead | 88,473 | 20,800 | 11,523 | 1,958 | 6,492 | 3,034 | 1,213 | 25,771 | 4,344 | 10,545 |
| Gallatin | 89,824 | 19,610 | 7,830 | 1,846 | 6,813 | 2,925 | 951 | 22,550 | 3,641 | 9,145 |
| Lewis and Clark | 60,925 | 13,777 | 7,817 | 1,297 | 4,529 | 2,120 | 844 | 17,981 | 3,025 | 6,399 |
| Lincoln | 18,971 | 3,752 | 3,809 | 353 | 1,433 | 717 | 340 | 6,622 | 1,160 | 3,762 |
| Missoula | 107,320 | 22,622 | 11,320 | 2,130 | 8,181 | 3,613 | 1,273 | 28,874 | 4,744 | 17,682 |
| Ravalli | 40,664 | 8,863 | 7,261 | 834 | 3,009 | 1,467 | 662 | 13,208 | 2,291 | 5,528 |
| Sanders | 11,034 | 2,118 | 2,236 | 199 | 839 | 419 | 198 | 3,859 | 676 | 1,912 |
| Silver Bow | 32,803 | 7,205 | 5,531 | 678 | 2,427 | 1,162 | 508 | 10,282 | 1,773 | 4,899 |
| Yellowstone | 142,348 | 34,423 | 19,658 | 3,240 | 10,316 | 4,801 | 1,946 | 40,966 | 6,942 | 15,036 |
| Totals | 674,388 | 153,426 | 89,679 | 14,442 | 49,912 | 23,050 | 9,131 | 194,579 | 32,791 | 85,774 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------------|---------------|------------|---------------|-----------------|--------------|
| Cascade | DNC | DNC | DNC | DNC | DNC |
| Flathead | 0 | 0 | 0 | 0.0 | A |
| Gallatin | DNC | DNC | DNC | DNC | DNC |
| Lewis and Clark | DNC | DNC | DNC | DNC | DNC |
| Lincoln | DNC | DNC | DNC | DNC | DNC |
| Missoula | DNC | DNC | DNC | DNC | DNC |
| Ravalli | DNC | DNC | DNC | DNC | DNC |
| Sanders | DNC | DNC | DNC | DNC | DNC |
| Silver Bow | DNC | DNC | DNC | DNC | DNC |
| Yellowstone | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 5 | 0 | 0 | 1.7 | C | 5.6 | PASS |
| 1 | 2 | 0 | 1.3 | C | 9.4 | PASS |
| 4 | 2 | 0 | 2.3 | D | 8.6 | PASS |
| 5 | 0 | 0 | 1.7 | C | * | INC |
| 7 | 0 | 0 | 2.3 | D | 13.7 | PASS |
| 11 | 1 | 0 | 4.2 | F | 9.2 | PASS |
| 4 | 1 | 0 | 1.8 | C | 8.0 | PASS |
| 1 | 1 | 0 | 0.8 | B | 7.1 | PASS |
| 14 | 1 | 0 | 5.2 | F | 10.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.0 | PASS |

American Lung Association in Nebraska

8990 W. Dodge Road, Suite 226
 Omaha, NE 68114
 (402) 502-4250
www.lungusa.org/nebraska

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Douglas | 502,032 | 135,189 | 53,874 | 12,726 | 26,151 | 15,776 | 5,772 | 128,197 | 26,929 | 59,511 |
| Hall | 56,401 | 15,537 | 7,766 | 1,463 | 2,882 | 1,808 | 739 | 15,470 | 3,276 | 6,889 |
| Lancaster | 278,728 | 66,495 | 28,900 | 6,260 | 15,229 | 8,908 | 3,094 | 70,563 | 14,738 | 28,086 |
| Sarpy | 150,467 | 43,136 | 12,426 | 4,061 | 7,718 | 4,498 | 1,488 | 34,950 | 7,285 | 7,971 |
| Scotts Bluff | 36,554 | 9,017 | 6,290 | 849 | 1,925 | 1,246 | 554 | 11,108 | 2,366 | 5,002 |
| Sioux | 1,287 | 240 | 192 | 23 | 73 | 48 | 20 | 419 | 89 | 167 |
| Washington | 19,812 | 4,597 | 2,756 | 433 | 1,073 | 677 | 274 | 5,773 | 1,223 | 1,296 |
| Totals | 1,045,281 | 274,211 | 112,204 | 25,815 | 55,051 | 32,961 | 11,941 | 266,480 | 55,904 | 108,922 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Douglas | 0 | 0 | 0 | 0.0 | A |
| Hall | DNC | DNC | DNC | DNC | DNC |
| Lancaster | 0 | 0 | 0 | 0.0 | A |
| Sarpy | DNC | DNC | DNC | DNC | DNC |
| Scotts Bluff | DNC | DNC | DNC | DNC | DNC |
| Sioux | * | * | * | * | * |
| Washington | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 2 | 0 | 0 | 0.7 | B | 9.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | 7.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.1 | PASS |
| 2 | 0 | 0 | 0.7 | B | 9.4 | PASS |
| 0 | 0 | 0 | 0.0 | A | 6.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 8.6 | PASS |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Carson City | 54,867 | 12,614 | 9,002 | 1,187 | 3,624 | 1,896 | 817 | 16,643 | 4,164 | 5,837 |
| Churchill | 24,896 | 6,759 | 3,714 | 636 | 1,557 | 813 | 345 | 7,082 | 1,770 | 2,614 |
| Clark | 1,865,746 | 492,906 | 196,956 | 46,400 | 116,473 | 58,741 | 21,217 | 474,395 | 115,568 | 205,121 |
| Lyon | 53,022 | 12,809 | 7,552 | 1,206 | 3,423 | 1,763 | 713 | 14,991 | 3,706 | 5,042 |
| Washoe | 410,443 | 99,789 | 49,246 | 9,394 | 26,628 | 13,611 | 5,203 | 112,993 | 27,902 | 49,627 |
| White Pine | 9,199 | 1,854 | 1,462 | 175 | 625 | 324 | 134 | 2,786 | 691 | 1,074 |
| Totals | 2,418,173 | 626,731 | 267,932 | 58,998 | 152,330 | 77,148 | 28,429 | 628,890 | 153,801 | 269,315 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Carson City | 3 | 0 | 0 | 1.0 | C |
| Churchill | * | * | * | * | * |
| Clark | 65 | 1 | 0 | 22.2 | F |
| Lyon | * | * | * | * | * |
| Washoe | 8 | 1 | 0 | 3.2 | D |
| White Pine | 5 | 0 | 0 | 1.7 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 9.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 1 | 0 | 1.5 | C | 8.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

NEW HAMPSHIRE

American Lung Association in New Hampshire

20 Warren Street, Suite 4
 Concord, NH 03301
 (603) 410-5108
www.lungusa.org/newhampshire

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Belknap | 61,281 | 12,359 | 9,757 | 1,163 | 4,970 | 2,214 | 939 | 19,326 | 3,823 | 5,466 |
| Cheshire | 77,170 | 15,355 | 11,205 | 1,445 | 6,353 | 2,737 | 1,103 | 23,280 | 4,581 | 7,532 |
| Coos | 31,971 | 6,108 | 6,224 | 575 | 2,585 | 1,196 | 551 | 10,869 | 2,176 | 4,059 |
| Grafton | 85,921 | 16,046 | 13,348 | 1,511 | 7,178 | 3,082 | 1,259 | 26,350 | 5,205 | 8,407 |
| Hillsborough | 402,042 | 97,611 | 46,099 | 9,189 | 31,479 | 13,479 | 5,139 | 111,967 | 21,788 | 27,632 |
| Merrimack | 148,161 | 31,963 | 19,097 | 3,009 | 11,973 | 5,158 | 2,020 | 43,356 | 8,478 | 12,073 |
| Rockingham | 297,350 | 69,153 | 34,969 | 6,510 | 23,455 | 10,263 | 3,991 | 86,195 | 16,776 | 14,020 |
| Sullivan | 42,591 | 9,156 | 6,729 | 862 | 3,395 | 1,514 | 645 | 13,243 | 2,621 | 4,146 |
| Totals | 1,146,487 | 257,751 | 147,428 | 24,264 | 91,387 | 39,643 | 15,647 | 334,586 | 65,449 | 83,335 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Belknap | 3 | 0 | 0 | 1.0 | C |
| Cheshire | 3 | 0 | 0 | 1.0 | C |
| Coos | 13 | 0 | 0 | 4.3 | F |
| Grafton | 3 | 0 | 0 | 1.0 | C |
| Hillsborough | 24 | 0 | 0 | 8.0 | F |
| Merrimack | 3 | 0 | 0 | 1.0 | C |
| Rockingham | 17 | 1 | 0 | 6.2 | F |
| Sullivan | 6 | 0 | 0 | 2.0 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 6.8 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.0 | PASS |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 7.8 | PASS |
| 2 | 0 | 0 | 0.7 | B | 9.6 | PASS |
| 1 | 0 | 0 | 0.3 | B | 9.3 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.6 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.9 | PASS |

American Lung Association in New Jersey

1031 Route 22 West Suite 203
 Bridgewater, NJ 08807-2919
 (908) 685-8040
www.lungusa.org/newjersey

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|------------------|------------------|----------------|--------------------|----------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Atlantic | 270,681 | 64,306 | 38,486 | 6,054 | 17,629 | 9,099 | 3,688 | 77,519 | 17,819 | 29,498 |
| Bergen | 894,840 | 195,873 | 133,079 | 18,439 | 59,631 | 31,416 | 13,047 | 271,347 | 62,832 | 47,293 |
| Camden | 517,234 | 127,537 | 64,433 | 12,006 | 33,434 | 17,077 | 6,614 | 142,551 | 32,608 | 56,871 |
| Cumberland | 156,830 | 38,301 | 19,750 | 3,606 | 10,172 | 5,085 | 1,931 | 41,944 | 9,516 | 19,360 |
| Essex | 770,675 | 195,592 | 91,035 | 18,412 | 49,420 | 24,965 | 9,445 | 206,022 | 46,912 | 108,608 |
| Gloucester | 287,860 | 66,479 | 33,799 | 6,258 | 19,044 | 9,629 | 3,610 | 79,196 | 18,034 | 19,438 |
| Hudson | 595,419 | 130,338 | 64,943 | 12,270 | 40,148 | 19,542 | 6,849 | 155,394 | 34,804 | 87,699 |
| Hunterdon | 129,031 | 29,349 | 14,724 | 2,763 | 8,574 | 4,506 | 1,743 | 37,794 | 8,729 | 4,596 |
| Mercer | 364,883 | 83,686 | 44,510 | 7,878 | 24,166 | 12,194 | 4,608 | 100,566 | 22,889 | 30,973 |
| Middlesex | 789,102 | 182,324 | 96,163 | 17,163 | 52,149 | 26,216 | 9,871 | 215,742 | 49,033 | 54,644 |
| Monmouth | 642,448 | 152,017 | 84,371 | 14,310 | 41,993 | 22,027 | 8,851 | 187,540 | 43,329 | 37,480 |
| Morris | 487,548 | 115,208 | 63,116 | 10,845 | 31,898 | 16,697 | 6,669 | 141,760 | 32,725 | 19,263 |
| Ocean | 569,111 | 131,789 | 118,817 | 12,406 | 36,700 | 19,828 | 9,447 | 182,497 | 42,717 | 48,172 |
| Passaic | 490,948 | 126,893 | 60,125 | 11,945 | 31,240 | 15,862 | 6,105 | 131,928 | 30,110 | 66,753 |
| Union | 523,249 | 129,721 | 65,627 | 12,211 | 33,748 | 17,336 | 6,769 | 145,343 | 33,320 | 45,220 |
| Warren | 109,876 | 26,075 | 14,641 | 2,455 | 7,174 | 3,725 | 1,489 | 31,596 | 7,275 | 7,303 |
| Totals | 7,599,735 | 1,795,488 | 1,007,619 | 169,021 | 497,121 | 255,204 | 100,736 | 2,148,739 | 492,651 | 683,171 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Atlantic | 12 | 0 | 0 | 4.0 | F |
| Bergen | * | * | * | * | * |
| Camden | 58 | 5 | 0 | 21.8 | F |
| Cumberland | 26 | 1 | 0 | 9.2 | F |
| Essex | DNC | DNC | DNC | DNC | DNC |
| Gloucester | 38 | 3 | 0 | 14.2 | F |
| Hudson | 29 | 0 | 0 | 9.7 | F |
| Hunterdon | 42 | 1 | 0 | 14.5 | F |
| Mercer | 37 | 4 | 0 | 14.3 | F |
| Middlesex | 45 | 5 | 0 | 17.5 | F |
| Monmouth | 30 | 1 | 0 | 10.5 | F |
| Morris | 52 | 4 | 0 | 19.3 | F |
| Ocean | 45 | 3 | 0 | 16.5 | F |
| Passaic | 21 | 0 | 0 | 7.0 | F |
| Union | DNC | DNC | DNC | DNC | DNC |
| Warren | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 3 | 1 | 0 | 1.5 | C | 11.1 | PASS |
| 6 | 0 | 0 | 2.0 | C | 12.2 | PASS |
| 15 | 0 | 0 | 5.0 | F | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 7 | 0 | 0 | 2.3 | D | * | INC |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| 18 | 0 | 0 | 6.0 | F | 14.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 10 | 0 | 0 | 3.3 | F | 11.9 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 10.3 | PASS |
| 6 | 0 | 0 | 2.0 | C | 10.2 | PASS |
| 7 | 0 | 0 | 2.3 | D | 12.3 | PASS |
| 25 | 0 | 0 | 8.3 | F | 13.6 | PASS |
| 4 | 0 | 0 | 1.3 | C | 11.8 | PASS |

American Lung Association in New Mexico

5911 Jefferson Street, NE
 Albuquerque, NM 87109
 (505) 265-0732
www.lungusa.org/newmexico

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Bernalillo | 635,139 | 157,512 | 79,191 | 14,828 | 40,409 | 20,778 | 7,994 | 172,744 | 37,280 | 89,607 |
| Chaves | 63,060 | 16,635 | 9,540 | 1,566 | 3,939 | 2,049 | 860 | 17,722 | 3,830 | 12,926 |
| Dona Ana | 201,603 | 55,315 | 24,572 | 5,207 | 12,360 | 6,202 | 2,331 | 50,827 | 10,877 | 45,531 |
| Eddy | 51,360 | 13,416 | 7,006 | 1,263 | 3,218 | 1,689 | 688 | 14,441 | 3,133 | 7,744 |
| Grant | 29,844 | 6,653 | 5,866 | 626 | 1,977 | 1,063 | 496 | 9,698 | 2,111 | 5,535 |
| Lea | 59,155 | 16,936 | 7,002 | 1,594 | 3,570 | 1,821 | 694 | 15,061 | 3,242 | 8,869 |
| Luna | 27,227 | 7,329 | 5,721 | 690 | 1,698 | 901 | 439 | 8,378 | 1,813 | 7,530 |
| San Juan | 122,500 | 33,903 | 13,350 | 3,192 | 7,486 | 3,821 | 1,414 | 31,210 | 6,725 | 17,372 |
| Sandoval | 122,298 | 31,278 | 13,270 | 2,944 | 7,691 | 3,939 | 1,449 | 32,115 | 6,930 | 13,435 |
| Santa Fe | 143,937 | 30,141 | 19,802 | 2,837 | 9,649 | 5,101 | 2,053 | 43,441 | 9,452 | 17,328 |
| Totals | 1,456,123 | 369,118 | 185,320 | 34,747 | 91,995 | 47,364 | 18,418 | 395,637 | 85,394 | 225,877 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Bernalillo | 6 | 0 | 0 | 2.0 | C |
| Chaves | DNC | DNC | DNC | DNC | DNC |
| Dona Ana | 17 | 0 | 0 | 5.7 | F |
| Eddy | 6 | 0 | 0 | 2.0 | C |
| Grant | 0 | 0 | 0 | 0.0 | A |
| Lea | 3 | 0 | 0 | 1.0 | C |
| Luna | 0 | 0 | 0 | 0.0 | A |
| San Juan | 22 | 0 | 0 | 7.3 | F |
| Sandoval | 2 | 0 | 0 | 0.7 | B |
| Santa Fe | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 6.7 | PASS |
| 0 | 0 | 0 | 0.0 | A | 6.4 | PASS |
| 14 | 0 | 0 | 4.7 | F | 10.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 1 | 0 | 0 | 0.3 | B | 4.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | 4.8 | PASS |

American Lung Association in New York

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Albany | 298,130 | 59,938 | 40,881 | 5,642 | 20,772 | 10,380 | 4,046 | 86,801 | 20,106 | 34,703 |
| Bronx | 1,391,903 | 388,071 | 148,116 | 36,532 | 87,811 | 42,381 | 15,198 | 340,437 | 77,682 | 367,883 |
| Chautauqua | 133,789 | 28,235 | 21,351 | 2,658 | 9,164 | 4,692 | 1,970 | 40,646 | 9,510 | 22,604 |
| Chemung | 87,813 | 18,933 | 13,467 | 1,782 | 5,986 | 3,059 | 1,268 | 26,350 | 6,159 | 13,254 |
| Dutchess | 292,878 | 64,400 | 37,654 | 6,062 | 19,950 | 10,021 | 3,881 | 83,663 | 19,408 | 23,978 |
| Erie | 909,845 | 195,594 | 141,691 | 18,412 | 62,054 | 31,878 | 13,340 | 275,942 | 64,621 | 118,925 |
| Essex | 37,826 | 6,939 | 6,435 | 653 | 2,679 | 1,378 | 586 | 12,013 | 2,816 | 4,572 |
| Franklin | 50,521 | 9,286 | 6,792 | 874 | 3,599 | 1,775 | 674 | 14,642 | 3,373 | 7,179 |
| Hamilton | 5,021 | 817 | 1,110 | 77 | 362 | 197 | 95 | 1,831 | 437 | 526 |
| Herkimer | 62,200 | 13,039 | 10,065 | 1,227 | 4,267 | 2,199 | 932 | 19,149 | 4,490 | 8,562 |
| Jefferson | 118,046 | 28,538 | 13,506 | 2,686 | 7,823 | 3,735 | 1,331 | 29,859 | 6,784 | 15,999 |
| Kings | 2,556,598 | 641,638 | 314,368 | 60,401 | 167,139 | 82,356 | 31,204 | 678,947 | 156,373 | 532,939 |
| Madison | 69,766 | 14,423 | 9,277 | 1,358 | 4,829 | 2,414 | 935 | 20,137 | 4,664 | 8,049 |
| Monroe | 732,762 | 164,904 | 99,525 | 15,523 | 49,507 | 25,048 | 9,949 | 211,570 | 49,234 | 92,057 |
| Nassau | 1,351,625 | 306,021 | 202,778 | 28,808 | 90,953 | 47,494 | 20,028 | 413,661 | 97,371 | 64,667 |
| New York | 1,634,795 | 277,378 | 210,296 | 26,111 | 118,596 | 57,267 | 20,841 | 462,720 | 105,661 | 267,745 |
| Niagara | 214,464 | 45,783 | 33,035 | 4,310 | 14,662 | 7,549 | 3,152 | 65,312 | 15,304 | 25,504 |
| Oneida | 231,590 | 48,818 | 37,349 | 4,596 | 15,861 | 8,113 | 3,414 | 70,342 | 16,454 | 30,851 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|-------------------|------------------|------------------|------------------|------------------|--------------------|----------------|-------------------------|------------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Onondaga | 452,633 | 103,313 | 62,222 | 9,726 | 30,438 | 15,373 | 6,125 | 129,970 | 30,231 | 51,683 |
| Orange | 379,647 | 100,082 | 38,266 | 9,421 | 24,510 | 12,032 | 4,316 | 97,007 | 22,272 | 35,826 |
| Oswego | 121,395 | 26,827 | 14,579 | 2,525 | 8,270 | 4,108 | 1,542 | 33,796 | 7,803 | 18,429 |
| Putnam | 99,244 | 22,977 | 11,520 | 2,163 | 6,678 | 3,421 | 1,321 | 28,629 | 6,683 | 4,800 |
| Queens | 2,293,007 | 491,620 | 305,926 | 46,279 | 157,128 | 78,352 | 30,375 | 653,456 | 151,227 | 278,546 |
| Rensselaer | 155,261 | 33,256 | 20,328 | 3,131 | 10,649 | 5,339 | 2,070 | 44,578 | 10,335 | 15,555 |
| Richmond | 487,407 | 113,910 | 59,168 | 10,723 | 32,644 | 16,322 | 6,220 | 135,264 | 31,315 | 49,544 |
| Saratoga | 217,191 | 47,244 | 26,806 | 4,447 | 14,856 | 7,436 | 2,834 | 61,633 | 14,274 | 15,661 |
| Schenectady | 151,427 | 34,203 | 23,426 | 3,220 | 10,182 | 5,232 | 2,195 | 45,342 | 10,620 | 17,072 |
| St. Lawrence | 109,701 | 22,008 | 15,011 | 2,072 | 7,645 | 3,778 | 1,454 | 31,359 | 7,233 | 16,865 |
| Steuben | 96,573 | 21,315 | 15,010 | 2,007 | 6,538 | 3,365 | 1,413 | 29,182 | 6,839 | 12,844 |
| Suffolk | 1,512,224 | 366,574 | 197,500 | 34,508 | 99,949 | 50,952 | 20,294 | 431,465 | 100,656 | 83,346 |
| Ulster | 181,670 | 36,728 | 25,327 | 3,457 | 12,639 | 6,421 | 2,559 | 54,348 | 12,665 | 21,001 |
| Wayne | 91,564 | 21,410 | 12,372 | 2,015 | 6,118 | 3,140 | 1,268 | 26,773 | 6,262 | 8,922 |
| Westchester | 953,943 | 228,123 | 135,833 | 21,475 | 63,180 | 32,478 | 13,358 | 279,142 | 65,352 | 78,557 |
| Totals | 17,482,459 | 3,982,345 | 2,310,990 | 374,881 | 1,177,437 | 589,685 | 230,188 | 4,935,966 | 1,144,215 | 2,348,648 |

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 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Albany | 10 | 0 | 0 | 3.3 | F |
| Bronx | 16 | 1 | 0 | 5.8 | F |
| Chautauqua | 35 | 0 | 0 | 11.7 | F |
| Chemung | 3 | 0 | 0 | 1.0 | C |
| Dutchess | 14 | 0 | 0 | 4.7 | F |
| Erie | 24 | 0 | 0 | 8.0 | F |
| Essex | 18 | 2 | 0 | 7.0 | F |
| Franklin | 5 | 0 | 0 | 1.7 | C |
| Hamilton | 3 | 0 | 0 | 1.0 | C |
| Herkimer | 4 | 0 | 0 | 1.3 | C |
| Jefferson | 11 | 0 | 0 | 3.7 | F |
| Kings | DNC | DNC | DNC | DNC | DNC |
| Madison | 8 | 0 | 0 | 2.7 | D |
| Monroe | 17 | 0 | 0 | 5.7 | F |
| Nassau | DNC | DNC | DNC | DNC | DNC |
| New York | * | * | * | * | * |
| Niagara | 19 | 0 | 0 | 6.3 | F |
| Oneida | 3 | 0 | 0 | 1.0 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 5 | 0 | 0 | 1.7 | C | * | INC |
| 21 | 0 | 0 | 7.0 | F | 14.3 | PASS |
| 1 | 0 | 0 | 0.3 | B | 8.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 8 | 0 | 0 | 2.7 | D | 11.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 5.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 6 | 0 | 0 | 2.0 | C | 12.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 9.5 | PASS |
| 3 | 0 | 0 | 1.0 | C | 10.9 | PASS |
| 12 | 0 | 0 | 4.0 | F | * | INC |
| 2 | 0 | 0 | 0.7 | B | 10.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|--------------|--------|-----|--------|----------|-------|
| Onondaga | 9 | 0 | 0 | 3.0 | D |
| Orange | 16 | 3 | 0 | 6.8 | F |
| Oswego | 10 | 0 | 0 | 3.3 | F |
| Putnam | 19 | 0 | 0 | 6.3 | F |
| Queens | 14 | 0 | 0 | 4.7 | F |
| Rensselaer | 10 | 0 | 0 | 3.3 | F |
| Richmond | 17 | 4 | 0 | 7.7 | F |
| Saratoga | 20 | 0 | 0 | 6.7 | F |
| Schenectady | 4 | 0 | 0 | 1.3 | C |
| St. Lawrence | DNC | DNC | DNC | DNC | DNC |
| Steuben | 4 | 0 | 0 | 1.3 | C |
| Suffolk | 34 | 6 | 1 | 15.0 | F |
| Ulster | 6 | 0 | 0 | 2.0 | C |
| Wayne | 11 | 0 | 0 | 3.7 | F |
| Westchester | 28 | 5 | 0 | 11.8 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 8.7 | PASS |
| 4 | 0 | 0 | 1.3 | C | 10.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 12 | 0 | 0 | 4.0 | F | 11.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 0 | 0 | 1.7 | C | 12.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 6.0 | PASS |
| 3 | 0 | 0 | 1.0 | C | 8.1 | PASS |
| 1 | 0 | 0 | 0.3 | B | 10.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 11.2 | PASS |

NORTH CAROLINA

American Lung Association in North Carolina

1-800-LUNG USA

www.lungusa.org/northcarolina

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Alamance | 148,053 | 35,255 | 20,417 | 3,319 | 8,515 | 4,935 | 1,966 | 41,679 | 10,851 | 22,864 |
| Alexander | 36,537 | 8,172 | 4,996 | 769 | 2,147 | 1,252 | 498 | 10,583 | 2,763 | 4,474 |
| Avery | 17,884 | 3,193 | 3,141 | 301 | 1,106 | 644 | 272 | 5,581 | 1,454 | 2,706 |
| Buncombe | 229,047 | 49,212 | 35,695 | 4,633 | 13,631 | 8,041 | 3,371 | 69,680 | 18,270 | 31,032 |
| Caldwell | 80,059 | 17,944 | 12,283 | 1,689 | 4,709 | 2,779 | 1,164 | 24,074 | 6,313 | 12,097 |
| Caswell | 23,248 | 4,661 | 3,605 | 439 | 1,412 | 836 | 349 | 7,240 | 1,902 | 4,133 |
| Catawba | 157,079 | 37,463 | 20,980 | 3,527 | 9,046 | 5,260 | 2,084 | 44,358 | 11,567 | 21,344 |
| Chatham | 63,077 | 14,341 | 8,702 | 1,350 | 3,681 | 2,135 | 847 | 18,008 | 4,690 | 6,438 |
| Cumberland | 312,696 | 86,675 | 29,285 | 8,159 | 17,019 | 9,617 | 3,349 | 76,457 | 19,697 | 46,331 |
| Davidson | 158,166 | 37,182 | 21,516 | 3,500 | 9,167 | 5,364 | 2,152 | 45,539 | 11,907 | 22,702 |
| Davie | 40,971 | 9,440 | 6,088 | 889 | 2,389 | 1,404 | 581 | 12,090 | 3,166 | 4,388 |
| Duplin | 53,362 | 13,845 | 6,865 | 1,303 | 2,982 | 1,722 | 674 | 14,418 | 3,748 | 10,835 |
| Durham | 262,715 | 64,759 | 24,384 | 6,096 | 14,858 | 8,296 | 2,793 | 64,892 | 16,618 | 34,855 |
| Edgecombe | 52,682 | 13,157 | 6,330 | 1,239 | 3,004 | 1,762 | 688 | 14,796 | 3,875 | 11,621 |
| Forsyth | 343,028 | 84,170 | 43,381 | 7,923 | 19,575 | 11,349 | 4,417 | 94,941 | 24,732 | 49,702 |
| Franklin | 58,927 | 14,293 | 6,268 | 1,345 | 3,366 | 1,917 | 691 | 15,483 | 4,003 | 8,107 |
| Gaston | 206,679 | 49,879 | 26,681 | 4,695 | 11,863 | 6,895 | 2,704 | 57,893 | 15,095 | 30,755 |
| Graham | 7,825 | 1,765 | 1,374 | 166 | 460 | 276 | 123 | 2,461 | 649 | 1,369 |
| Granville | 57,044 | 13,031 | 6,161 | 1,227 | 3,314 | 1,880 | 673 | 15,126 | 3,903 | 6,818 |
| Guilford | 472,216 | 111,748 | 57,003 | 10,520 | 27,216 | 15,657 | 5,925 | 129,237 | 33,556 | 62,528 |
| Haywood | 56,590 | 11,377 | 11,316 | 1,071 | 3,432 | 2,068 | 960 | 18,825 | 4,969 | 8,098 |
| Jackson | 36,739 | 7,073 | 5,128 | 666 | 2,232 | 1,279 | 494 | 10,631 | 2,753 | 5,698 |
| Johnston | 163,428 | 44,686 | 14,828 | 4,207 | 8,935 | 5,029 | 1,723 | 39,693 | 10,207 | 20,423 |
| Lenoir | 56,826 | 13,669 | 9,391 | 1,287 | 3,283 | 1,969 | 867 | 17,494 | 4,615 | 13,054 |
| Lincoln | 74,746 | 17,937 | 9,064 | 1,689 | 4,299 | 2,490 | 954 | 20,688 | 5,388 | 9,187 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Martin | 23,398 | 5,361 | 3,953 | 505 | 1,372 | 823 | 363 | 7,317 | 1,930 | 5,469 |
| Mcdowell | 43,843 | 9,569 | 6,921 | 901 | 2,594 | 1,526 | 641 | 13,223 | 3,462 | 6,188 |
| Mecklenburg | 890,515 | 237,056 | 73,754 | 22,316 | 49,226 | 27,682 | 9,234 | 216,219 | 55,591 | 95,508 |
| Mitchell | 15,784 | 3,065 | 3,176 | 289 | 966 | 584 | 271 | 5,321 | 1,406 | 2,680 |
| Montgomery | 27,358 | 6,839 | 3,792 | 644 | 1,554 | 909 | 369 | 7,761 | 2,029 | 5,179 |
| New Hanover | 192,538 | 41,378 | 25,982 | 3,895 | 11,402 | 6,573 | 2,557 | 54,896 | 14,261 | 26,306 |
| Onslow | 165,938 | 45,878 | 12,127 | 4,319 | 8,933 | 4,816 | 1,439 | 35,696 | 8,967 | 20,551 |
| Orange | 126,532 | 24,019 | 12,616 | 2,261 | 7,701 | 4,311 | 1,458 | 33,809 | 8,670 | 16,061 |
| Person | 37,438 | 8,652 | 5,180 | 814 | 2,185 | 1,286 | 522 | 10,986 | 2,880 | 5,063 |
| Pitt | 156,081 | 37,283 | 15,438 | 3,510 | 8,899 | 4,951 | 1,680 | 38,812 | 9,920 | 32,859 |
| Robeson | 129,123 | 35,377 | 14,104 | 3,330 | 7,065 | 4,032 | 1,486 | 32,860 | 8,502 | 37,898 |
| Rockingham | 92,282 | 20,551 | 14,553 | 1,935 | 5,447 | 3,235 | 1,376 | 28,254 | 7,427 | 14,749 |
| Rowan | 139,225 | 32,568 | 19,841 | 3,066 | 8,067 | 4,711 | 1,911 | 40,157 | 10,487 | 21,042 |
| Swain | 13,512 | 3,103 | 2,393 | 292 | 790 | 472 | 211 | 4,212 | 1,109 | 2,128 |
| Union | 193,255 | 53,761 | 16,180 | 5,061 | 10,484 | 5,861 | 1,948 | 45,640 | 11,698 | 16,396 |
| Wake | 866,410 | 226,070 | 67,625 | 21,281 | 48,192 | 26,953 | 8,763 | 208,193 | 53,385 | 78,017 |
| Watauga | 45,196 | 6,824 | 5,531 | 642 | 2,869 | 1,596 | 558 | 12,648 | 3,231 | 7,564 |
| Wayne | 113,671 | 29,178 | 14,539 | 2,747 | 6,397 | 3,728 | 1,472 | 31,410 | 8,199 | 20,125 |
| Yancey | 18,503 | 3,699 | 3,662 | 348 | 1,125 | 679 | 314 | 6,170 | 1,630 | 3,387 |
| Totals | 6,460,226 | 1,595,158 | 716,249 | 150,165 | 366,907 | 209,584 | 76,892 | 1,705,451 | 441,476 | 868,729 |

NORTH CAROLINA

American Lung Association in North Carolina

1-800-LUNG USA

www.lungusa.org/northcarolina

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Alamance | DNC | DNC | DNC | DNC | DNC |
| Alexander | 23 | 0 | 0 | 7.7 | F |
| Avery | 2 | 0 | 0 | 0.7 | B |
| Buncombe | 5 | 0 | 0 | 1.7 | C |
| Caldwell | 9 | 0 | 0 | 3.0 | D |
| Caswell | 23 | 0 | 0 | 7.7 | F |
| Catawba | DNC | DNC | DNC | DNC | DNC |
| Chatham | 5 | 0 | 0 | 1.7 | C |
| Cumberland | 14 | 0 | 0 | 4.7 | F |
| Davidson | DNC | DNC | DNC | DNC | DNC |
| Davie | 37 | 0 | 0 | 12.3 | F |
| Duplin | DNC | DNC | DNC | DNC | DNC |
| Durham | 19 | 0 | 0 | 6.3 | F |
| Edgecombe | 15 | 0 | 0 | 5.0 | F |
| Forsyth | 44 | 1 | 0 | 15.2 | F |
| Franklin | 14 | 0 | 0 | 4.7 | F |
| Gaston | DNC | DNC | DNC | DNC | DNC |
| Graham | 21 | 0 | 0 | 7.0 | F |
| Granville | 21 | 1 | 0 | 7.5 | F |
| Guilford | 37 | 1 | 0 | 12.8 | F |
| Haywood | 22 | 0 | 0 | 7.3 | F |
| Jackson | * | * | * | * | * |
| Johnston | 13 | 0 | 0 | 4.3 | F |
| Lenoir | 7 | 0 | 0 | 2.3 | D |
| Lincoln | 36 | 2 | 0 | 13.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 3 | 0 | 0 | 1.0 | C | 12.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 11.2 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 12.3 | PASS |
| 2 | 0 | 0 | 0.7 | B | 14.2 | PASS |
| 0 | 1 | 0 | 0.5 | B | 11.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | 13.0 | PASS |
| 2 | 0 | 0 | 0.7 | B | 14.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.5 | PASS |
| 2 | 0 | 0 | 0.7 | B | * | INC |
| 1 | 0 | 0 | 0.3 | B | 11.8 | PASS |
| 4 | 0 | 0 | 1.3 | C | 13.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 13.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 1 | 0 | 1.2 | C | * | INC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 1 | 0 | 0 | 0.3 | B | 11.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 10.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-------------|--------|-----|--------|----------|-------|
| Martin | 5 | 0 | 0 | 1.7 | C |
| Mcdowell | DNC | DNC | DNC | DNC | DNC |
| Mecklenburg | 63 | 9 | 1 | 26.2 | F |
| Mitchell | DNC | DNC | DNC | DNC | DNC |
| Montgomery | DNC | DNC | DNC | DNC | DNC |
| New Hanover | 3 | 0 | 0 | 1.0 | C |
| Onslow | DNC | DNC | DNC | DNC | DNC |
| Orange | DNC | DNC | DNC | DNC | DNC |
| Person | 14 | 0 | 0 | 4.7 | F |
| Pitt | 14 | 0 | 0 | 4.7 | F |
| Robeson | DNC | DNC | DNC | DNC | DNC |
| Rockingham | 22 | 0 | 0 | 7.3 | F |
| Rowan | 78 | 8 | 0 | 30.0 | F |
| Swain | 0 | 0 | 0 | 0.0 | A |
| Union | 30 | 2 | 0 | 11.0 | F |
| Wake | 35 | 0 | 0 | 11.7 | F |
| Watauga | DNC | DNC | DNC | DNC | DNC |
| Wayne | DNC | DNC | DNC | DNC | DNC |
| Yancey | 13 | 0 | 0 | 4.3 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 1 | 0 | 0.8 | B | 10.6 | PASS |
| 1 | 0 | 0 | 0.3 | B | 13.0 | PASS |
| 6 | 0 | 0 | 2.0 | C | 13.9 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.9 | PASS |
| 1 | 1 | 0 | 0.8 | B | 11.6 | PASS |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 1 | 0 | 1.2 | C | 11.3 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 13.6 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 1 | 0 | 2.2 | D | 12.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | 10.7 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|---------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Billings | 811 | 147 | 139 | 14 | 51 | 31 | 14 | 279 | 56 | 92 |
| Burke | 1,820 | 335 | 437 | 32 | 112 | 73 | 38 | 709 | 147 | 190 |
| Burleigh | 78,689 | 17,111 | 10,610 | 1,611 | 4,894 | 2,665 | 1,033 | 22,203 | 4,451 | 6,706 |
| Cass | 139,918 | 31,914 | 13,640 | 3,004 | 8,712 | 4,466 | 1,488 | 34,703 | 6,819 | 13,457 |
| Dunn | 3,318 | 699 | 575 | 66 | 202 | 122 | 55 | 1,094 | 222 | 397 |
| Mckenzie | 5,674 | 1,303 | 903 | 123 | 339 | 201 | 87 | 1,779 | 360 | 806 |
| Mercer | 7,854 | 1,548 | 1,211 | 146 | 481 | 297 | 129 | 2,634 | 530 | 554 |
| Oliver | 1,695 | 307 | 291 | 29 | 105 | 67 | 31 | 610 | 123 | 173 |
| Totals | 239,779 | 53,364 | 27,806 | 5,025 | 14,896 | 7,922 | 2,875 | 64,011 | 12,709 | 22,375 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|----------|--------|-----|--------|----------|-------|
| Billings | 0 | 0 | 0 | 0.0 | A |
| Burke | 0 | 0 | 0 | 0.0 | A |
| Burleigh | 0 | 0 | 0 | 0.0 | A |
| Cass | 0 | 0 | 0 | 0.0 | A |
| Dunn | 0 | 0 | 0 | 0.0 | A |
| Mckenzie | 0 | 0 | 0 | 0.0 | A |
| Mercer | 0 | 0 | 0 | 0.0 | A |
| Oliver | 0 | 0 | 0 | 0.0 | A |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | 4.8 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 6.9 | PASS |
| 0 | 0 | 0 | 0.0 | A | 8.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 6.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Ohio

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Allen | 105,168 | 25,559 | 15,600 | 2,406 | 7,554 | 3,541 | 1,471 | 30,533 | 8,178 | 14,749 |
| Ashtabula | 100,648 | 23,621 | 14,912 | 2,224 | 7,314 | 3,450 | 1,436 | 29,816 | 7,993 | 15,304 |
| Athens | 63,255 | 10,524 | 6,539 | 991 | 5,025 | 2,106 | 664 | 15,905 | 4,143 | 16,134 |
| Butler | 360,765 | 89,645 | 40,885 | 8,439 | 25,840 | 11,685 | 4,321 | 95,405 | 25,320 | 41,659 |
| Clark | 139,859 | 32,595 | 22,337 | 3,068 | 10,167 | 4,817 | 2,061 | 42,151 | 11,316 | 18,870 |
| Clermont | 195,385 | 50,803 | 21,648 | 4,782 | 13,790 | 6,305 | 2,357 | 51,818 | 13,780 | 16,994 |
| Clinton | 43,200 | 10,605 | 5,585 | 998 | 3,100 | 1,420 | 553 | 11,874 | 3,163 | 4,608 |
| Cuyahoga | 1,283,925 | 301,457 | 195,113 | 28,378 | 93,253 | 44,264 | 18,682 | 385,175 | 103,383 | 199,694 |
| Delaware | 165,026 | 45,164 | 14,067 | 4,252 | 11,460 | 5,038 | 1,680 | 39,285 | 10,341 | 7,877 |
| Franklin | 1,129,067 | 289,631 | 110,221 | 27,265 | 80,146 | 35,590 | 12,386 | 282,692 | 74,649 | 166,917 |
| Geauga | 94,753 | 22,552 | 14,225 | 2,123 | 6,861 | 3,314 | 1,417 | 29,087 | 7,827 | 6,467 |
| Greene | 159,190 | 34,550 | 20,395 | 3,252 | 11,866 | 5,433 | 2,086 | 45,139 | 12,017 | 16,162 |
| Hamilton | 851,494 | 206,018 | 114,701 | 19,394 | 61,384 | 28,595 | 11,457 | 242,599 | 64,838 | 113,411 |
| Jefferson | 68,526 | 13,428 | 13,173 | 1,264 | 5,207 | 2,531 | 1,158 | 22,908 | 6,183 | 11,879 |
| Knox | 59,324 | 13,689 | 8,467 | 1,289 | 4,333 | 1,996 | 802 | 16,916 | 4,515 | 7,336 |
| Lake | 234,030 | 51,648 | 35,012 | 4,862 | 17,327 | 8,219 | 3,431 | 71,178 | 19,096 | 19,629 |
| Lawrence | 62,573 | 14,358 | 9,346 | 1,352 | 4,575 | 2,133 | 879 | 18,311 | 4,899 | 11,257 |
| Licking | 157,721 | 38,445 | 20,421 | 3,619 | 11,350 | 5,261 | 2,074 | 44,299 | 11,825 | 15,727 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|------------------|------------------|----------------|--------------------|----------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Lorain | 304,373 | 72,471 | 41,139 | 6,822 | 22,051 | 10,246 | 4,092 | 86,765 | 23,179 | 36,331 |
| Lucas | 440,456 | 109,399 | 56,583 | 10,298 | 31,496 | 14,528 | 5,695 | 121,916 | 32,515 | 80,006 |
| Madison | 41,861 | 9,395 | 5,147 | 884 | 3,092 | 1,403 | 529 | 11,553 | 3,070 | 4,091 |
| Mahoning | 237,978 | 51,393 | 40,767 | 4,838 | 17,673 | 8,497 | 3,739 | 75,454 | 20,314 | 38,690 |
| Medina | 171,210 | 41,836 | 20,475 | 3,938 | 12,333 | 5,714 | 2,202 | 47,660 | 12,711 | 9,764 |
| Miami | 101,085 | 23,381 | 15,150 | 2,201 | 7,377 | 3,484 | 1,455 | 30,152 | 8,085 | 7,901 |
| Montgomery | 534,626 | 125,714 | 80,165 | 11,834 | 38,804 | 18,216 | 7,580 | 157,243 | 42,124 | 77,813 |
| Portage | 155,991 | 33,044 | 18,381 | 3,111 | 11,719 | 5,290 | 1,947 | 43,095 | 11,432 | 17,385 |
| Preble | 41,643 | 9,458 | 6,221 | 890 | 3,056 | 1,443 | 601 | 12,479 | 3,346 | 3,443 |
| Scioto | 76,587 | 17,558 | 11,847 | 1,653 | 5,595 | 2,599 | 1,079 | 22,364 | 5,982 | 14,675 |
| Stark | 379,214 | 86,105 | 59,606 | 8,106 | 27,805 | 13,215 | 5,626 | 115,444 | 31,000 | 45,898 |
| Summit | 542,562 | 127,431 | 76,162 | 11,996 | 39,462 | 18,517 | 7,545 | 158,425 | 42,408 | 66,372 |
| Trumbull | 211,317 | 45,982 | 35,911 | 4,329 | 15,663 | 7,531 | 3,308 | 66,825 | 17,989 | 32,109 |
| Warren | 207,353 | 54,257 | 20,948 | 5,108 | 14,612 | 6,545 | 2,329 | 52,532 | 13,902 | 13,204 |
| Washington | 61,567 | 12,940 | 10,649 | 1,218 | 4,605 | 2,204 | 967 | 19,535 | 5,256 | 10,063 |
| Wood | 125,340 | 26,220 | 14,974 | 2,468 | 9,442 | 4,231 | 1,548 | 34,338 | 9,097 | 11,863 |
| Totals | 8,907,072 | 2,120,876 | 1,196,772 | 199,652 | 645,336 | 299,361 | 119,157 | 2,530,871 | 675,875 | 1,174,282 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Lorain | 7 | 0 | 0 | 2.3 | D |
| Lucas | 16 | 1 | 0 | 5.8 | F |
| Madison | 20 | 0 | 0 | 6.7 | F |
| Mahoning | 12 | 0 | 0 | 4.0 | F |
| Medina | 4 | 0 | 0 | 1.3 | C |
| Miami | 5 | 0 | 0 | 1.7 | C |
| Montgomery | 11 | 0 | 0 | 3.7 | F |
| Portage | 10 | 0 | 0 | 3.3 | F |
| Preble | 4 | 0 | 0 | 1.3 | C |
| Scioto | DNC | DNC | DNC | DNC | DNC |
| Stark | 49 | 1 | 0 | 16.8 | F |
| Summit | 33 | 1 | 0 | 11.5 | F |
| Trumbull | 32 | 0 | 0 | 10.7 | F |
| Warren | 54 | 1 | 0 | 18.5 | F |
| Washington | 29 | 0 | 0 | 9.7 | F |
| Wood | 8 | 0 | 0 | 2.7 | D |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 11.9 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 7 | 0 | 0 | 2.3 | D | 13.6 | PASS |
| 0 | 0 | 0 | 0.0 | A | 12.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 7 | 0 | 0 | 2.3 | D | 14.2 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.6 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.7 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.5 | PASS |
| 2 | 0 | 0 | 0.7 | B | * | INC |
| 7 | 0 | 0 | 2.3 | D | 14.0 | PASS |
| 6 | 0 | 0 | 2.0 | C | 13.3 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Oklahoma

11212 N. May Ave Suite 405
 Oklahoma City, OK 73120
 (405) 748-4674
www.lungusa.org/oklahoma

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|------------------|---------------|--------------------|---------------|---------------|-------------------------|----------------|---------------------------|
| | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | | |
| Adair | 21,811 | 6,347 | 2,578 | 597 | 1,375 | 671 | 258 | 5,571 | 1,519 | 4,899 |
| Caddo | 29,024 | 7,566 | 4,188 | 712 | 1,897 | 950 | 393 | 8,173 | 2,235 | 5,924 |
| Canadian | 106,079 | 26,738 | 11,104 | 2,517 | 7,073 | 3,436 | 1,249 | 27,884 | 7,604 | 8,772 |
| Carter | 47,979 | 12,069 | 7,480 | 1,136 | 3,166 | 1,609 | 687 | 14,055 | 3,850 | 7,672 |
| Cherokee | 45,733 | 11,155 | 5,691 | 1,050 | 3,082 | 1,474 | 553 | 12,085 | 3,287 | 11,184 |
| Cleveland | 239,760 | 53,554 | 22,349 | 5,041 | 16,703 | 7,813 | 2,615 | 60,996 | 16,549 | 26,269 |
| Comanche | 111,772 | 31,269 | 12,395 | 2,944 | 7,179 | 3,445 | 1,272 | 28,071 | 7,640 | 18,507 |
| Cotton | 6,191 | 1,534 | 954 | 144 | 411 | 209 | 89 | 1,819 | 498 | 1,006 |
| Creek | 69,822 | 16,859 | 10,557 | 1,587 | 4,673 | 2,373 | 998 | 20,594 | 5,642 | 8,776 |
| Dewey | 4,389 | 946 | 892 | 89 | 300 | 161 | 77 | 1,487 | 409 | 545 |
| Jefferson | 6,219 | 1,450 | 1,205 | 136 | 418 | 218 | 101 | 1,981 | 544 | 1,303 |
| Kay | 45,632 | 11,621 | 7,483 | 1,094 | 2,988 | 1,548 | 682 | 13,754 | 3,775 | 7,642 |
| Lincoln | 32,153 | 7,771 | 4,766 | 732 | 2,152 | 1,093 | 457 | 9,461 | 2,592 | 4,523 |
| Love | 9,155 | 2,170 | 1,577 | 204 | 613 | 317 | 141 | 2,831 | 777 | 1,279 |
| Mayes | 39,912 | 9,888 | 6,180 | 931 | 2,650 | 1,335 | 564 | 11,593 | 3,172 | 6,780 |
| McClain | 32,365 | 7,945 | 4,328 | 748 | 2,165 | 1,074 | 427 | 9,065 | 2,477 | 3,218 |
| Muskogee | 71,278 | 17,336 | 11,288 | 1,632 | 4,760 | 2,397 | 1,018 | 20,875 | 5,712 | 13,338 |
| Oklahoma | 706,617 | 186,249 | 89,342 | 17,533 | 46,222 | 22,645 | 8,815 | 189,205 | 51,626 | 110,764 |
| Ottawa | 31,849 | 7,687 | 5,519 | 724 | 2,125 | 1,087 | 481 | 9,656 | 2,646 | 6,034 |
| Pittsburg | 45,115 | 9,897 | 7,970 | 932 | 3,099 | 1,578 | 694 | 13,975 | 3,828 | 7,209 |
| Sequoyah | 41,034 | 10,357 | 5,874 | 975 | 2,713 | 1,360 | 559 | 11,663 | 3,190 | 8,387 |
| Tulsa | 591,982 | 156,061 | 71,672 | 14,691 | 38,727 | 19,040 | 7,337 | 158,507 | 43,276 | 78,977 |
| Totals | 2,335,871 | 596,469 | 295,392 | 56,149 | 154,491 | 75,833 | 29,467 | 633,301 | 172,849 | 343,008 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------|--------|-----|--------|----------|-------|
| Adair | 13 | 0 | 0 | 4.3 | F |
| Caddo | * | * | * | * | * |
| Canadian | 17 | 0 | 0 | 5.7 | F |
| Carter | * | * | * | * | * |
| Cherokee | 3 | 1 | 0 | 1.5 | C |
| Cleveland | 14 | 0 | 0 | 4.7 | F |
| Comanche | 14 | 0 | 0 | 4.7 | F |
| Cotton | * | * | * | * | * |
| Creek | 17 | 0 | 0 | 5.7 | F |
| Dewey | 3 | 0 | 0 | 1.0 | C |
| Jefferson | * | * | * | * | * |
| Kay | 17 | 0 | 0 | 5.7 | F |
| Lincoln | * | * | * | * | * |
| Love | * | * | * | * | * |
| Mayes | 16 | 0 | 0 | 5.3 | F |
| Mcclain | 5 | 0 | 0 | 1.7 | C |
| Muskogee | DNC | DNC | DNC | DNC | DNC |
| Oklahoma | 38 | 0 | 0 | 12.7 | F |
| Ottawa | 6 | 0 | 0 | 2.0 | C |
| Pittsburg | 7 | 0 | 0 | 2.3 | D |
| Sequoyah | 5 | 0 | 0 | 1.7 | C |
| Tulsa | 32 | 3 | 0 | 12.2 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 8.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 11.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 11.6 | PASS |
| 0 | 0 | 0 | 0.0 | A | 10.1 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.2 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.1 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.9 | PASS |
| 4 | 0 | 0 | 1.3 | C | 11.3 | PASS |

American Lung Association in Oregon

7420 SW Bridgeport Road, Suite 200
 Tigard, OR 97224-7711
 (503) 924-4094
www.lungusa.org/oregon

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Clackamas | 380,576 | 84,441 | 47,380 | 7,949 | 25,542 | 13,206 | 5,155 | 110,923 | 20,791 | 34,731 |
| Columbia | 49,408 | 11,080 | 5,975 | 1,043 | 3,301 | 1,700 | 655 | 14,194 | 2,655 | 5,536 |
| Deschutes | 158,456 | 34,935 | 22,347 | 3,289 | 10,594 | 5,440 | 2,180 | 46,115 | 8,633 | 16,424 |
| Douglas | 104,059 | 20,975 | 21,598 | 1,975 | 7,198 | 3,835 | 1,817 | 35,300 | 6,741 | 14,565 |
| Harney | 6,747 | 1,493 | 1,303 | 141 | 459 | 248 | 117 | 2,284 | 438 | 1,048 |
| Jackson | 201,138 | 43,144 | 34,448 | 4,061 | 13,627 | 7,134 | 3,116 | 63,056 | 11,932 | 31,611 |
| Josephine | 81,618 | 16,400 | 17,467 | 1,544 | 5,655 | 3,023 | 1,453 | 28,028 | 5,361 | 15,619 |
| Klamath | 66,425 | 15,434 | 10,544 | 1,453 | 4,402 | 2,303 | 988 | 20,190 | 3,817 | 11,023 |
| Lake | 7,239 | 1,410 | 1,486 | 133 | 507 | 272 | 129 | 2,503 | 479 | 1,287 |
| Lane | 346,560 | 69,455 | 49,662 | 6,538 | 23,760 | 12,190 | 4,864 | 103,115 | 19,293 | 53,423 |
| Linn | 115,348 | 27,272 | 17,677 | 2,567 | 7,570 | 3,920 | 1,643 | 33,945 | 6,388 | 15,984 |
| Marion | 314,606 | 83,781 | 38,431 | 7,887 | 19,712 | 10,002 | 3,837 | 82,998 | 15,436 | 48,005 |
| Multnomah | 714,567 | 164,021 | 72,679 | 15,440 | 47,099 | 23,799 | 8,495 | 191,636 | 35,456 | 99,035 |
| Umatilla | 73,526 | 19,069 | 9,297 | 1,795 | 4,671 | 2,393 | 939 | 20,097 | 3,755 | 10,576 |
| Union | 24,961 | 5,435 | 3,872 | 512 | 1,681 | 873 | 366 | 7,566 | 1,425 | 3,641 |
| Washington | 529,216 | 138,355 | 49,244 | 13,024 | 33,361 | 16,754 | 5,844 | 133,464 | 24,603 | 50,055 |
| Totals | 3,174,450 | 736,700 | 403,410 | 69,351 | 209,138 | 107,092 | 41,598 | 895,414 | 167,204 | 412,563 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Clackamas | 3 | 1 | 0 | 1.5 | C |
| Columbia | 0 | 0 | 0 | 0.0 | A |
| Deschutes | * | * | * | * | * |
| Douglas | DNC | DNC | DNC | DNC | DNC |
| Harney | DNC | DNC | DNC | DNC | DNC |
| Jackson | 3 | 0 | 0 | 1.0 | C |
| Josephine | DNC | DNC | DNC | DNC | DNC |
| Klamath | DNC | DNC | DNC | DNC | DNC |
| Lake | DNC | DNC | DNC | DNC | DNC |
| Lane | 6 | 0 | 0 | 2.0 | C |
| Linn | DNC | DNC | DNC | DNC | DNC |
| Marion | 5 | 0 | 0 | 1.7 | C |
| Multnomah | 1 | 0 | 0 | 0.3 | B |
| Umatilla | * | * | * | * | * |
| Union | DNC | DNC | DNC | DNC | DNC |
| Washington | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |
| 10 | 0 | 0 | 3.3 | F | 10.0 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 12 | 1 | 0 | 4.5 | F | 11.6 | PASS |
| * | * | * | * | * | * | INC |
| 24 | 0 | 0 | 8.0 | F | 11.0 | PASS |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 8.8 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 1 | 0 | 0 | 0.3 | B | 7.5 | PASS |
| 2 | 0 | 0 | 0.7 | B | * | INC |

PENNSYLVANIA

American Lung Association in Pennsylvania

3001 Old Gettysburg Road
Camp Hill, PA 17011-7206
(717) 541-5864
www.lungusa.org/pennsylvania

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Adams | 101,119 | 22,237 | 14,586 | 2,093 | 7,277 | 3,473 | 1,402 | 29,527 | 6,746 | 7,569 |
| Allegheny | 1,215,103 | 250,672 | 204,705 | 23,597 | 88,545 | 43,690 | 18,952 | 385,161 | 89,099 | 145,977 |
| Armstrong | 68,790 | 13,696 | 12,913 | 1,289 | 5,041 | 2,532 | 1,150 | 22,844 | 5,324 | 7,425 |
| Beaver | 172,476 | 35,214 | 31,681 | 3,315 | 12,565 | 6,308 | 2,850 | 56,769 | 13,220 | 19,600 |
| Berks | 403,595 | 94,949 | 57,472 | 8,938 | 28,462 | 13,636 | 5,534 | 116,275 | 26,595 | 44,207 |
| Blair | 125,174 | 26,402 | 21,648 | 2,485 | 9,063 | 4,461 | 1,952 | 39,460 | 9,136 | 17,353 |
| Bucks | 621,643 | 141,132 | 86,433 | 13,286 | 44,292 | 21,670 | 8,863 | 186,034 | 42,684 | 31,336 |
| Cambria | 144,319 | 27,777 | 26,924 | 2,615 | 10,675 | 5,294 | 2,372 | 47,382 | 11,011 | 20,963 |
| Centre | 144,779 | 23,629 | 16,509 | 2,224 | 11,289 | 4,897 | 1,619 | 37,771 | 8,310 | 18,941 |
| Chester | 491,489 | 119,297 | 61,124 | 11,230 | 34,403 | 16,494 | 6,448 | 138,490 | 31,528 | 27,886 |
| Clearfield | 82,896 | 15,942 | 14,730 | 1,501 | 6,144 | 3,011 | 1,315 | 26,589 | 6,152 | 12,351 |
| Cumberland | 229,361 | 46,594 | 35,421 | 4,386 | 16,837 | 8,099 | 3,341 | 69,588 | 15,956 | 16,387 |
| Dauphin | 256,562 | 59,937 | 35,138 | 5,642 | 18,135 | 8,797 | 3,564 | 75,118 | 17,200 | 27,090 |
| Delaware | 553,619 | 131,738 | 78,322 | 12,401 | 38,891 | 18,779 | 7,666 | 160,735 | 36,821 | 48,314 |
| Erie | 279,175 | 63,598 | 40,259 | 5,987 | 19,877 | 9,540 | 3,881 | 81,461 | 18,641 | 38,562 |
| Franklin | 143,495 | 32,855 | 24,157 | 3,093 | 10,160 | 4,933 | 2,134 | 43,325 | 10,003 | 11,848 |
| Greene | 39,344 | 7,775 | 6,006 | 732 | 2,909 | 1,398 | 573 | 11,978 | 2,744 | 6,004 |
| Indiana | 87,479 | 15,995 | 14,132 | 1,506 | 6,586 | 3,131 | 1,287 | 26,807 | 6,136 | 13,387 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|-------------------|------------------|------------------|------------------|----------------|--------------------|----------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Lackawanna | 209,408 | 42,932 | 37,682 | 4,041 | 15,263 | 7,515 | 3,326 | 66,811 | 15,491 | 26,508 |
| Lancaster | 502,370 | 125,391 | 73,853 | 11,804 | 34,717 | 16,719 | 6,928 | 143,951 | 33,029 | 45,093 |
| Lawrence | 90,272 | 19,013 | 16,668 | 1,790 | 6,523 | 3,256 | 1,472 | 29,280 | 6,815 | 11,874 |
| Lehigh | 339,989 | 79,453 | 51,980 | 7,479 | 23,975 | 11,632 | 4,878 | 100,789 | 23,179 | 33,749 |
| Luzerne | 311,983 | 62,037 | 56,868 | 5,840 | 22,912 | 11,286 | 5,006 | 100,446 | 23,297 | 42,217 |
| Lycoming | 116,670 | 24,351 | 19,334 | 2,292 | 8,483 | 4,142 | 1,774 | 36,255 | 8,365 | 15,305 |
| Mercer | 116,652 | 24,653 | 20,790 | 2,321 | 8,433 | 4,165 | 1,847 | 37,080 | 8,602 | 15,140 |
| Monroe | 165,058 | 39,012 | 19,797 | 3,672 | 11,668 | 5,523 | 2,105 | 45,798 | 10,378 | 16,320 |
| Montgomery | 778,048 | 179,646 | 115,817 | 16,911 | 55,081 | 26,913 | 11,244 | 233,092 | 53,617 | 46,672 |
| Northampton | 294,787 | 64,103 | 43,017 | 6,034 | 21,268 | 10,224 | 4,163 | 87,349 | 19,994 | 24,724 |
| Perry | 45,185 | 10,279 | 5,856 | 968 | 3,224 | 1,557 | 616 | 13,154 | 3,002 | 4,154 |
| Philadelphia | 1,447,395 | 361,859 | 185,962 | 34,064 | 100,391 | 46,961 | 18,156 | 390,839 | 88,611 | 331,349 |
| Tioga | 40,574 | 8,342 | 7,223 | 785 | 2,956 | 1,451 | 638 | 12,856 | 2,978 | 6,175 |
| Washington | 206,407 | 41,852 | 35,648 | 3,940 | 15,099 | 7,464 | 3,264 | 66,055 | 15,299 | 20,690 |
| Westmoreland | 361,589 | 70,130 | 66,762 | 6,602 | 26,686 | 13,391 | 6,033 | 120,346 | 28,015 | 35,130 |
| York | 424,583 | 97,250 | 58,797 | 9,155 | 30,200 | 14,534 | 5,856 | 123,655 | 28,270 | 33,417 |
| Totals | 10,611,388 | 2,379,742 | 1,598,214 | 224,018 | 758,030 | 366,876 | 152,209 | 3,163,070 | 726,246 | 1,223,717 |

PENNSYLVANIA

American Lung Association in Pennsylvania

3001 Old Gettysburg Road
Camp Hill, PA 17011-7206
(717) 541-5864
www.lungusa.org/pennsylvania

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Adams | 17 | 0 | 0 | 5.7 | F |
| Allegheny | 47 | 1 | 0 | 16.2 | F |
| Armstrong | 37 | 2 | 0 | 13.3 | F |
| Beaver | 25 | 0 | 0 | 8.3 | F |
| Berks | 31 | 0 | 0 | 10.3 | F |
| Blair | 5 | 0 | 0 | 1.7 | C |
| Bucks | 44 | 4 | 2 | 18.0 | F |
| Cambria | 2 | 0 | 0 | 0.7 | B |
| Centre | 9 | 0 | 0 | 3.0 | D |
| Chester | 30 | 1 | 1 | 11.2 | F |
| Clearfield | 7 | 0 | 0 | 2.3 | D |
| Cumberland | DNC | DNC | DNC | DNC | DNC |
| Dauphin | 33 | 0 | 0 | 11.0 | F |
| Delaware | 31 | 1 | 0 | 10.8 | F |
| Erie | 18 | 1 | 0 | 6.5 | F |
| Franklin | 6 | 0 | 0 | 2.0 | C |
| Greene | 13 | 0 | 0 | 4.3 | F |
| Indiana | 16 | 0 | 0 | 5.3 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 12 | 0 | 0 | 4.0 | F | 11.9 | PASS |
| 129 | 5 | 0 | 45.5 | F | 18.3 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 10 | 0 | 0 | 3.3 | F | 14.9 | PASS |
| 8 | 0 | 0 | 2.7 | D | 13.6 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 6 | 0 | 0 | 2.0 | C | 12.6 | PASS |
| 5 | 0 | 0 | 1.7 | C | 14.4 | PASS |
| 13 | 0 | 0 | 4.3 | F | 11.4 | PASS |
| 6 | 0 | 0 | 2.0 | C | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 14 | 0 | 0 | 4.7 | F | 13.2 | PASS |
| 22 | 0 | 0 | 7.3 | F | 13.8 | PASS |
| 5 | 0 | 0 | 1.7 | C | 14.1 | PASS |
| 11 | 0 | 0 | 3.7 | F | 11.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|--------------|--------|-----|--------|----------|-------|
| Lackawanna | 9 | 1 | 0 | 3.5 | F |
| Lancaster | 37 | 0 | 0 | 12.3 | F |
| Lawrence | 7 | 0 | 0 | 2.3 | D |
| Lehigh | 28 | 0 | 0 | 9.3 | F |
| Luzerne | 10 | 0 | 0 | 3.3 | F |
| Lycoming | 12 | 0 | 0 | 4.0 | F |
| Mercer | 29 | 0 | 0 | 9.7 | F |
| Monroe | 11 | 0 | 0 | 3.7 | F |
| Montgomery | 41 | 1 | 0 | 14.2 | F |
| Northampton | 22 | 1 | 0 | 7.8 | F |
| Perry | 12 | 0 | 0 | 4.0 | F |
| Philadelphia | 48 | 5 | 0 | 18.5 | F |
| Tioga | 4 | 0 | 0 | 1.3 | C |
| Washington | 20 | 0 | 0 | 6.7 | F |
| Westmoreland | 13 | 0 | 0 | 4.3 | F |
| York | 29 | 1 | 0 | 10.2 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 10 | 0 | 0 | 3.3 | F | 10.7 | PASS |
| 9 | 0 | 0 | 3.0 | D | 14.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 9 | 0 | 0 | 3.0 | D | 12.2 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 6 | 0 | 0 | 2.0 | C | 12.3 | PASS |
| 21 | 0 | 0 | 7.0 | F | 12.8 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 33 | 0 | 0 | 11.0 | F | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 22 | 0 | 0 | 7.3 | F | 14.4 | PASS |
| 7 | 0 | 0 | 2.3 | D | 14.1 | PASS |
| 9 | 0 | 0 | 3.0 | D | 14.6 | PASS |

RHODE ISLAND

American Lung Association in Rhode Island

260 West Exchange Street, Suite 102-B
 Providence, RI 02903
 (401) 533-5171
www.lungusa.org/rhodeisland

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Kent | 168,058 | 35,032 | 24,800 | 3,298 | 13,972 | 5,979 | 2,466 | 51,486 | 10,360 | 13,464 |
| Providence | 626,150 | 142,736 | 83,679 | 13,437 | 50,841 | 20,957 | 8,148 | 174,895 | 35,167 | 87,789 |
| Washington | 126,264 | 25,075 | 17,660 | 2,360 | 10,647 | 4,495 | 1,795 | 38,096 | 7,647 | 9,914 |
| Totals | 920,472 | 202,843 | 126,139 | 19,095 | 75,459 | 31,431 | 12,409 | 264,477 | 53,174 | 111,167 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Kent | 17 | 0 | 0 | 5.7 | F |
| Providence | 19 | 1 | 0 | 6.8 | F |
| Washington | 21 | 2 | 1 | 8.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 7.7 | PASS |
| 3 | 0 | 0 | 1.0 | C | 11.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

SOUTH CAROLINA

American Lung Association in South Carolina

44-A Markfield Drive
 Charleston, SC 29407
 (843) 556-8451
www.lungusa.org/southcarolina

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|--------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Abbeville | 25,404 | 5,695 | 3,980 | 536 | 1,628 | 883 | 373 | 7,678 | 2,131 | 4,334 |
| Aiken | 154,071 | 36,070 | 23,300 | 3,395 | 9,760 | 5,297 | 2,224 | 45,966 | 12,791 | 24,763 |
| Anderson | 182,825 | 43,340 | 26,943 | 4,080 | 11,512 | 6,210 | 2,570 | 53,469 | 14,826 | 25,830 |
| Barnwell | 22,872 | 5,710 | 3,119 | 538 | 1,420 | 767 | 312 | 6,560 | 1,829 | 4,976 |
| Beaufort | 150,415 | 36,100 | 29,070 | 3,398 | 9,396 | 5,141 | 2,372 | 46,563 | 12,760 | 14,609 |
| Berkeley | 169,327 | 44,011 | 15,394 | 4,143 | 10,302 | 5,359 | 1,851 | 42,512 | 11,762 | 22,817 |
| Charleston | 348,046 | 80,343 | 44,260 | 7,563 | 22,035 | 11,688 | 4,510 | 97,350 | 26,909 | 52,004 |
| Cherokee | 54,394 | 13,267 | 6,981 | 1,249 | 3,389 | 1,805 | 706 | 15,137 | 4,192 | 9,406 |
| Chester | 32,618 | 7,818 | 4,571 | 736 | 2,051 | 1,108 | 453 | 9,498 | 2,646 | 6,359 |
| Chesterfield | 42,882 | 10,378 | 5,596 | 977 | 2,689 | 1,446 | 576 | 12,246 | 3,416 | 8,721 |
| Colleton | 39,019 | 9,694 | 5,609 | 913 | 2,425 | 1,312 | 544 | 11,317 | 3,149 | 8,182 |
| Darlington | 67,031 | 16,216 | 9,372 | 1,527 | 4,205 | 2,273 | 930 | 19,491 | 5,434 | 14,400 |
| Edgefield | 25,546 | 5,268 | 2,899 | 496 | 1,669 | 877 | 320 | 7,130 | 1,974 | 4,391 |
| Florence | 132,800 | 32,918 | 17,232 | 3,099 | 8,244 | 4,413 | 1,747 | 37,227 | 10,341 | 23,565 |
| Georgetown | 60,731 | 13,570 | 10,598 | 1,277 | 3,901 | 2,140 | 948 | 19,052 | 5,291 | 10,805 |
| Greenville | 438,119 | 107,134 | 53,235 | 10,085 | 27,278 | 14,485 | 5,554 | 120,376 | 33,368 | 59,025 |
| Greenwood | 68,549 | 16,380 | 10,252 | 1,542 | 4,291 | 2,300 | 949 | 19,753 | 5,440 | 11,111 |
| Horry | 257,380 | 55,135 | 44,453 | 5,190 | 16,635 | 8,998 | 3,895 | 79,019 | 21,729 | 37,015 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Lexington | 248,518 | 61,239 | 29,922 | 5,765 | 15,479 | 8,269 | 3,194 | 69,029 | 19,243 | 25,982 |
| Oconee | 71,274 | 15,284 | 13,389 | 1,439 | 4,623 | 2,541 | 1,152 | 22,859 | 6,323 | 11,407 |
| Pickens | 116,915 | 24,411 | 15,538 | 2,298 | 7,569 | 3,965 | 1,508 | 32,722 | 8,932 | 18,244 |
| Richland | 364,001 | 86,784 | 35,588 | 8,170 | 22,732 | 11,782 | 4,087 | 93,504 | 25,717 | 47,689 |
| Spartanburg | 280,738 | 67,058 | 37,710 | 6,313 | 17,605 | 9,400 | 3,732 | 79,348 | 21,957 | 38,448 |
| Union | 27,672 | 6,201 | 4,607 | 584 | 1,780 | 977 | 427 | 8,650 | 2,414 | 4,921 |
| Williamsburg | 35,090 | 7,966 | 5,233 | 750 | 2,239 | 1,209 | 500 | 10,413 | 2,889 | 10,048 |
| York | 217,448 | 54,030 | 23,743 | 5,086 | 13,450 | 7,078 | 2,603 | 57,706 | 15,974 | 25,554 |
| Totals | 3,633,685 | 862,020 | 482,594 | 81,149 | 228,308 | 121,723 | 48,037 | 1,024,575 | 283,435 | 524,606 |

SOUTH CAROLINA

American Lung Association in South Carolina

44-A Markfield Drive
 Charleston, SC 29407
 (843) 556-8451
www.lungusa.org/southcarolina

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|--------------|--------|-----|--------|----------|-------|
| Abbeville | 23 | 0 | 0 | 7.7 | F |
| Aiken | 13 | 0 | 0 | 4.3 | F |
| Anderson | * | * | * | * | * |
| Barnwell | * | * | * | * | * |
| Beaufort | DNC | DNC | DNC | DNC | DNC |
| Berkeley | 2 | 0 | 0 | 0.7 | B |
| Charleston | 8 | 0 | 0 | 2.7 | D |
| Cherokee | 10 | 0 | 0 | 3.3 | F |
| Chester | * | * | * | * | * |
| Chesterfield | 4 | 0 | 0 | 1.3 | C |
| Colleton | 5 | 0 | 0 | 1.7 | C |
| Darlington | 11 | 0 | 0 | 3.7 | F |
| Edgefield | 4 | 0 | 0 | 1.3 | C |
| 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 |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 1 | 0 | 1.5 | C | 11.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 12.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 12.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.1 | PASS |
| * | * | * | * | * | * | INC |
| 3 | 0 | 0 | 1.0 | C | 14.2 | PASS |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Lexington | DNC | DNC | DNC | DNC | DNC |
| Oconee | 6 | 0 | 0 | 2.0 | C |
| Pickens | 23 | 0 | 0 | 7.7 | F |
| Richland | 33 | 0 | 0 | 11.0 | F |
| Spartanburg | 37 | 0 | 0 | 12.3 | F |
| Union | * | * | * | * | * |
| Williamsburg | * | * | * | * | * |
| York | 12 | 0 | 0 | 4.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 13.7 | PASS |
| 0 | 0 | 0 | 0.0 | A | 10.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 13.3 | PASS |
| 3 | 0 | 0 | 1.0 | C | 13.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|---------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Brookings | 29,668 | 5,698 | 3,131 | 536 | 1,705 | 978 | 323 | 7,553 | 1,253 | 3,295 |
| Brown | 35,154 | 7,890 | 5,962 | 743 | 1,952 | 1,227 | 535 | 10,832 | 1,923 | 3,881 |
| Codington | 26,317 | 6,464 | 3,946 | 608 | 1,419 | 884 | 369 | 7,645 | 1,346 | 2,686 |
| Custer | 7,811 | 1,627 | 1,421 | 153 | 443 | 289 | 132 | 2,614 | 471 | 776 |
| Jackson | 2,711 | 843 | 383 | 79 | 134 | 84 | 36 | 731 | 129 | 868 |
| Meade | 23,989 | 6,331 | 2,806 | 596 | 1,256 | 789 | 308 | 6,636 | 1,161 | 2,211 |
| Minnehaha | 179,180 | 45,470 | 21,880 | 4,280 | 9,526 | 5,805 | 2,219 | 48,116 | 8,318 | 14,896 |
| Pennington | 98,533 | 24,993 | 12,918 | 2,353 | 5,243 | 3,246 | 1,291 | 27,436 | 4,791 | 12,987 |
| Totals | 403,363 | 99,316 | 52,447 | 9,348 | 21,678 | 13,302 | 5,213 | 111,563 | 19,393 | 41,600 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Brookings | DNC | DNC | DNC | DNC | DNC |
| Brown | DNC | DNC | DNC | DNC | DNC |
| Codington | DNC | DNC | DNC | DNC | DNC |
| Custer | 2 | 0 | 0 | 0.7 | B |
| Jackson | 0 | 0 | 0 | 0.0 | A |
| Meade | * | * | * | * | * |
| Minnehaha | 0 | 0 | 0 | 0.0 | A |
| Pennington | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 8.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 7.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | 9.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 5.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 5.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 9.6 | PASS |
| 2 | 0 | 0 | 0.7 | B | 8.4 | PASS |

American Lung Association in Tennessee

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

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardiovascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|------------------------|----------------|---------------------------|
| | Total | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Anderson | 74,169 | 16,186 | 12,524 | 1,524 | 5,180 | 2,630 | 1,149 | 23,270 | 6,534 | 11,256 |
| Blount | 121,511 | 26,607 | 18,408 | 2,505 | 8,482 | 4,217 | 1,744 | 36,291 | 10,236 | 12,860 |
| Davidson | 626,144 | 149,232 | 69,292 | 14,048 | 42,659 | 20,556 | 7,517 | 167,066 | 47,567 | 101,518 |
| Dyer | 37,600 | 9,172 | 5,323 | 863 | 2,541 | 1,266 | 518 | 10,848 | 3,062 | 6,566 |
| Hamblen | 62,132 | 14,508 | 9,617 | 1,366 | 4,255 | 2,108 | 881 | 18,208 | 5,132 | 10,256 |
| Hamilton | 332,848 | 74,126 | 48,701 | 6,978 | 23,126 | 11,563 | 4,760 | 99,402 | 28,040 | 45,850 |
| Haywood | 19,024 | 4,808 | 2,609 | 453 | 1,271 | 633 | 258 | 5,411 | 1,528 | 4,104 |
| Jefferson | 51,074 | 11,288 | 7,582 | 1,063 | 3,556 | 1,742 | 707 | 14,828 | 4,190 | 8,145 |
| Knox | 430,019 | 95,525 | 55,588 | 8,992 | 29,909 | 14,613 | 5,651 | 121,844 | 34,543 | 59,873 |
| Lawrence | 40,954 | 10,157 | 6,588 | 956 | 2,751 | 1,370 | 587 | 11,981 | 3,371 | 6,290 |
| Loudon | 46,445 | 9,901 | 9,661 | 932 | 3,262 | 1,666 | 788 | 15,289 | 4,269 | 5,106 |
| Madison | 96,376 | 24,062 | 12,134 | 2,265 | 6,466 | 3,166 | 1,231 | 26,465 | 7,500 | 14,300 |
| Maury | 81,938 | 20,077 | 10,136 | 1,890 | 5,532 | 2,710 | 1,047 | 22,596 | 6,406 | 11,283 |
| McMinn | 52,511 | 11,898 | 8,240 | 1,120 | 3,629 | 1,813 | 765 | 15,745 | 4,434 | 8,411 |
| Meigs | 11,790 | 2,728 | 1,547 | 257 | 810 | 400 | 158 | 3,366 | 953 | 2,424 |
| Montgomery | 154,756 | 44,047 | 13,482 | 4,146 | 9,906 | 4,650 | 1,565 | 36,393 | 10,430 | 20,017 |
| Putnam | 71,160 | 15,959 | 10,473 | 1,502 | 4,933 | 2,379 | 949 | 20,058 | 5,677 | 12,253 |
| Roane | 53,430 | 10,901 | 9,346 | 1,026 | 3,799 | 1,937 | 854 | 17,218 | 4,831 | 8,182 |
| Rutherford | 249,270 | 66,108 | 20,435 | 6,223 | 16,392 | 7,603 | 2,458 | 58,447 | 16,803 | 24,885 |
| Sevier | 84,835 | 18,967 | 12,886 | 1,785 | 5,887 | 2,933 | 1,219 | 25,298 | 7,132 | 11,097 |
| Shelby | 906,825 | 245,711 | 92,733 | 23,130 | 59,146 | 28,802 | 10,553 | 234,717 | 66,796 | 159,896 |
| Sullivan | 153,900 | 31,730 | 27,454 | 2,987 | 10,913 | 5,574 | 2,481 | 49,761 | 13,953 | 21,424 |
| Sumner | 155,474 | 37,929 | 18,628 | 3,570 | 10,513 | 5,161 | 1,977 | 42,894 | 12,167 | 13,355 |
| Williamson | 171,452 | 44,004 | 15,347 | 4,142 | 11,408 | 5,604 | 1,993 | 45,199 | 12,885 | 8,464 |
| Wilson | 109,803 | 27,251 | 11,948 | 2,565 | 7,385 | 3,607 | 1,338 | 29,559 | 8,404 | 9,192 |
| Totals | 4,195,440 | 1,022,882 | 510,682 | 96,288 | 283,711 | 138,703 | 53,148 | 1,152,154 | 326,841 | 597,007 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Anderson | 21 | 1 | 0 | 7.5 | F |
| Blount | 61 | 1 | 0 | 20.8 | F |
| Davidson | 20 | 2 | 0 | 7.7 | F |
| Dyer | DNC | DNC | DNC | DNC | DNC |
| Hamblen | * | * | * | * | * |
| Hamilton | 44 | 3 | 0 | 16.2 | F |
| Haywood | 12 | 1 | 0 | 4.5 | F |
| Jefferson | 28 | 1 | 0 | 9.8 | F |
| Knox | 54 | 0 | 1 | 18.7 | F |
| Lawrence | * | * | * | * | * |
| Loudon | 41 | 1 | 0 | 14.2 | F |
| Madison | DNC | DNC | DNC | DNC | DNC |
| Maury | DNC | DNC | DNC | DNC | DNC |
| McMinn | DNC | DNC | DNC | DNC | DNC |
| Meigs | 22 | 1 | 0 | 7.8 | F |
| Montgomery | * | * | * | * | * |
| Putnam | * | * | * | * | * |
| Roane | DNC | DNC | DNC | DNC | DNC |
| Rutherford | 9 | 1 | 0 | 3.5 | F |
| Sevier | 79 | 0 | 0 | 26.3 | F |
| Shelby | 45 | 5 | 0 | 17.5 | F |
| Sullivan | 26 | 3 | 0 | 10.2 | F |
| Sumner | 48 | 2 | 0 | 17.0 | F |
| Williamson | 23 | 0 | 0 | 7.7 | F |
| Wilson | 29 | 0 | 0 | 9.7 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 7 | 0 | 0 | 2.3 | D | 14.1 | PASS |
| 12 | 0 | 0 | 4.0 | F | 13.2 | PASS |
| 5 | 0 | 0 | 1.7 | C | 11.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 9 | 0 | 0 | 3.0 | D | 14.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 16 | 0 | 0 | 5.3 | F | * | INC |
| 3 | 0 | 0 | 1.0 | C | 11.3 | PASS |
| 5 | 0 | 0 | 1.7 | C | 14.9 | PASS |
| 6 | 0 | 0 | 2.0 | C | 11.8 | PASS |
| 2 | 0 | 0 | 0.7 | B | 12.3 | PASS |
| 5 | 0 | 0 | 1.7 | C | 14.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 12 | 0 | 0 | 4.0 | F | 12.6 | PASS |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| 0 | 0 | 0 | 0.0 | A | 14.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 10 | 0 | 0 | 3.3 | F | 12.6 | PASS |
| 3 | 0 | 0 | 1.0 | C | 13.3 | PASS |
| 5 | 0 | 0 | 1.7 | C | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

American Lung Association in Texas

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------|------------------|-----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Bexar | 1,622,899 | 458,423 | 166,099 | 43,154 | 85,102 | 49,460 | 17,678 | 397,210 | 114,326 | 270,728 |
| Bowie | 92,283 | 21,780 | 12,302 | 2,050 | 5,207 | 3,073 | 1,204 | 25,751 | 7,458 | 16,501 |
| Brazoria | 301,044 | 83,989 | 27,714 | 7,906 | 15,864 | 9,224 | 3,194 | 73,153 | 21,090 | 27,778 |
| Brewster | 9,331 | 1,944 | 1,427 | 183 | 544 | 320 | 129 | 2,714 | 783 | 1,508 |
| Cameron | 392,736 | 133,499 | 45,175 | 12,567 | 18,974 | 11,045 | 4,227 | 91,283 | 26,225 | 130,014 |
| Collin | 762,010 | 213,197 | 54,788 | 20,070 | 39,836 | 22,932 | 7,276 | 175,260 | 50,342 | 48,336 |
| Dallas | 2,412,827 | 681,211 | 207,388 | 64,127 | 125,942 | 72,693 | 24,336 | 567,600 | 163,008 | 409,612 |
| Denton | 636,557 | 175,561 | 37,091 | 16,527 | 33,209 | 18,900 | 5,538 | 139,742 | 39,908 | 40,919 |
| Ector | 131,941 | 39,273 | 14,325 | 3,697 | 6,806 | 3,984 | 1,480 | 32,579 | 9,408 | 20,036 |
| El Paso | 742,062 | 230,018 | 79,048 | 21,653 | 37,507 | 21,870 | 8,063 | 178,045 | 51,293 | 183,824 |
| Ellis | 148,186 | 40,694 | 14,054 | 3,831 | 7,849 | 4,557 | 1,584 | 36,176 | 10,417 | 14,363 |
| Galveston | 288,239 | 74,327 | 30,858 | 6,997 | 15,788 | 9,313 | 3,437 | 76,112 | 22,099 | 33,874 |
| Gregg | 117,528 | 31,167 | 15,994 | 2,934 | 6,391 | 3,782 | 1,519 | 32,063 | 9,292 | 16,142 |
| Harris | 3,984,349 | 1,145,274 | 316,399 | 107,812 | 206,787 | 119,643 | 39,499 | 929,844 | 267,659 | 603,105 |
| Harrison | 63,594 | 15,424 | 8,207 | 1,452 | 3,572 | 2,121 | 834 | 17,830 | 5,184 | 9,113 |
| Hays | 149,476 | 36,439 | 11,251 | 3,430 | 8,091 | 4,557 | 1,367 | 33,855 | 9,580 | 19,874 |
| Hidalgo | 726,604 | 260,350 | 70,501 | 24,508 | 33,778 | 19,364 | 6,862 | 154,332 | 44,005 | 250,117 |
| Hood | 50,573 | 11,127 | 9,786 | 1,047 | 2,954 | 1,776 | 813 | 16,027 | 4,660 | 5,045 |
| Hunt | 82,805 | 20,193 | 11,202 | 1,901 | 4,621 | 2,724 | 1,074 | 22,884 | 6,620 | 11,566 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|-------------------|------------------|------------------|------------------|----------------|--------------------|----------------|-------------------------|------------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Jefferson | 243,090 | 59,082 | 32,516 | 5,562 | 13,614 | 8,053 | 3,183 | 67,789 | 19,656 | 39,041 |
| Johnson | 153,630 | 39,913 | 16,145 | 3,757 | 8,338 | 4,870 | 1,755 | 39,302 | 11,347 | 14,139 |
| Kaufman | 100,527 | 27,528 | 9,148 | 2,591 | 5,319 | 3,078 | 1,050 | 24,227 | 6,966 | 9,778 |
| Kleberg | 30,739 | 7,763 | 3,527 | 731 | 1,671 | 964 | 347 | 7,746 | 2,216 | 7,062 |
| Lubbock | 264,418 | 67,140 | 29,979 | 6,320 | 14,358 | 8,290 | 2,985 | 66,644 | 19,088 | 40,067 |
| Mclennan | 230,213 | 59,036 | 28,552 | 5,557 | 12,530 | 7,295 | 2,752 | 59,936 | 17,233 | 44,280 |
| Montgomery | 429,953 | 116,894 | 40,955 | 11,004 | 22,909 | 13,344 | 4,670 | 106,337 | 30,682 | 40,127 |
| Nueces | 322,077 | 86,697 | 37,899 | 8,161 | 17,392 | 10,273 | 3,929 | 85,241 | 24,730 | 55,276 |
| Orange | 83,022 | 20,240 | 11,740 | 1,905 | 4,676 | 2,792 | 1,142 | 23,913 | 6,964 | 11,135 |
| Parker | 111,776 | 26,665 | 12,362 | 2,510 | 6,261 | 3,675 | 1,346 | 29,900 | 8,655 | 11,138 |
| Potter | 120,918 | 34,950 | 14,563 | 3,290 | 6,297 | 3,670 | 1,394 | 30,250 | 8,701 | 25,385 |
| Rockwall | 77,633 | 21,381 | 6,698 | 2,013 | 4,098 | 2,371 | 797 | 18,551 | 5,336 | 4,771 |
| Smith | 201,277 | 51,668 | 29,556 | 4,864 | 11,071 | 6,548 | 2,689 | 56,035 | 16,217 | 25,756 |
| Tarrant | 1,750,091 | 493,382 | 149,164 | 46,445 | 91,590 | 53,034 | 17,837 | 415,258 | 119,511 | 208,934 |
| Travis | 998,543 | 253,198 | 67,020 | 23,835 | 53,580 | 30,386 | 9,047 | 225,696 | 64,240 | 141,162 |
| Victoria | 86,755 | 23,504 | 11,625 | 2,213 | 4,700 | 2,798 | 1,132 | 23,833 | 6,931 | 13,103 |
| Webb | 236,941 | 88,558 | 19,936 | 8,337 | 10,740 | 6,151 | 2,094 | 48,232 | 13,764 | 62,060 |
| Totals | 18,156,647 | 5,151,489 | 1,654,994 | 484,941 | 947,969 | 548,930 | 188,263 | 4,331,350 | 1,245,595 | 2,865,669 |

American Lung Association in Texas

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

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------|--------|-----|--------|----------|-------|
| Bexar | 34 | 0 | 0 | 11.3 | F |
| Bowie | DNC | DNC | DNC | DNC | DNC |
| Brazoria | 40 | 3 | 1 | 15.5 | F |
| Brewster | 0 | 0 | 0 | 0.0 | A |
| Cameron | 0 | 0 | 0 | 0.0 | A |
| Collin | 41 | 2 | 0 | 14.7 | F |
| Dallas | 43 | 2 | 0 | 15.3 | F |
| Denton | 45 | 9 | 0 | 19.5 | F |
| Ector | DNC | DNC | DNC | DNC | DNC |
| El Paso | 30 | 0 | 0 | 10.0 | F |
| Ellis | 15 | 1 | 0 | 5.5 | F |
| Galveston | 18 | 3 | 0 | 7.5 | F |
| Gregg | 20 | 0 | 0 | 6.7 | F |
| Harris | 77 | 16 | 3 | 35.7 | F |
| Harrison | 7 | 0 | 0 | 2.3 | D |
| Hays | 3 | 0 | 0 | 1.0 | C |
| Hidalgo | 1 | 0 | 0 | 0.3 | B |
| Hood | 16 | 0 | 0 | 5.3 | F |
| Hunt | 8 | 0 | 0 | 2.7 | D |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| * | * | * | * | * | * | INC |
| 2 | 0 | 0 | 0.7 | B | 12.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 8.3 | PASS |
| 8 | 0 | 0 | 2.7 | D | 11.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 9 | 0 | 0 | 3.0 | D | 15.2 | FAIL |
| 0 | 0 | 0 | 0.0 | A | 11.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Jefferson | 41 | 0 | 0 | 13.7 | F |
| Johnson | 26 | 1 | 0 | 9.2 | F |
| Kaufman | 13 | 0 | 0 | 4.3 | F |
| Kleberg | * | * | * | * | * |
| Lubbock | DNC | DNC | DNC | DNC | DNC |
| Mclennan | * | * | * | * | * |
| Montgomery | 18 | 2 | 0 | 7.0 | F |
| Nueces | 6 | 0 | 0 | 2.0 | C |
| Orange | 10 | 0 | 0 | 3.3 | F |
| Parker | 24 | 2 | 0 | 9.0 | F |
| Potter | DNC | DNC | DNC | DNC | DNC |
| Rockwall | 18 | 0 | 0 | 6.0 | F |
| Smith | 21 | 1 | 0 | 7.5 | F |
| Tarrant | 67 | 9 | 1 | 27.5 | F |
| Travis | 22 | 0 | 0 | 7.3 | F |
| Victoria | 2 | 0 | 0 | 0.7 | B |
| Webb | 0 | 0 | 0 | 0.0 | A |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 10.8 | PASS |
| 1 | 0 | 0 | 0.3 | B | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 6.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 11.2 | PASS |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

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

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Box Elder | 49,015 | 15,247 | 5,302 | 1,435 | 2,820 | 1,436 | 530 | 11,687 | 2,278 | 3,772 |
| Cache | 112,616 | 35,915 | 8,563 | 3,381 | 6,381 | 3,047 | 922 | 22,639 | 4,237 | 13,020 |
| Davis | 295,332 | 95,880 | 23,230 | 9,026 | 16,660 | 8,261 | 2,694 | 63,687 | 12,021 | 17,875 |
| Salt Lake | 1,022,651 | 302,184 | 89,440 | 28,446 | 60,222 | 30,200 | 10,192 | 236,479 | 44,953 | 89,216 |
| San Juan | 15,055 | 4,864 | 1,613 | 458 | 851 | 436 | 162 | 3,560 | 695 | 4,157 |
| Tooele | 56,941 | 19,137 | 4,083 | 1,801 | 3,151 | 1,527 | 470 | 11,457 | 2,141 | 3,994 |
| Uintah | 29,885 | 9,097 | 2,959 | 856 | 1,737 | 880 | 313 | 7,056 | 1,361 | 2,977 |
| Utah | 530,837 | 185,393 | 33,761 | 17,452 | 28,728 | 13,536 | 3,851 | 98,073 | 18,088 | 61,648 |
| Washington | 137,589 | 39,738 | 25,134 | 3,741 | 8,119 | 4,198 | 1,880 | 37,220 | 7,715 | 13,054 |
| Weber | 227,487 | 67,754 | 23,237 | 6,378 | 13,341 | 6,743 | 2,407 | 54,064 | 10,448 | 23,572 |
| Totals | 2,477,408 | 775,209 | 217,322 | 72,974 | 142,011 | 70,264 | 23,421 | 545,922 | 103,936 | 233,285 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Box Elder | 18 | 0 | 0 | 6.0 | F |
| Cache | 4 | 0 | 0 | 1.3 | C |
| Davis | 25 | 0 | 0 | 8.3 | F |
| Salt Lake | 46 | 1 | 0 | 15.8 | F |
| San Juan | 0 | 0 | 0 | 0.0 | A |
| Tooele | 15 | 0 | 0 | 5.0 | F |
| Uintah | * | * | * | * | * |
| Utah | 20 | 0 | 0 | 6.7 | F |
| Washington | 3 | 0 | 2 | 2.3 | D |
| Weber | 36 | 0 | 0 | 12.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 7 | 0 | 0 | 2.3 | D | 8.2 | PASS |
| 22 | 2 | 0 | 8.3 | F | 9.2 | PASS |
| 4 | 2 | 0 | 2.3 | D | 10.1 | PASS |
| 44 | 7 | 0 | 18.2 | F | 11.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 6.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 23 | 6 | 0 | 10.7 | F | 10.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 10 | 1 | 0 | 3.8 | F | 10.5 | PASS |

American Lung Association in Vermont

372 Hurricane Lane, Suite 101
 Williston, VT 05495
 (802) 876-6862
www.lungusa.org/vermont

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|---------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Addison | 36,617 | 7,676 | 4,478 | 723 | 2,847 | 1,280 | 490 | 10,649 | 1,786 | 3,265 |
| Bennington | 36,382 | 7,315 | 6,713 | 689 | 2,794 | 1,338 | 606 | 12,057 | 2,107 | 4,298 |
| Chittenden | 152,782 | 32,376 | 16,452 | 3,048 | 11,965 | 5,222 | 1,889 | 42,298 | 6,997 | 13,987 |
| Rutland | 63,331 | 12,230 | 10,478 | 1,151 | 4,943 | 2,329 | 1,003 | 20,489 | 3,537 | 7,087 |
| Totals | 289,112 | 59,597 | 38,121 | 5,611 | 22,549 | 10,169 | 3,988 | 85,493 | 14,427 | 28,637 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Addison | DNC | DNC | DNC | DNC | DNC |
| Bennington | 6 | 0 | 0 | 2.0 | C |
| Chittenden | 6 | 0 | 0 | 2.0 | C |
| Rutland | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 7.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 8.3 | PASS |
| 1 | 0 | 0 | 0.3 | B | 10.6 | PASS |

American Lung Association in Virginia

1-800-LUNG USA
www.lungusa.org/virginia

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-----------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Albemarle | 94,075 | 20,117 | 11,957 | 1,894 | 6,766 | 3,193 | 1,209 | 26,337 | 5,847 | 6,008 |
| Alexandria City | 143,885 | 29,859 | 15,997 | 2,811 | 10,496 | 4,833 | 1,715 | 38,688 | 8,530 | 11,398 |
| Arlington | 209,969 | 38,529 | 19,034 | 3,627 | 15,901 | 7,147 | 2,321 | 55,082 | 12,065 | 13,735 |
| Bristol City | 17,424 | 3,425 | 4,047 | 322 | 1,240 | 636 | 311 | 5,929 | 1,335 | 3,605 |
| Caroline | 27,632 | 6,653 | 3,380 | 626 | 1,920 | 903 | 341 | 7,432 | 1,648 | 2,518 |
| Charles City | 7,212 | 1,373 | 1,223 | 129 | 526 | 266 | 116 | 2,353 | 532 | 809 |
| Chesterfield | 303,469 | 76,040 | 23,686 | 7,158 | 21,049 | 9,828 | 3,302 | 77,265 | 17,190 | 17,311 |
| Fairfax | 1,015,302 | 246,631 | 100,245 | 23,217 | 70,576 | 34,102 | 12,508 | 278,910 | 62,634 | 48,966 |
| Fauquier | 66,839 | 16,019 | 7,276 | 1,508 | 4,658 | 2,238 | 834 | 18,401 | 4,119 | 4,048 |
| Frederick | 73,898 | 18,015 | 8,222 | 1,696 | 5,129 | 2,404 | 880 | 19,537 | 4,333 | 5,310 |
| Hampton City | 145,494 | 33,086 | 17,280 | 3,115 | 10,311 | 4,799 | 1,766 | 39,044 | 8,631 | 18,827 |
| Hanover | 99,716 | 23,470 | 12,355 | 2,209 | 6,953 | 3,392 | 1,326 | 28,499 | 6,399 | 4,518 |
| Henrico | 292,599 | 70,851 | 36,698 | 6,670 | 20,245 | 9,690 | 3,744 | 80,764 | 18,012 | 24,078 |
| Loudoun | 289,995 | 87,037 | 17,769 | 8,193 | 18,937 | 8,348 | 2,506 | 62,310 | 13,569 | 9,033 |
| Lynchburg City | 72,596 | 15,046 | 12,260 | 1,416 | 5,214 | 2,464 | 1,020 | 21,082 | 4,659 | 12,344 |
| Madison | 13,639 | 2,898 | 2,285 | 273 | 968 | 485 | 210 | 4,271 | 962 | 1,434 |
| Norfolk City | 234,220 | 60,226 | 23,564 | 5,669 | 16,075 | 7,172 | 2,429 | 56,058 | 12,211 | 40,407 |
| Page | 24,164 | 5,071 | 4,113 | 477 | 1,721 | 853 | 368 | 7,486 | 1,680 | 3,370 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Prince William | 364,734 | 106,970 | 24,535 | 10,070 | 23,981 | 10,758 | 3,368 | 81,790 | 17,930 | 19,016 |
| Roanoke City | 92,967 | 20,978 | 16,213 | 1,975 | 6,475 | 3,224 | 1,415 | 28,520 | 6,404 | 16,170 |
| Roanoke | 90,867 | 19,900 | 14,388 | 1,873 | 6,404 | 3,223 | 1,379 | 28,252 | 6,380 | 5,757 |
| Rockbridge | 21,570 | 4,439 | 3,907 | 418 | 1,538 | 778 | 347 | 6,950 | 1,568 | 2,469 |
| Rockingham | 74,394 | 16,940 | 10,657 | 1,595 | 5,218 | 2,538 | 1,028 | 21,622 | 4,838 | 6,666 |
| Salem City | 25,449 | 4,769 | 4,340 | 449 | 1,869 | 915 | 387 | 7,946 | 1,778 | 2,193 |
| Stafford | 121,736 | 33,300 | 7,778 | 3,135 | 8,237 | 3,703 | 1,145 | 28,039 | 6,157 | 5,713 |
| Suffolk City | 82,302 | 21,756 | 9,160 | 2,048 | 5,554 | 2,599 | 958 | 21,174 | 4,691 | 8,727 |
| Virginia Beach City | 433,746 | 109,141 | 45,745 | 10,274 | 29,837 | 13,944 | 5,033 | 112,655 | 24,975 | 29,532 |
| Wythe | 28,769 | 5,930 | 5,100 | 558 | 2,055 | 1,024 | 449 | 9,054 | 2,034 | 3,967 |
| Totals | 4,468,662 | 1,098,469 | 463,214 | 103,405 | 309,853 | 145,459 | 52,415 | 1,175,450 | 261,113 | 327,929 |

VIRGINIA

American Lung Association in Virginia

1-800-LUNG USA
www.lungusa.org/virginia

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------------|--------|-----|--------|----------|-------|
| Albemarle | * | * | * | * | * |
| Alexandria City | 26 | 1 | 1 | 9.8 | F |
| Arlington | 41 | 3 | 0 | 15.2 | F |
| Bristol City | DNC | DNC | DNC | DNC | DNC |
| Caroline | 25 | 0 | 0 | 8.3 | F |
| Charles City | 26 | 0 | 0 | 8.7 | F |
| Chesterfield | 14 | 2 | 0 | 5.7 | F |
| Fairfax | 60 | 4 | 2 | 23.3 | F |
| Fauquier | 5 | 0 | 0 | 1.7 | C |
| Frederick | 5 | 0 | 0 | 1.7 | C |
| Hampton City | 13 | 0 | 0 | 4.3 | F |
| Hanover | 24 | 1 | 0 | 8.5 | F |
| Henrico | 30 | 3 | 0 | 11.5 | F |
| Loudoun | 34 | 2 | 0 | 12.3 | F |
| Lynchburg City | DNC | DNC | DNC | DNC | DNC |
| Madison | 10 | 0 | 0 | 3.3 | F |
| Norfolk City | DNC | DNC | DNC | DNC | DNC |
| Page | 2 | 0 | 0 | 0.7 | B |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 2 | 0 | 0 | 0.7 | B | 12.9 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 11.5 | PASS |
| 1 | 0 | 0 | 0.3 | B | 12.4 | PASS |
| 10 | 0 | 0 | 3.3 | F | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 3 | 0 | 0 | 1.0 | C | 11.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 8 | 0 | 0 | 2.7 | D | 12.1 | PASS |
| 3 | 0 | 0 | 1.0 | C | 12.2 | PASS |
| 1 | 0 | 0 | 0.3 | B | 11.9 | PASS |
| * | * | * | * | * | * | INC |
| 8 | 2 | 0 | 3.7 | F | 12.5 | PASS |
| 0 | 0 | 0 | 0.0 | A | 11.7 | PASS |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------------|---------------|------------|---------------|-----------------|--------------|
| Prince William | 14 | 2 | 0 | 5.7 | F |
| Roanoke City | DNC | DNC | DNC | DNC | DNC |
| Roanoke | 12 | 0 | 0 | 4.0 | F |
| Rockbridge | 1 | 0 | 0 | 0.3 | B |
| Rockingham | * | * | * | * | * |
| Salem City | DNC | DNC | DNC | DNC | DNC |
| Stafford | 16 | 2 | 1 | 7.0 | F |
| Suffolk City | 21 | 0 | 0 | 7.0 | F |
| Virginia Beach City | DNC | DNC | DNC | DNC | DNC |
| Wythe | 3 | 0 | 0 | 1.0 | C |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 13.4 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 11 | 3 | 0 | 5.2 | F | 11.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

WASHINGTON

American Lung Association in Washington

2625 Third Avenue
 Seattle, WA 98121-1213
 (206) 441-5100
www.lungusa.org/washington

AT-RISK GROUPS

| County | Total Population | | | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | Total | Under 18 | 65 & Over | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Asotin | 21,420 | 4,823 | 4,023 | 454 | 1,536 | 750 | 341 | 6,751 | 1,329 | 3,443 |
| Chelan | 71,540 | 17,495 | 11,769 | 1,647 | 5,007 | 2,429 | 1,056 | 21,411 | 4,198 | 8,453 |
| Clallam | 71,021 | 13,290 | 16,454 | 1,251 | 5,346 | 2,668 | 1,312 | 24,994 | 4,963 | 9,466 |
| Clark | 424,733 | 109,454 | 46,361 | 10,304 | 29,196 | 13,634 | 5,022 | 111,205 | 21,420 | 41,605 |
| King | 1,875,519 | 404,557 | 203,897 | 38,083 | 136,443 | 64,080 | 23,399 | 521,475 | 100,398 | 169,901 |
| Kittitas | 38,951 | 7,187 | 4,631 | 677 | 2,926 | 1,322 | 464 | 10,497 | 2,009 | 6,140 |
| Klickitat | 20,377 | 4,568 | 3,372 | 430 | 1,468 | 720 | 314 | 6,368 | 1,249 | 3,388 |
| Pierce | 785,639 | 195,284 | 83,691 | 18,383 | 54,659 | 25,432 | 9,226 | 206,007 | 39,616 | 85,886 |
| Skagit | 118,000 | 27,756 | 17,904 | 2,613 | 8,353 | 3,990 | 1,656 | 34,360 | 6,702 | 13,331 |
| Snohomish | 683,655 | 170,580 | 65,634 | 16,058 | 47,590 | 22,228 | 7,888 | 178,640 | 34,289 | 54,184 |
| Spokane | 462,677 | 107,635 | 59,072 | 10,132 | 32,867 | 15,466 | 5,965 | 128,744 | 24,917 | 62,224 |
| Thurston | 245,181 | 54,018 | 30,632 | 5,085 | 17,712 | 8,353 | 3,194 | 69,320 | 13,407 | 23,518 |
| Whatcom | 196,529 | 42,304 | 24,855 | 3,982 | 14,253 | 6,625 | 2,492 | 54,441 | 10,504 | 27,291 |
| Yakima | 234,564 | 71,281 | 27,085 | 6,710 | 15,105 | 7,079 | 2,714 | 58,731 | 11,358 | 42,875 |
| Totals | 5,249,806 | 1,230,232 | 599,380 | 115,809 | 372,462 | 174,776 | 65,043 | 1,432,944 | 276,359 | 551,705 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-----------|--------|-----|--------|----------|-------|
| Asotin | DNC | DNC | DNC | DNC | DNC |
| Chelan | DNC | DNC | DNC | DNC | DNC |
| Clallam | 0 | 0 | 0 | 0.0 | A |
| Clark | 0 | 0 | 0 | 0.0 | A |
| King | 10 | 3 | 0 | 4.8 | F |
| Kittitas | DNC | DNC | DNC | DNC | DNC |
| Klickitat | * | * | * | * | * |
| Pierce | 7 | 1 | 0 | 2.8 | D |
| Skagit | 1 | 0 | 0 | 0.3 | B |
| Snohomish | DNC | DNC | DNC | DNC | DNC |
| Spokane | 1 | 0 | 0 | 0.3 | B |
| Thurston | 1 | 0 | 0 | 0.3 | B |
| Whatcom | * | * | * | * | * |
| Yakima | DNC | DNC | DNC | DNC | DNC |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| * | * | * | * | * | * | INC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |
| 3 | 1 | 0 | 1.5 | C | * | INC |
| * | * | * | * | * | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 11 | 1 | 0 | 4.2 | F | 9.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 15 | 1 | 0 | 5.5 | F | 8.8 | PASS |
| 1 | 0 | 0 | 0.3 | B | 9.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| * | * | * | * | * | * | INC |

WEST VIRGINIA

American Lung Association in West Virginia

415 Dickinson Street
 P.O. Box 3980
 Charleston, West Virginia 25339-3980
 (304) 342-6600
www.lungusa.org/westvirginia

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|----------------|----------------|------------------|---------------|--------------------|---------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Berkeley | 102,044 | 26,497 | 11,108 | 2,494 | 7,294 | 3,261 | 1,199 | 26,568 | 8,215 | 11,253 |
| Brooke | 23,520 | 4,396 | 4,588 | 414 | 1,825 | 883 | 406 | 8,018 | 2,459 | 2,674 |
| Cabell | 94,631 | 19,658 | 15,551 | 1,851 | 7,157 | 3,313 | 1,396 | 28,724 | 8,822 | 18,725 |
| Greenbrier | 34,567 | 7,223 | 6,201 | 680 | 2,614 | 1,253 | 562 | 11,234 | 3,449 | 5,952 |
| Hancock | 30,008 | 6,041 | 5,652 | 569 | 2,292 | 1,114 | 511 | 10,117 | 3,104 | 4,316 |
| Harrison | 68,853 | 15,271 | 11,166 | 1,438 | 5,132 | 2,418 | 1,039 | 21,211 | 6,520 | 12,128 |
| Kanawha | 191,018 | 41,029 | 31,892 | 3,862 | 14,381 | 6,848 | 2,991 | 60,630 | 18,639 | 29,656 |
| Marion | 56,496 | 11,260 | 9,663 | 1,060 | 4,320 | 2,023 | 870 | 17,728 | 5,444 | 10,336 |
| Marshall | 32,766 | 6,596 | 5,500 | 621 | 2,513 | 1,201 | 524 | 10,639 | 3,272 | 5,397 |
| Monongalia | 88,221 | 16,013 | 9,022 | 1,507 | 6,951 | 2,959 | 970 | 22,811 | 7,062 | 13,178 |
| Ohio | 44,106 | 8,819 | 8,479 | 830 | 3,363 | 1,621 | 743 | 14,690 | 4,503 | 6,570 |
| Raleigh | 79,357 | 16,215 | 13,022 | 1,526 | 6,049 | 2,843 | 1,215 | 24,867 | 7,645 | 14,837 |
| Wood | 86,204 | 18,647 | 14,331 | 1,755 | 6,475 | 3,074 | 1,338 | 27,165 | 8,350 | 13,678 |
| Totals | 931,791 | 197,665 | 146,175 | 18,607 | 70,367 | 32,811 | 13,764 | 284,402 | 87,486 | 148,700 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|---------------|---------------|------------|---------------|-----------------|--------------|
| Berkeley | 8 | 0 | 0 | 2.7 | D |
| Brooke | DNC | DNC | DNC | DNC | DNC |
| Cabell | 39 | 0 | 0 | 13.0 | F |
| Greenbrier | 4 | 0 | 0 | 1.3 | C |
| Hancock | 21 | 0 | 0 | 7.0 | F |
| Harrison | DNC | DNC | DNC | DNC | DNC |
| Kanawha | 21 | 0 | 0 | 7.0 | F |
| Marion | DNC | DNC | DNC | DNC | DNC |
| Marshall | DNC | DNC | DNC | DNC | DNC |
| Monongalia | 13 | 0 | 0 | 4.3 | F |
| Ohio | 20 | 0 | 0 | 6.7 | F |
| Raleigh | DNC | DNC | DNC | DNC | DNC |
| Wood | 24 | 0 | 0 | 8.0 | F |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|----------------|------------|---------------|-----------------|--------------|---------------------|------------------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 3 | 0 | 0 | 1.0 | C | 14.9 | PASS |
| 14 | 0 | 0 | 4.7 | F | 15.4 | FAIL |
| 6 | 0 | 0 | 2.0 | C | 15.2 | FAIL |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 11 | 0 | 0 | 3.7 | F | 14.3 | PASS |
| 4 | 0 | 0 | 1.3 | C | 13.4 | PASS |
| 18 | 0 | 0 | 6.0 | F | 15.4 | FAIL |
| 3 | 0 | 0 | 1.0 | C | 14.5 | PASS |
| 17 | 0 | 0 | 5.7 | F | 14.2 | PASS |
| 5 | 0 | 0 | 1.7 | C | 13.6 | PASS |
| 6 | 0 | 0 | 2.0 | C | 13.7 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.9 | PASS |
| 8 | 0 | 0 | 2.7 | D | 14.6 | PASS |

American Lung Association in Wisconsin

13100 West Lisbon Road, Suite 700
 Brookfield, WI 53005-2508
 (262) 703-4200
www.lungusa.org/wisconsin

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|-------------|------------------|----------|-----------|------------------|--------------|--------------------|-----------|-------------------------|----------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Ashland | 16,295 | 3,714 | 2,605 | 350 | 1,165 | 560 | 237 | 4,875 | 968 | 2,317 |
| Brown | 245,018 | 60,251 | 28,061 | 5,672 | 17,346 | 8,019 | 2,995 | 65,818 | 12,730 | 20,794 |
| Columbia | 55,196 | 12,413 | 8,094 | 1,169 | 3,953 | 1,909 | 786 | 16,409 | 3,227 | 4,009 |
| Dane | 482,705 | 105,929 | 46,799 | 9,972 | 35,876 | 15,939 | 5,445 | 125,622 | 23,966 | 51,941 |
| Dodge | 87,912 | 18,517 | 12,341 | 1,743 | 6,467 | 3,053 | 1,215 | 25,795 | 5,053 | 6,494 |
| Door | 27,771 | 5,083 | 5,902 | 478 | 2,038 | 1,061 | 507 | 9,828 | 1,984 | 2,406 |
| Florence | 4,652 | 831 | 946 | 78 | 342 | 179 | 84 | 1,651 | 331 | 574 |
| Fond du Lac | 99,453 | 22,268 | 14,161 | 2,096 | 7,163 | 3,419 | 1,384 | 29,137 | 5,719 | 7,650 |
| Forest | 9,846 | 2,132 | 2,150 | 201 | 704 | 352 | 170 | 3,269 | 668 | 1,518 |
| Grant | 49,238 | 10,025 | 8,067 | 944 | 3,657 | 1,725 | 722 | 14,892 | 2,961 | 5,825 |
| Jefferson | 80,792 | 18,268 | 10,592 | 1,720 | 5,849 | 2,732 | 1,063 | 22,839 | 4,458 | 5,836 |
| Kenosha | 164,465 | 42,297 | 18,496 | 3,982 | 11,455 | 5,313 | 1,987 | 43,648 | 8,437 | 15,429 |
| Kewaunee | 20,388 | 4,420 | 3,199 | 416 | 1,473 | 715 | 301 | 6,211 | 1,228 | 1,582 |
| La Crosse | 112,627 | 24,261 | 14,598 | 2,284 | 8,342 | 3,801 | 1,443 | 31,363 | 6,122 | 12,868 |
| Manitowoc | 80,641 | 17,434 | 12,924 | 1,641 | 5,789 | 2,863 | 1,226 | 25,091 | 4,961 | 6,825 |
| Marathon | 130,962 | 30,976 | 18,027 | 2,916 | 9,254 | 4,448 | 1,798 | 37,905 | 7,422 | 10,198 |
| Milwaukee | 953,328 | 250,167 | 110,423 | 23,550 | 65,930 | 30,589 | 11,570 | 252,500 | 48,969 | 158,153 |
| Oneida | 36,031 | 6,693 | 7,604 | 630 | 2,644 | 1,365 | 649 | 12,601 | 2,545 | 3,608 |

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|------------------|----------------|------------------|----------------|--------------------|---------------|-------------------------|----------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Outagamie | 174,993 | 43,282 | 20,810 | 4,074 | 12,332 | 5,744 | 2,182 | 47,525 | 9,218 | 11,889 |
| Ozaukee | 85,874 | 19,105 | 12,575 | 1,798 | 6,077 | 3,052 | 1,282 | 26,562 | 5,202 | 3,519 |
| Racine | 199,510 | 49,537 | 24,894 | 4,663 | 13,913 | 6,643 | 2,605 | 55,846 | 10,857 | 20,089 |
| Rock | 160,213 | 39,328 | 20,974 | 3,702 | 11,247 | 5,330 | 2,110 | 44,953 | 8,782 | 17,716 |
| Sauk | 59,013 | 13,838 | 8,888 | 1,303 | 4,176 | 2,015 | 841 | 17,419 | 3,439 | 4,650 |
| Sheboygan | 114,561 | 26,479 | 16,056 | 2,493 | 8,154 | 3,918 | 1,589 | 33,435 | 6,554 | 8,266 |
| St. Croix | 82,487 | 21,234 | 7,927 | 1,999 | 5,778 | 2,635 | 930 | 21,096 | 4,030 | 4,228 |
| Taylor | 19,308 | 4,338 | 3,151 | 408 | 1,375 | 675 | 291 | 5,929 | 1,177 | 2,299 |
| Vernon | 29,090 | 7,286 | 4,795 | 686 | 1,993 | 991 | 436 | 8,798 | 1,752 | 4,131 |
| Vilas | 21,919 | 3,848 | 5,813 | 362 | 1,618 | 851 | 445 | 8,232 | 1,702 | 2,493 |
| Walworth | 100,749 | 22,667 | 13,471 | 2,134 | 7,312 | 3,406 | 1,331 | 28,521 | 5,578 | 10,098 |
| Washington | 129,477 | 30,360 | 16,446 | 2,858 | 9,195 | 4,391 | 1,721 | 36,907 | 7,175 | 6,316 |
| Waukesha | 380,629 | 86,910 | 52,810 | 8,181 | 26,875 | 13,310 | 5,468 | 114,570 | 22,366 | 15,338 |
| Totals | 4,215,143 | 1,003,891 | 533,599 | 94,503 | 299,490 | 141,003 | 54,813 | 1,179,247 | 229,581 | 429,059 |

American Lung Association in Wisconsin

13100 West Lisbon Road, Suite 700
 Brookfield, WI 53005-2508
 (262) 703-4200
www.lungusa.org/wisconsin

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|-------------|--------|-----|--------|----------|-------|
| Ashland | 0 | 0 | 0 | 0.0 | A |
| Brown | 6 | 0 | 0 | 2.0 | C |
| Columbia | 5 | 0 | 0 | 1.7 | C |
| Dane | 5 | 0 | 0 | 1.7 | C |
| Dodge | 4 | 0 | 0 | 1.3 | C |
| Door | 24 | 2 | 0 | 9.0 | F |
| Florence | 2 | 0 | 0 | 0.7 | B |
| Fond du Lac | 2 | 0 | 0 | 0.7 | B |
| Forest | 1 | 0 | 0 | 0.3 | B |
| Grant | DNC | DNC | DNC | DNC | DNC |
| Jefferson | 5 | 0 | 0 | 1.7 | C |
| Kenosha | 17 | 0 | 0 | 5.7 | F |
| Kewaunee | 20 | 0 | 0 | 6.7 | F |
| La Crosse | * | * | * | * | * |
| Manitowoc | 20 | 1 | 0 | 7.2 | F |
| Marathon | 2 | 0 | 0 | 0.7 | B |
| Milwaukee | 12 | 0 | 0 | 4.0 | F |
| Oneida | 1 | 0 | 0 | 0.3 | B |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 1 | 0 | 0 | 0.3 | B | 6.3 | PASS |
| 14 | 0 | 0 | 4.7 | F | 11.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 12 | 0 | 0 | 4.0 | F | 12.6 | PASS |
| 2 | 0 | 0 | 0.7 | B | 11.1 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 7.1 | PASS |
| 7 | 0 | 0 | 2.3 | D | 12.3 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 12.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 12.1 | PASS |
| 2 | 0 | 0 | 0.7 | B | 10.7 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 12 | 1 | 0 | 4.5 | F | 14.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Outagamie | 3 | 0 | 0 | 1.0 | C |
| Ozaukee | 14 | 0 | 0 | 4.7 | F |
| Racine | 9 | 0 | 0 | 3.0 | D |
| Rock | 7 | 0 | 0 | 2.3 | D |
| Sauk | 2 | 0 | 0 | 0.7 | B |
| Sheboygan | 27 | 2 | 0 | 10.0 | F |
| St. Croix | 4 | 0 | 0 | 1.3 | C |
| Taylor | DNC | DNC | DNC | DNC | DNC |
| Vernon | 2 | 0 | 0 | 0.7 | B |
| Vilas | 1 | 0 | 0 | 0.3 | B |
| Walworth | 5 | 0 | 0 | 1.7 | C |
| Washington | 0 | 0 | 0 | 0.0 | A |
| Waukesha | 0 | 0 | 0 | 0.0 | A |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 6 | 0 | 0 | 2.0 | C | 11.4 | PASS |
| 4 | 0 | 0 | 1.3 | C | 11.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 3 | 0 | 0 | 1.0 | C | 10.5 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 4 | 0 | 0 | 1.3 | C | 10.3 | PASS |
| 1 | 0 | 0 | 0.3 | B | 9.0 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 1 | 0 | 0 | 0.3 | B | 6.9 | PASS |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 5 | 0 | 0 | 1.7 | C | 13.9 | PASS |

American Lung Association in Wyoming

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

AT-RISK GROUPS

| County | Total Population | Under 18 | 65 & Over | Lung Diseases | | | | Cardio-vascular Disease | Diabetes | Poverty Estimate All Ages |
|---------------|------------------|---------------|---------------|------------------|---------------|--------------------|--------------|-------------------------|---------------|---------------------------|
| | | | | Pediatric Asthma | Adult Asthma | Chronic Bronchitis | Emphysema | | | |
| Campbell | 41,473 | 11,327 | 2,438 | 1,066 | 2,790 | 1,289 | 404 | 9,856 | 1,947 | 2,376 |
| Carbon | 15,624 | 3,532 | 1,935 | 332 | 1,090 | 544 | 214 | 4,589 | 924 | 1,450 |
| Converse | 13,267 | 3,140 | 1,673 | 296 | 914 | 454 | 180 | 3,844 | 774 | 1,122 |
| Crook | 6,457 | 1,437 | 1,029 | 135 | 452 | 227 | 97 | 1,991 | 404 | 476 |
| Fremont | 38,113 | 9,720 | 5,565 | 915 | 2,568 | 1,274 | 533 | 11,039 | 2,234 | 5,045 |
| Laramie | 87,542 | 22,418 | 10,682 | 2,110 | 5,975 | 2,847 | 1,097 | 23,708 | 4,762 | 8,582 |
| Park | 27,574 | 5,790 | 4,612 | 545 | 1,957 | 989 | 429 | 8,724 | 1,771 | 2,802 |
| Sheridan | 28,662 | 6,366 | 4,462 | 599 | 2,002 | 1,011 | 430 | 8,844 | 1,792 | 2,694 |
| Sublette | 8,456 | 2,029 | 887 | 191 | 587 | 283 | 104 | 2,312 | 463 | 393 |
| Sweetwater | 39,944 | 10,780 | 3,324 | 1,015 | 2,669 | 1,274 | 444 | 10,177 | 2,028 | 2,286 |
| Teton | 20,376 | 4,126 | 1,762 | 388 | 1,501 | 699 | 236 | 5,497 | 1,092 | 882 |
| Uinta | 20,617 | 5,834 | 1,739 | 549 | 1,354 | 646 | 226 | 5,173 | 1,031 | 1,805 |
| Totals | 348,105 | 86,499 | 40,108 | 8,141 | 23,858 | 11,537 | 4,394 | 95,754 | 19,223 | 29,913 |

HIGH OZONE DAYS 2006-2008

| County | Orange | Red | Purple | Wgt. Avg | Grade |
|------------|--------|-----|--------|----------|-------|
| Campbell | 4 | 0 | 0 | 1.3 | C |
| Carbon | * | * | * | * | * |
| Converse | DNC | DNC | DNC | DNC | DNC |
| Crook | * | * | * | * | * |
| Fremont | * | * | * | * | * |
| Laramie | DNC | DNC | DNC | DNC | DNC |
| Park | DNC | DNC | DNC | DNC | DNC |
| Sheridan | DNC | DNC | DNC | DNC | DNC |
| Sublette | 3 | 0 | 0 | 1.0 | C |
| Sweetwater | 0 | 0 | 0 | 0.0 | A |
| Teton | 1 | 0 | 0 | 0.3 | B |
| Uinta | * | * | * | * | * |

HIGH PARTICLE POLLUTION DAYS 2006-2008

| 24 Hour | | | | | Annual | |
|---------|-----|--------|----------|-------|--------------|-----------|
| Orange | Red | Purple | Wgt. Avg | Grade | Design Value | Pass/Fail |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |
| 0 | 0 | 0 | 0.0 | A | 7.7 | PASS |
| 0 | 0 | 0 | 0.0 | A | 4.4 | PASS |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | 9.1 | PASS |
| 2 | 0 | 0 | 0.7 | B | * | INC |
| * | * | * | * | * | * | INC |
| 0 | 0 | 0 | 0.0 | A | * | INC |
| DNC | DNC | DNC | DNC | DNC | DNC | DNC |

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 tobacco 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.

