AMERICAN LUNG ASSOCIATION®

State of the Air: 2007

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The years 2003, 2004 and 2005 showed a split picture for the nation's air quality. Both of the nation's most widespread and dangerous pollutants tracked in decidedly different directions in the eastern U.S.—ozone went down, but particle pollution went up. In the west, the direction is clearly toward lower pollution levels for both pollutants. Included in this report:

Acknowledgments

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The American Lung Association assumes sole responsibility for the content of the *American Lung Association State of the Air: 2007*.

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Executive Summary

The years 2003, 2004 and 2005 showed the first truly split picture for the nation's air quality since the American Lung Association started these annual report cards. The nation's two most widespread and dangerous pollutants tracked in decidedly different directions: ozone went down from the peaks reported in 2002, but particle pollution—the more dangerous—went up. This finding stems from a close look at air pollution data that states themselves collected on a county-by-county basis, using the most up-to-date quality-assured data available for nationwide comparison presented in the *American Lung Association State of the Air: 2007*.

Particle pollution went up in the Eastern U.S., driven by electricity generation.

Ozone, often called smog, improved significantly in many parts of the U.S., especially in the eastern half. Grades of F—common among many states in the past—improved to passing grades, even among some of the counties that had historically been among the most ozone-polluted in the years 2003-2005. These improvements showed up in the list of cities that face the most ozone pollution. For example, the Los Angeles metropolitan area returned to the top of the most polluted list for ozone, but reduced the number of days that its residents suffered from the nation's worst ozone levels. Nonetheless, despite these improvements, millions of Americans still face dangerous levels of ozone pollution.

The most ominous trend is the increase in particle pollution, or soot, in the eastern U.S. Many areas east of the Mississippi River already had unhealthy levels of this most deadly of the widespread air pollutants. They frequently had more days and higher year-round levels of particles, here measured by $PM_{2.5}$. In contrast were the western states, led by California. Although many areas in the western U.S. suffer from some of the highest levels of particle pollution, but levels of particle pollution there dropped significantly during the years 2003-2005.

Both ozone and particle pollution remain a persistent threat across large parts of the United States. Favorable weather combined with controls placed on coal-fired power plants between 1998 and 2004 to improve ozone levels in large parts of the eastern United States. However, those same power plants are likely the source of much of the increase in particle pollution in the eastern United States, driven by increased electricity production during the period.

Looking at the nation as a whole, the *American Lung Association State of the Air: 2007* finds:

- **Nearly half (46 percent) of the U.S. population lives in counties that have unhealthful levels of either ozone or particle pollution.**
  Over 136 million Americans live in 251 counties where they are exposed to unhealthful levels of air pollution in the form of either ozone or short-term or year-round levels of particles.

- **One-third of the U.S. population—33.4 percent—lives in areas with unhealthful levels of ozone, a significant reduction since the last report when nearly half did.**
  Counties that were graded "F" for ozone levels have a combined population of over 99 million. One in three Americans lives in counties where the monitored air quality places them at risk for decreased lung function, respiratory infection, lung inflammation and aggravation of respiratory illness.

- **Roughly one in three people in the United States lives in an area with unhealthful short-term levels of particle pollution, a significant increase since the last report.**
  Over 93.7 million Americans live in areas where they are exposed to unhealthful short-term levels of particle pollution. Short-term, or acute, exposure to particle pollution has been shown to increase heart attacks, strokes and emergency-room visits for asthma and cardiovascular disease and, most importantly, to increase the risk of death. Some of this increase is likely due to the new, slightly lower threshold of unhealthful air recognized in this report, based on the newly adopted national standards for short-term particle pollution.

- **Nearly one in five people in the United States lives in an area with unhealthful year-round levels of particle pollution.**
  Nearly 54.5 million Americans suffer from chronic exposure to particle pollution. 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.

- **About 38.3 million Americans—nearly one in eight people—live in 32 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 groups are at greater risk because of their age or the presence of asthma or other chronic lung or cardiovascular disease or because they have diabetes. Those groups include:

- **People with Asthma**—Approximately 2.3 million children and over 5.6 million adults with asthma live in parts of the United States with very high levels of ozone. Over 5.5 million adults and 2.1 million children with asthma live in areas with high levels of short-term particle pollution. Nearly 3.1 million adults and 1.3 million children with asthma live in counties with unhealthful levels of year-round particle pollution.

- **Older and Younger**—Over 11.1 million adults aged 65 and over and nearly 25.8 million children aged 18 and under live in counties with unhealthful ozone levels. Nearly 11 million seniors and 23.9 million children live in counties with unhealthful short-term levels of particle pollution. Nearly 6.3 million seniors and over 14.1 million children live in counties with unhealthful levels of year-round particle pollution.

- **Chronic Bronchitis and Emphysema**—Nearly 3 million people with chronic bronchitis and over 1.2 million with emphysema live in counties with unhealthful ozone levels. Over 2.8 million people with chronic bronchitis and nearly 1.2 million with emphysema live in counties with unhealthful levels of short-term particle pollution. Over 1.6 million people with chronic bronchitis and over 685,000 with emphysema live in counties with unhealthful year-round levels of particle pollution.

- **Cardiovascular Disease**—Nearly 21.4 million people with cardiovascular diseases live in areas with unhealthful levels of short-term particle pollution; nearly 12.3 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 5.1 million people with diabetes live in areas with unhealthful levels of short-term particle pollution; over 2.9 million live in counties with unhealthful levels of year-round particle pollution. Research indicates that diabetics face increased risk due to particle pollution impact on their cardiovascular systems.

In addition to providing specific grades for each county with ozone and particle pollution monitors, the *American Lung Association State of the Air: 2007* also discusses key steps needed to improve the air we all breathe. Those steps include:

- **Setting much more protective limits on ozone pollution in the air.** Review of current research by both an independent expert panel of scientists and the U.S. Environmental Protection Agency (EPA) staff scientists agree that the current limits on ozone pollution do not protect the health of the public "with an adequate margin of safety" as required by the Clean Air Act. The EPA Administrator will decide in June 2007 how much ozone pollution will be permitted. That limit will become the goal all states must meet and will drive decisions on how to clean up ozone pollution in each community. The American Lung Association recommends that the EPA set those limits at 0.060 parts per million measured on an eight-hour basis.

- **Cleaning up diesel locomotives and marine vehicles.** In 2006, new rules took effect requiring cleaner highway diesel trucks, buses and fuel. Beginning in 2010, similar requirements will mean cleaner heavy equipment and construction and agricultural diesel engines and their fuel. The EPA issued new

emissions standards for locomotive and marine engines in early March 2007. EPA must make those rules final to ensure these vehicles are cleaned up.

- **Cleaning up dirty power plants.** Old, coal-fired power plants are among the biggest industrial contributors to unhealthful air, especially particle pollution in the eastern United States. The toll of death, disease and environmental destruction caused by coal-fired power plant pollution continues to mount. The EPA issued rules in 2005 that give states the tools to clean up these plants. However, the EPA has issued other rules that give the electric power plants huge loopholes in complying with the Clean Air Act. The American Lung Association and our partners will continue to take steps to ensure that loopholes are removed.

  Several northeastern states are considering adopting even more stringent requirements for their power plants. The American Lung Association repeatedly urged EPA to use this opportunity to clean up even more pollution, faster. The American Lung Association supports efforts in Congress to strengthen the Clean Air Act to further clean up these heavy polluters.

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

- **Driving 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.

- **Not burning wood or trash.** Burning firewood and trash is among the largest source of particles in many parts of the country. If you must use a fireplace or stove for heat, convert your wood stoves 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.

- **Getting involved.** Participate in your community's review of its air pollution plans and support state and local efforts to clean up air pollution.

- **Using less electricity.** Turn out the lights and use energy-efficient appliances.

- **Sending a message to decision makers.** Send an email or fax to urge EPA to set more protective standards for ozone air pollution. Log on to www.lungusa.org to see how easy that can be.

The State of the Air in 2003-2005

The years 2003, 2004 and 2005 showed the first truly split picture for the nation's air quality since the American Lung Association started these annual report cards. Both of the nation's most widespread and dangerous pollutants tracked in decidedly different directions in the eastern U.S.—ozone went down, but particle pollution went up. In the west, the direction is clearly toward lower pollution levels for both pollutants.

Good news—less ozone everywhere.

Ozone grades improved significantly in many parts of the U.S., especially in the eastern half. Grades of F—common among many states in the past—improved to passing grades, even among some of the counties that had historically been among the most ozone-polluted. Many states saw a dozen or more counties improve into passing grades, including Kentucky, Michigan, North Carolina, New York and Ohio.

These improvements appeared even in the cities that face the most ozone pollution. Los Angeles metropolitan area returned to the top of the most polluted list, but reduced the number of days that its residents suffered from the nation's worst ozone levels. In eastern cities, a combination of favorable weather and reduced emissions dropped some cities off the most polluted list for the first time. For example, ten cities in the eastern U.S. dropped off the list of the 25 most polluted for ozone, including Knoxville, TN, which had been a fixture on the list from the first report.

What made the difference? Favorable weather and lower emissions, primarily. Cooler summers in 2003 and 2004 combined with a widespread cut in nitrogen oxide emissions—one of the raw ingredients in ozone pollution—to make measurable differences in the ozone levels in much of the east. Cuts in the nitrogen oxide emissions in power plants that began in 2002 meant that the ozone levels stayed lower even though 2005 was a hot summer in much of the east.

In the west—particularly in California—continued aggressive measures to slice emissions from wide range of air pollution sources contributed to fewer ozone days. Even with the improvements, California returns nine cities to the list of the most polluted by ozone. Fourteen of the most ozone-polluted counties are also in California.

Changes in the Ozone Rankings

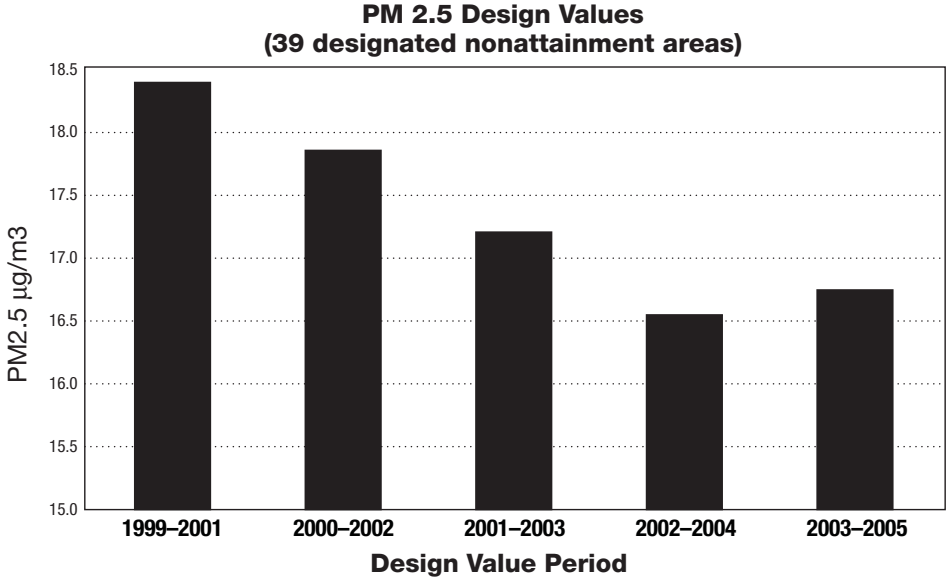
Los Angeles returned to the top of the list of cities most polluted by ozone despite having fewer days with unhealthy ozone levels. The same cities remain in the top

eight although the rankings shifted slightly. Bakersfield, Visalia-Porterville, Fresno-Madera, Merced, Sacramento, Hanford-Corcoran, Modesto and El Centro are California cities on the most ozone-polluted list. Texas has three cities on the list: Houston, Dallas-Ft. Worth and Beaumont-Port Arthur.

Widespread ozone reductions meant that it took fewer total days to be among the nation's most ozone polluted in this report. The nation's improvements in ozone appear also in the list of cities dropped off the worst for ozone list, some for the first time: Knoxville, TN; Pittsburgh, PA; Columbus, Youngstown and Cincinnati, OH; Raleigh, NC; San Antonio, TX; South Bend, IN; Huntingdon, WV; Buffalo, NY. Returning to the list are Atlanta, GA, and Chicago, IL, although they had fewer high ozone days than in previous reports. Their return to the list comes from the overall improvement of other cities. Moving onto the most ozone polluted list are metropolitan newcomers: Phoenix-Mesa-Scottsdale, AZ; Las Vegas, NV; Milwaukee, WI; St. Louis, MO-IL; El Centro, CA; Kansas City, MO-KS; Beaumont-Port Arthur, TX; and Grand Rapids, MI.

Bad news—more particle pollution in the east.

Unfortunately, levels of particle pollution rose in the eastern United States, likely because coal-fired power plants increased their production of electricity by seven percent.[1] Across the nation, 334 counties had higher real levels of year-round particle pollution in 2003-2005 compared to 2002-2004, while only 108 monitored cleaner air. Roughly two-thirds of the counties showing increases were in the eastern U.S. In the eastern states levels rose in 2003-2005, in stark contrast to the consistent decline in levels seen in the period from 2002-2004, as shown by both the analysis that the Lung Association completed for this report and data prepared by the U.S. Environmental Protection Agency.



U.S. EPA developed this chart that shows that the level of particle pollution in the U.S. has risen in the 39 communities that are already suffering from unhealthful levels of air pollution based on the official level of dangerous air pollution (nonattainment areas).

In this report, looking simply at the number of Fs masks the growth of this problem. Many counties maintained a failing grade, but their air quality worsened. Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee and Virginia all had over a dozen counties with increases in year-round particle pollution during this period.

This trend is especially troubling in light of U.S. EPA's failure to tighten the annual particle pollution standard in 2006. For this report, the Lung Association continued to use U.S. EPA's definition of unhealthy levels—officially the National Ambient Air Quality Standard—as the basis for the annual particle pollution grades. However, the Lung Association and many other public health groups, environmental groups and medical societies had urged EPA to use a much tighter standard. Under EPA's official standard for unhealthy particle pollution, only 73 counties were given failing grades for year-round exposure. Under the level recommended by the American Lung Association and much of the medical community, 299 counties have dangerous air pollution year-round.

Fortunately, outside of the eastern U.S., particle levels continue to drop, even in areas which rank historically high in particle pollution. California showed the most improvement with 32 counties reducing their year-round particle pollution levels, including some improving by over 10 percent.

Changes in the particle pollution rankings

Los Angeles remained atop both lists of cities most polluted by particle pollution, though its level of year-round particle pollution actually improved from the last report. Pittsburgh, PA, moved up to the number two slot in both lists, triggered by increases in pollution levels in that metropolitan area. Other eastern metropolitan areas worsened significantly in particle levels, including: Birmingham, AL; Detroit, MI; Cleveland, OH; Cincinnati, OH; Indianapolis, IN; Atlanta, GA; Lancaster, PA; Harrisburg, PA; and Chicago, IL. By contrast, many California cities reduced their particle pollution and improved their place on the list of most polluted year-round including Visalia-Porterville; Fresno-Madera; Hanford-Corcoran, CA. Dropping off both particle lists for the first time was Merced, CA.

The list for most polluted by short-term particles includes several cities where the smoke from burning firewood in the winter puts their population at risk: Logan, UT-ID; Salt Lake City-Ogden-Clearfield, UT; Eugene-Springfield, OR; and Provo-Orem, UT. An unusually widespread wildfire in 2004 put Fairbanks, AK, on the list for most polluted by short-term pollution with the report's only maroon days, signaling very hazardous air pollution levels.[2]

The Most Polluted Counties

California and Texas lead for ozone pollution.

Among the most polluted counties, Riverside County, CA remains the most burdened by particle pollution, while San Bernardino County, CA has the worst ozone levels. Three California counties appear on all three lists of worst polluted

in addition to these two: Los Angeles County, Fresno County and Kern County. California and Texas counties occupy the top 17 places in the list of counties most polluted by ozone. Fourteen of the 25 most ozone polluted counties are in California, five are in Texas, and New Jersey and Louisiana have two counties each on that list.

The Midwest and the Mid-Atlantic lead for particle pollution.

Particle pollution is more widespread. Many states in the Midwest and Mid-Atlantic have among the highest levels of annual particle pollution. Nine Midwestern counties (in Ohio, Michigan, Illinois and Indiana) and seven Mid-Atlantic counties (in Pennsylvania, Maryland, and West Virginia) are on this list. For worst exposure to short-term levels, California has the most counties on the list, with nine. Five counties on the list for worst short-term exposure are in the Midwest, in Ohio, Illinois, Indiana and Michigan. Five others are in the Mid-Atlantic, in Pennsylvania, New Jersey and Maryland. Utah has the three counties on the worst for short-term particles list.

Several counties improved enough in ozone levels to drop off the most polluted list, including Anne Arundel County, MD; Fairfax County, VA; New Haven County, CT; Blount County and Sevier County, TN. Falling off the annual particle pollution list were Orange County and Merced County, CA. Falling off the short-term particle pollution list were Klamath County, OR; Tulare County, Kings County and Stanislaus County, CA; and Jefferson County, KY.

The Cleanest Cities

Only three cities made all three lists of cleanest cities in the nation: Fargo-Wahpeton, ND-MN; Rapid City, SD; and Salinas, CA. Miami-Fort Lauderdale-Miami-Beach, FL is the largest city listed among the cleanest for particle pollution, followed by Tucson, AZ and Colorado Springs, CO. Phoenix-Mesa-Scottsdale, AZ is also on the list of cleanest cities for long-term particle pollution, despite its presence on the list of the cities most polluted by ozone.

Forty-five cities had no days of ozone in unhealthful ranges. The largest of these metropolitan areas are Portland-Vancouver-Beaverton, OR; Honolulu, HI; and Omaha-Council Bluffs-Freemont, NE-IA. Twenty-five cities had no days with unhealthful particle pollution levels. Cheyenne, WY, topped the list as the cleanest city for year-round particle pollution with the lowest average concentration.

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1. U.S. Environmental Protection Agency. *NO_X Budget Trading Program: 2005 Program Compliance and Environmental Results.* 2006
2. The elevated days in Alaska's 2004 season should have been captured in last year's report which covered 2002-2004, but were not reported due to a software error.

Tables

Table 1: *Estimated Populations at Risk from Short-Term Particle Pollution (24-Hour $PM_{2.5}$)*

		Chronic Diseases					
	Report Year	Adult Asthma	Pediatric Asthma	Chronic Bronchitis	Emphysema	CV Disease	Diabetes
Grade A (0.0)	2004	1,098,109	427,013	677,090	238,588	4,417,584	(1)
	2005	1,265,970	486,791	721,673	275,701	6,069,486	1,214,415
	2006	1,907,529	663,978	1,042,736	425,983	8,362,853	1,775,331
	2007	723,267	254,527	366,951	162,864	2,870,181	678,454
Grade B (0.3-0.9)	2004	2,091,803	777,232	1,234,260	429,795	7,998,682	(1)
	2005	2,177,008	850,022	1,165,895	421,841	9,554,840	1,899,681
	2006	2,508,661	882,494	1,296,874	507,256	10,178,986	2,151,354
	2007	1,338,695	498,993	738,503	328,417	5,784,989	1,367,113
Grade C (1.0-2.0)	2004	2,494,275	941,891	1,500,267	514,544	9,635,256	(1)
	2005	2,241,512	849,957	1,181,534	419,786	9,612,249	1,905,198
	2006	2,881,178	1,002,944	1,465,631	574,248	11,532,058	2,435,734
	2007	2,343,019	892,012	1,223,190	510,249	9,167,840	2,190,730
Grade D (2.1-3.2)	2004	1,341,788	496,552	783,391	263,649	4,966,969	(1)
	2005	1,711,703	622,929	873,476	312,009	7,131,044	1,413,876
	2006	1,182,987	394,221	597,144	232,231	4,665,231	985,191
	2007	2,062,482	798,520	1,063,714	443,747	7,959,894	1,899,877
Grade F (3.3+)	2004	4,468,378	1,766,912	2,649,823	888,281	16,729,853	(1)
	2005	4,606,903	1,679,638	2,254,726	801,992	18,325,151	3,627,483
	2006	3,907,150	1,421,992	1,974,959	763,403	15,371,186	3,236,265
	2007	5,484,393	2,125,283	2,846,148	1,194,055	21,368,462	5,093,142
National Population in Counties with $PM_{2.5}$ Monitors	2004	11,731,287	4,497,507	6,985,770	2,383,863	44,661,067	(1)
	2005	13,606,631	5,060,978	7,032,822	2,540,957	50,692,770	11,444,651
	2006	13,109,352	4,607,401	6,738,927	2,643,257	52,913,571	11,178,920
	2007	12,756,739	4,867,064	6,647,841	2,809,175	50,202,520	11,958,143

(1) 2005 was the first year in which people with diabetes were incorporated as a high-risk group.

(2) 2005 was the first year those 18 and under were incorporated as a sensitive group. In previous versions of the report, 14 and under was used.

	Report Year	Age Groups: Under 18	Age Groups: Over 65	Total Population	Number of Counties	Number of High $PM_{2.5}$ Days: Orange	Red	Purple	Maroon
Grade A (0.0)	2004	(2)	2,602,983	20,387,885	177	0	0	0	0
	2005	5,720,170	3,216,121	23,463,883	185	0	0	0	0
	2006	7,839,172	4,324,071	32,447,762	218	0	0	0	0
	2007	2,859,856	1,582,448	11,752,625	80	0	0	0	0
Grade B (0.3-0.9)	2004	(2)	4,618,540	37,207,266	185	224	28	0	0
	2005	9,988,540	4,646,290	39,108,293	194	254	18	0	0
	2006	10,419,050	4,845,683	41,426,762	198	252	17	1	0
	2007	5,606,667	3,195,860	23,494,442	149	213	2	0	0
Grade C (1.0-2.0)	2004	(2)	5,426,388	45,286,047	136	503	40	0	0
	2005	9,987,706	4,518,985	39,637,741	120	448	28	0	0
	2006	11,841,092	5,475,538	46,848,907	104	371	37	1	0
	2007	10,022,611	4,571,794	39,966,818	165	714	4	0	0
Grade D (2.1-3.2)	2004	(2)	2,718,105	23,768,590	51	337	34	1	0
	2005	7,319,930	3,358,629	29,187,894	59	381	49	1	0
	2006	4,654,292	2,225,319	18,973,903	37	249	27	0	0
	2007	8,972,131	4,026,457	35,070,995	88	653	23	1	0
Grade F (3.3+)	2004	(2)	9,356,704	81,757,891	106	2,724	446	7	0
	2005	19,737,219	8,878,003	76,509,309	94	2,494	327	4	0
	2006	16,788,579	7,377,704	64,324,359	71	1,773	236	5	0
	2007	23,879,579	10,965,349	93,704,219	137	3,589	186	3	6
National Population in Counties with $PM_{2.5}$ Monitors	2004	(2)	25,234,335	212,631,740	726	3,788	548	8	0
	2005	59,470,893	28,046,929	235,287,598	735	3,577	422	5	0
	2006	54,396,663	25,587,775	215,558,018	718	2,645	317	7	0
	2007	54,686,116	25,874,255	217,389,252	718	5,169	215	4	6

Table 1a: *Estimated Populations at Risk from Year-Round Particle Pollution (Annual $PM_{2.5}$)*

		Chronic Diseases						Age Groups			
	Report Year	Adult Asthma	Pediatric Asthma	Chronic Bronchitis	Emphysema	CV Disease	Diabetes	Under 18	Over 65	Total Population	Number of Counties
Pass	2004	6,221,496	2,374,312	3,719,521	1,268,996	23,779,701	(1)	(2)	13,359,480	112,896,625	396
	2005	6,841,000	2,594,982	3,615,962	1,306,929	29,641,691	5,887,389	30,493,216	14,392,539	120,845,855	435
	2006	8,071,754	2,830,224	4,201,235	1,656,530	33,107,960	6,996,832	33,414,601	16,084,169	133,680,848	467
	2007	8,179,468	3,041,301	4,233,660	1,801,792	32,144,480	7,650,058	34,171,923	16,688,256	137,594,967	455
Fail	2004	3,564,838	1,430,102	2,147,177	720,826	13,569,611	(1)	(2)	7,597,861	66,207,360	120
	2005	3,466,484	1,282,823	1,717,548	610,587	13,957,208	2,763,144	15,074,296	6,737,881	58,311,751	82
	2006	3,208,987	1,173,640	1,628,006	627,882	12,672,297	2,665,505	13,856,441	6,032,060	53,054,643	68
	2007	3,091,746	1,256,707	1,642,524	685,390	12,279,896	2,928,550	14,120,305	6,273,908	54,480,556	73
National Population in Counties with $PM_{2.5}$ Monitors	2004	9,786,334	3,804,414	5,866,698	1,989,822	37,349,312	(1)	(2)	20,957,341	179,103,985	516
	2005	10,307,484	3,877,805	5,333,510	1,917,516	43,598,899	8,650,533	45,567,512	21,130,420	179,157,606	517
	2006	11,280,741	4,003,864	5,829,241	2,284,412	45,780,257	9,662,337	47,271,042	22,116,229	186,735,491	535
	2007	11,271,214	4,298,008	5,876,184	2,487,182	44,424,376	10,578,608	48,292,228	22,962,164	192,075,523	528

(1) 2005 was the first year in which people with diabetes were incorporated as a high-risk group.

(2) 2005 was the first year those 18 and under were incorporated as a sensitive group. In previous versions of the report, 14 and under was used.

Table 1b: *Estimated Populations at Risk from Ozone*[1]

		Chronic Diseases			
	Report Year	Adult Asthma	Pediatric Asthma	Chronic Bronchitis	Emphysema
Grade A (0.0)	2004	791,444	295,702	479,335	163,687
	2005	816,733	300,035	434,229	158,458
	2006	1,101,423	371,502	606,774	253,035
	2007	1,444,708	505,761	772,761	346,761
Grade B (0.3-0.9)	2004	835,492	312,162	509,065	181,520
	2005	818,571	322,006	483,003	185,875
	2006	1,065,860	384,181	580,847	232,928
	2007	1,348,081	516,736	723,870	311,496
Grade C (1.0-2.0)	2004	777,159	294,538	482,637	172,954
	2005	1,046,738	400,744	570,187	210,265
	2006	1,183,001	419,134	608,112	238,066
	2007	1,975,636	732,459	1,006,458	421,078
Grade D (2.1-3.2)	2004	849,726	352,390	528,588	177,904
	2005	531,289	207,069	284,197	103,901
	2006	413,923	140,501	217,638	88,754
	2007	1,683,506	593,353	848,895	363,798
Grade F (3.3+)	2004	7,497,712	2,917,201	4,444,370	1,502,981
	2005	8,402,314	3,118,942	4,224,519	1,502,371
	2006	8,573,183	3,052,922	4,353,739	1,686,664
	2007	5,608,752	2,293,031	2,979,685	1,233,743
National Population	2004	11,275,592	4,343,905	6,744,494	2,305,126
in Counties with	2005	12,080,816	4,498,334	6,229,914	2,245,723
Ozone Monitors	2006	12,726,163	4,497,070	6,562,587	2,576,661
	2007	12,383,917	4,760,020	6,497,821	2,748,891

Table 1b: (continued) *Estimated Populations at Risk from Ozone*[1]

		Age Groups				Number of High Ozone Days		
	Report Year	Under 18	Total Over 65	Number of Population	Counties	Orange	Red	Purple
Grade A (0.0)	2004	(2)	1,719,616	14,417,418	77	0	0	0
	2005	3,525,678	1,755,385	14,339,204	87	0	0	0
	2006	4,386,141	2,624,697	18,604,687	110	0	0	0
	2007	5,682,711	3,389,213	24,345,906	145	0	0	0
Grade B (0.3-0.9)	2004	(2)	2,021,935	15,211,187	56	77	0	0
	2005	3,783,850	2,198,284	15,646,414	67	97	0	0
	2006	4,535,795	2,328,379	18,337,580	81	118	1	0
	2007	5,806,019	2,927,058	23,457,531	132	173	2	
Grade C (1.0-2.0)	2004	(2)	1,918,297	14,373,424	77	324	3	0
	2005	4,709,090	2,379,449	18,887,354	94	397	4	0
	2006	4,948,370	2,280,662	19,486,872	99	429	7	0
	2007	8,229,881	3,822,577	32,897,057	143	579	24	0
Grade D (2.1-3.2)	2004	(2)	1,861,308	16,275,763	53	420	10	0
	2005	2,433,258	1,148,216	9,502,497	54	413	10	0
	2006	1,658,808	898,495	6,797,619	42	316	11	0
	2007	6,666,892	3,377,432	27,354,130	90	635	50	0
Grade F (3.3+)	2004	(2)	15,701,385	136,081,799	373	9,991	1,220	95
	2005	36,650,356	16,313,879	142,743,621	353	9,403	1,319	127
	2006	36,043,999	16,036,647	140,539,448	337	7,551	1,113	101
	2007	25,764,398	11,119,853	99,006,369	163	3,713	535	64
National Population	2004	(2)	24,393,223	205,205,712	707	10,812	1,233	95
in Counties with	2005	52,859,356	24,745,650	208,721,127	723	10,310	1,333	127
Ozone Monitors	2006	53,094,168	24,922,402	209,951,406	737	8,414	1,132	101
	2007	53,483,376	25,312,854	212,433,979	744	5,100	611	64

(1) Data from the reports issued in 2000, 2001, 2002, and 2003 were omitted to simplify the table, but are available upon request.

(2) 2005 was the first year those 18 and under were incorporated as a sensitive group. In previous versions, 14 and under was used.

Table 2: *People at Risk in 25 U.S. Cities Most Polluted by Short-Term Particle Pollution (24-Hour $PM_{2.5}$)*

2007 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8,10]	Diabetes[9,10]
1	Los Angeles-Long Beach-Riverside, CA	17,629,607	4,921,801	1,781,348	438,040	916,542	510,446	202,486	3,672,566	881,192
2	Pittsburgh-New Castle, PA	2,478,883	525,365	428,273	46,757	154,671	83,221	41,131	707,679	165,171
3	Fresno-Madera, CA	1,020,372	311,230	99,900	27,699	51,057	28,344	11,176	202,473	48,527
4	Bakersfield, CA	756,825	232,363	67,288	20,680	37,686	20,780	7,858	144,004	34,715
5	Logan, UT-ID	110,426	33,204	8,785	2,955	5,981	2,944	1,004	18,642	4,510
6	Birmingham-Hoover-Cullman, AL	1,170,012	279,076	149,678	24,838	63,613	36,773	16,025	284,657	67,614
7	Salt Lake City-Ogden-Clearfield, UT	1,586,740	466,822	134,005	41,547	88,565	44,144	16,222	299,844	72,600
8	Detroit-Warren-Flint, MI	5,428,000	1,389,788	633,567	123,691	365,181	166,122	70,555	1,264,208	301,771
9	Eugene-Springfield, OR	335,180	70,393	46,471	6,265	22,738	10,939	4,840	85,480	20,233
10	Cleveland-Akron-Elyria, OH	2,931,774	700,675	415,219	62,360	176,254	93,335	42,751	750,352	177,109
11	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,125,656	2,040,180	835,307	181,576	518,499	247,738	99,659	1,814,612	436,891
12	Sacramento—Arden-Arcade—Truckee, CA-NV	2,187,694	561,213	256,759	49,948	117,608	66,352	27,913	499,231	118,957
13	Chicago-Naperville-Michigan City, IL-IN-WI	9,661,840	2,544,703	1,051,356	226,479	503,654	289,114	118,463	2,136,379	511,388
14	Harrisburg-Carlisle-Lebanon, PA	647,390	144,630	95,385	12,872	40,443	21,070	9,733	170,421	40,171
15	San Jose-San Francisco-Oakland, CA	7,168,176	1,710,137	831,536	152,202	396,041	223,742	93,732	1,685,256	402,984
16	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,903,623	5,337,060	2,790,776	474,998	1,421,500	681,921	296,377	5,260,662	1,248,713
16	Indianapolis-Anderson-Columbus, IN	1,958,453	520,335	218,557	46,310	117,570	58,632	24,357	437,802	104,623
18	San Diego-Carlsbad-San Marcos, CA	2,933,462	760,274	324,496	67,664	156,702	87,417	35,427	637,292	152,194
19	Provo-Orem, UT	452,851	150,427	29,785	13,388	23,632	11,379	3,621	68,544	16,729
20	Weirton-Steubenville, WV-OH	126,464	25,193	23,586	2,242	8,498	4,363	2,228	38,086	8,859
21	Fairbanks, AK	87,560	25,337	4,785	2,255	29,597	2,425	783	15,210	3,779
22	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,372,799	1,560,212	831,328	138,859	384,921	199,063	87,763	1,553,543	368,292
22	Hanford-Corcoran, CA	143,420	40,411	10,597	3,597	7,337	3,951	1,324	24,918	6,077
24	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN	1,342,918	314,141	155,666	27,959	84,937	40,286	17,227	308,138	73,487
24	Visalia-Porterville, CA	410,874	134,343	38,049	11,957	19,900	11,028	4,302	78,170	18,763

(1) Cities are ranked using the highest weighted average for any county within that metropolitan statistical area.

(2) **Total Population** represents the at-risk populations for all counties within the respective CSA or MSA.

(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 2005, 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 2005, 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 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(8) **CV Disease** estimates are for adults 18 and over who had been diagnosed in 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, hypertension, stroke, angina pectoris and heart attack.

(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

Table 2a: *People at Risk in 25 U.S. Cities Most Polluted by Year-Round Particle Pollution (Annual $PM_{2.5}$)*

2007 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8,10]	Diabetes[9,10]
1	Los Angeles-Long Beach-Riverside, CA	17,629,607	4,921,801	1,781,348	438,040	916,542	510,446	202,486	3,672,566	881,192
2	Pittsburgh-New Castle, PA	2,478,883	525,365	428,273	46,757	154,671	83,221	41,131	707,679	165,171
3	Bakersfield, CA	756,825	232,363	67,288	20,680	37,686	20,780	7,858	144,004	34,715
4	Birmingham-Hoover-Cullman, AL	1,170,012	279,076	149,678	24,838	63,613	36,773	16,025	284,657	67,614
4	Detroit-Warren-Flint, MI	5,428,000	1,389,788	633,567	123,691	365,181	166,122	70,555	1,264,208	301,771
6	Cleveland-Akron-Elyria, OH	2,931,774	700,675	415,219	62,360	176,254	93,335	42,751	750,352	177,109
7	Visalia-Porterville, CA	410,874	134,343	38,049	11,957	19,900	11,028	4,302	78,170	18,763
8	Cincinnati-Middletown-Wilmington, OH-KY-IN	2,113,011	531,067	248,569	47,265	128,126	64,796	27,371	490,073	116,891
9	Indianapolis-Anderson-Columbus, IN	1,958,453	520,335	218,557	46,310	117,570	58,632	24,357	437,802	104,623
10	St. Louis-St. Charles-Farmington, MO-IL	2,840,179	689,139	362,685	61,333	180,965	88,845	38,796	688,863	163,593
11	Chicago-Naperville-Michigan City, IL-IN-WI	9,661,840	2,544,703	1,051,356	226,479	503,654	289,114	118,463	2,136,379	511,388
11	Lancaster, PA	490,562	124,822	69,787	11,109	29,521	15,237	7,003	122,404	28,808
13	Atlanta-Sandy Springs-Gainesville, GA-AL	5,249,121	1,387,694	419,991	123,505	281,445	152,989	55,288	1,033,988	252,135
14	York-Hanover-Gettysburg, PA	508,550	116,951	69,335	10,409	31,706	16,301	7,302	128,949	30,539
15	Fresno-Madera, CA	1,020,372	311,230	99,900	27,699	51,057	28,344	11,176	202,473	48,527
15	Weirton-Steubenville, WV-OH	126,464	25,193	23,586	2,242	8,498	4,363	2,228	38,086	8,859
17	Hanford-Corcoran, CA	143,420	40,411	10,597	3,597	7,337	3,951	1,324	24,918	6,077
17	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,903,623	5,337,060	2,790,776	474,998	1,421,500	681,921	296,377	5,260,662	1,248,713
19	Canton-Massillon, OH	409,996	95,538	62,820	8,503	24,766	13,279	6,295	109,582	25,749
20	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,125,656	2,040,180	835,307	181,576	518,499	247,738	99,659	1,814,612	436,891
20	Charleston, WV	306,435	66,267	46,483	5,898	21,899	10,184	4,800	83,977	19,801
22	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN	1,342,918	314,141	155,666	27,959	84,937	40,286	17,227	308,138	73,487
23	Huntington-Ashland, WV-KY-OH	286,012	61,119	44,309	5,440	19,734	9,437	4,422	77,038	18,104
24	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,372,799	1,560,212	831,328	138,859	384,921	199,063	87,763	1,553,543	368,292
24	Hagerstown-Martinsburg, MD-WV	251,311	58,494	32,272	5,206	16,685	7,909	3,415	60,640	14,394
24	Rome, GA	94,198	23,266	13,003	2,071	5,170	2,917	1,302	22,832	5,380

(1) Cities are ranked using the highest weighted average for any county within that metropolitan statistical area.

(2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.

(3) Those **18 & under** and **65 & over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.

(4) **Pediatric Asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2005, 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 2005, 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 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(8) **CV Disease** estimates are for adults 18 and over who had been diagnosed in 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, hypertension, stroke, angina pectoris and heart attack.

(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

Table 2b: *People at Risk In 25 Most Ozone-Polluted Cities*

2007 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,8]	Adult Asthma[5,8]	Chronic Bronchitis[6,8]	Emphysema[7,8]
1	Los Angeles-Long Beach-Riverside, CA	17,629,607	4,921,801	1,781,348	438,040	916,542	510,446	202,486
2	Bakersfield, CA	756,825	232,363	67,288	20,680	37,686	20,780	7,858
3	Visalia-Porterville, CA	410,874	134,343	38,049	11,957	19,900	11,028	4,302
4	Fresno-Madera, CA	1,020,372	311,230	99,900	27,699	51,057	28,344	11,176
5	Houston-Baytown-Huntsville, TX	5,380,661	1,513,625	432,961	134,713	261,308	154,239	56,816
6	Merced, CA	241,706	79,143	21,318	7,044	11,676	6,437	2,448
7	Dallas-Fort Worth, TX	6,160,046	1,700,462	520,804	151,341	300,888	177,236	65,615
8	Sacramento—Arden-Arcade—Truckee, CA-NV	2,187,694	561,213	256,759	49,948	117,608	66,352	27,913
9	Baton Rouge-Pierre Part, LA	689,693	169,445	71,763	15,081	30,912	21,005	8,358
10	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,903,623	5,337,060	2,790,776	474,998	1,421,500	681,921	296,377
11	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,125,656	2,040,180	835,307	181,576	518,499	247,738	99,659
12	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,372,799	1,560,212	831,328	138,859	384,921	199,063	87,763
13	Hanford-Corcoran, CA	143,420	40,411	10,597	3,597	7,337	3,951	1,324
13	Modesto, CA	505,505	150,921	50,172	13,432	25,566	14,234	5,657
15	Phoenix-Mesa-Scottsdale, AZ	3,865,077	1,053,835	436,359	93,791	205,219	113,406	46,717
16	Charlotte-Gastonia-Salisbury, NC-SC	2,120,745	543,952	224,209	48,412	102,362	63,862	25,759
17	Las Vegas-Paradise-Pahrump, NV	1,751,028	456,783	191,310	40,654	90,888	52,272	21,243
17	Milwaukee-Racine-Waukesha, WI	1,708,563	428,583	210,102	38,144	116,405	52,838	22,862
19	St. Louis-St. Charles-Farmington, MO-IL	2,840,179	689,139	362,685	61,333	180,965	88,845	38,796
20	El Centro, CA	155,823	47,199	16,035	4,201	7,813	4,335	1,731
20	Kansas City-Overland Park-Kansas City, MO-KS	1,942,169	488,350	221,928	43,463	118,884	59,449	24,834
20	Beaumont-Port Arthur, TX	383,530	96,678	50,496	8,604	19,743	11,862	5,260
20	Chicago-Naperville-Michigan City, IL-IN-WI	9,661,840	2,544,703	1,051,356	226,479	503,654	289,114	118,463
24	Grand Rapids-Muskegon-Holland, MI	1,315,319	351,496	144,064	31,283	87,591	39,147	16,094
25	Atlanta-Sandy Springs-Gainesville, GA-AL	5,249,121	1,387,694	419,991	123,505	281,445	152,989	55,288
25	Cleveland-Akron-Elyria, OH	2,931,774	700,675	415,219	62,360	176,254	93,335	42,751

(1) Cities are ranked using the highest weighted average for any county within that metropolitan statistical area.

(2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.

(3) Those **18 & under** and **65 & over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.

(4) **Pediatric Asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2005, 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 2005, 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 2005, 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, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

Table 3: *People at Risk in 25 Counties Most Polluted by Short-Term Particle Pollution (24-Hour $PM_{2.5}$)*

						At-Risk Groups						High $PM_{2.5}$ Days in Unhealthy Ranges 2003-2005	
2007 Rank[1]	County	ST	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8]	Diabetes[9]	Weighted Avg.[11]	Grade[12]
1	RIVERSIDE	CA	1,946,419	555,060	223,169	49,400	100,091	55,726	22,965	408,833	96,994	61.5	F
2	ALLEGHENY	PA	1,235,841	262,526	212,350	23,365	77,181	41,377	20,370	350,589	81,831	60.7	F
3	LOS ANGELES	CA	9,935,475	2,739,469	998,963	243,813	519,004	288,953	114,234	2,074,467	498,089	49.7	F
4	FRESNO	CA	877,584	270,845	84,678	24,105	43,682	24,239	9,523	172,725	41,424	41.8	F
5	KERN	CA	756,825	232,363	67,288	20,680	37,686	20,780	7,858	144,004	34,715	39.0	F
6	CACHE	UT	98,055	29,139	7,425	2,593	5,380	2,607	861	16,098	3,906	31.0	F
7	JEFFERSON	AL	657,229	156,950	88,180	13,969	35,690	20,749	9,239	163,164	38,633	29.0	F
8	SALT LAKE	UT	948,172	272,437	78,767	24,247	53,466	26,605	9,686	179,611	43,562	27.7	F
9	WAYNE	MI	1,998,217	555,354	232,698	49,427	130,544	59,355	25,424	453,881	108,107	21.7	F
10	ORANGE	CA	2,988,072	803,073	315,351	71,473	157,985	88,492	35,849	648,274	155,387	21.2	F
10	SAN BERNARDINO	CA	1,963,535	605,131	158,725	53,857	97,597	53,654	19,657	364,436	88,409	21.2	F
12	LANE	OR	335,180	70,393	46,471	6,265	22,738	10,939	4,840	85,480	20,233	20.8	F
13	CUYAHOGA	OH	1,335,317	322,877	202,842	28,736	79,719	42,610	20,146	350,325	82,248	20.3	F
14	BALTIMORE CITY	MD	635,815	161,148	77,079	14,342	39,479	19,440	8,295	147,866	35,175	20.0	F
15	SACRAMENTO	CA	1,363,482	373,540	148,453	33,245	71,513	40,041	16,380	294,666	70,406	18.8	F
16	COOK	IL	5,303,683	1,371,667	620,638	122,078	272,217	160,101	67,175	1,201,153	286,128	18.7	F
17	CUMBERLAND	PA	223,089	45,609	33,624	4,059	14,326	7,396	3,393	59,361	13,980	14.8	F
18	SANTA CLARA	CA	1,699,052	428,298	177,135	38,119	91,888	51,418	20,589	373,949	89,856	14.0	F
19	NEW HAVEN	CT	846,766	199,416	117,232	17,748	52,515	26,860	12,072	212,417	50,184	13.7	F
19	MARION	IN	863,133	234,799	94,240	20,897	51,340	25,482	10,464	188,300	45,009	13.7	F
21	SAN DIEGO	CA	2,933,462	760,274	324,496	67,664	156,702	87,417	35,427	637,292	152,194	13.3	F
21	UNION	NJ	531,457	137,149	67,960	12,206	29,360	16,317	7,193	127,370	30,203	13.3	F
23	UTAH	UT	443,738	147,343	28,906	13,114	23,158	11,139	3,527	66,843	16,323	12.8	F
23	DAUPHIN	PA	253,995	60,560	35,585	5,390	15,555	8,126	3,726	65,544	15,497	12.8	F
25	JEFFERSON	OH	70,599	14,274	13,067	1,270	4,404	2,423	1,234	21,095	4,907	11.7	F

(1) Counties are ranked by weighted average. See note 11 below.

(2) **Total Population** represents the at-risk populations in counties with $PM_{2.5}$ monitors.

(3) Those **18 & under** and **65 & over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.

(4) **Pediatric Asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2005, 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 2005, 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 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(8) **CV Disease** estimates are for adults 18 and over who had been diagnosed in 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, hypertension, stroke, angina pectoris and heart attack.

(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

(11) The **Weighted Average** was derived by counting the number of days in each unhealthful range (orange, red, purple, maroon) in each year (2003-2005), multiplying the total in each range by the assigned standard weights (i.e., 1 for orange, 1.5 for red, 2.0 for purple, 2.5 for maroon), and calculating the average.

(12) **Grade** is assigned by weighted average as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

Table 3a: *People at Risk in 25 Counties Most Polluted by Long-Term Particle Pollution (Annual $PM_{2.5}$)*

				At-Risk Groups								$PM_{2.5}$ Annual, 2003-2005	
2007 Rank[1]	County	ST	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,10]	Adult Asthma[5,10]	Chronic Bronchitis[6,10]	Emphysema[7,10]	CV Disease[8]	Diabetes[9]	Design Value[11]	Pass/ Fail[12]
1	RIVERSIDE	CA	1,946,419	555,060	223,169	49,400	100,091	55,726	22,965	408,833	96,994	22.6	FAIL
2	SAN BERNARDINO	CA	1,963,535	605,131	158,725	53,857	97,597	53,654	19,657	364,436	88,409	21.2	FAIL
3	ALLEGHENY	PA	1,235,841	262,526	212,350	23,365	77,181	41,377	20,370	350,589	81,831	20.8	FAIL
4	LOS ANGELES	CA	9,935,475	2,739,469	998,963	243,813	519,004	288,953	114,234	2,074,467	498,089	19.7	FAIL
5	KERN	CA	756,825	232,363	67,288	20,680	37,686	20,780	7,858	144,004	34,715	19	FAIL
6	JEFFERSON	AL	657,229	156,950	88,180	13,969	35,690	20,749	9,239	163,164	38,633	18.2	FAIL
6	WAYNE	MI	1,998,217	555,354	232,698	49,427	130,544	59,355	25,424	453,881	108,107	18.2	FAIL
8	CUYAHOGA	OH	1,335,317	322,877	202,842	28,736	79,719	42,610	20,146	350,325	82,248	18.1	FAIL
9	TULARE	CA	410,874	134,343	38,049	11,957	19,900	11,028	4,302	78,170	18,763	18	FAIL
10	HAMILTON	OH	806,652	200,874	109,252	17,878	47,911	25,149	11,296	198,891	47,009	17.9	FAIL
11	MARION	IN	863,133	234,799	94,240	20,897	51,340	25,482	10,464	188,300	45,009	17.8	FAIL
12	MADISON	IL	264,309	62,521	36,769	5,564	13,960	8,352	3,750	65,908	15,556	17.7	FAIL
13	LAKE	IN	493,297	130,958	63,423	11,655	29,600	15,075	6,723	118,902	28,184	17.5	FAIL
13	LANCASTER	PA	490,562	124,822	69,787	11,109	29,521	15,237	7,003	122,404	28,808	17.5	FAIL
15	FULTON	GA	915,623	228,319	69,999	20,320	50,093	27,265	9,713	183,023	44,821	17.4	FAIL
16	YORK	PA	202,315	44,192	28,054	3,933	16,024	6,645	3,013	53,265	12,632	17.3	FAIL
17	FRESNO	CA	877,584	270,845	84,678	24,105	43,682	24,239	9,523	172,725	41,424	17.2	FAIL
17	COOK	IL	5,303,683	1,371,667	620,638	122,078	272,217	160,101	67,175	1,201,153	286,128	17.2	FAIL
17	JEFFERSON	OH	70,599	14,274	13,067	1,270	4,404	2,423	1,234	21,095	4,907	17.2	FAIL
20	KINGS	CA	143,420	40,411	10,597	3,597	7,337	3,951	1,324	24,918	6,077	17	FAIL
20	NEW YORK	NY	1,593,200	272,910	202,762	24,289	122,942	52,900	21,505	385,193	91,723	17	FAIL
22	BROOKE	WV	24,515	4,651	4,602	414	1,810	855	435	7,440	1,731	16.8	FAIL
23	STARK	OH	380,608	88,946	58,425	7,916	22,968	12,316	5,844	101,680	23,886	16.7	FAIL
24	BALTIMORE CITY	MD	786,113	181,489	114,385	16,153	49,761	25,217	11,572	202,548	47,716	16.6	FAIL
24	HANCOCK	WV	31,350	6,268	5,917	558	2,284	1,086	559	9,551	2,221	16.6	FAIL
24	KANAWHA	WV	193,559	40,618	31,816	3,615	13,939	6,532	3,179	55,131	12,935	16.6	FAIL

(1) Counties are ranked by design value. See note 11 below.

(2) **Total Population** represents the at-risk populations in counties with $PM_{2.5}$ monitors.

(3) Those **18 & under** and **65 & over** are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.

(4) **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2003, 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 2003, 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 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(8) **CV disease** estimates are for adults 18 and over who had been diagnosed in 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, hypertension, stroke, angina pectoris and heart attack.

(9) **Diabetes** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(10) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

(11) The **Design Value** is the calculated concentration of a pollutant based on the form of the National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the standard. The source for the Design Values is EPA, communication from the Office of Air Quality Planning & Standards, Mark Schmidt, October 30, 2006.

(12) **Grades** are based on EPA's determination of meeting or failing to meet the NAAQS for annual $PM_{2.5}$ levels during 2003-2005. Counties meeting the NAAQS received grades of Pass; counties not meeting received grades of Fail.

Table 3b: *People at Risk in 25 Most Ozone-Polluted Counties*

				At-Risk Groups						High Ozone Days in Unhealthy Ranges 2003-2005	
2007 Rank[1]	County	ST	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]	Weighted Avg[9]	Grade[10]
1	SAN BERNARDINO	CA	1,963,535	605,131	158,725	53,857	97,597	53,654	19,657	103.3	F
2	KERN	CA	756,825	232,363	67,288	20,680	37,686	20,780	7,858	101.5	F
3	RIVERSIDE	CA	1,946,419	555,060	223,169	49,400	100,091	55,726	22,965	86.8	F
4	LOS ANGELES	CA	9,935,475	2,739,469	998,963	243,813	519,004	288,953	114,234	80.8	F
5	TULARE	CA	410,874	134,343	38,049	11,957	19,900	11,028	4,302	79.5	F
6	FRESNO	CA	877,584	270,845	84,678	24,105	43,682	24,239	9,523	52.0	F
7	HARRIS	TX	3,693,050	1,066,672	283,631	94,934	177,117	104,332	37,811	42.8	F
8	MERCED	CA	241,706	79,143	21,318	7,044	11,676	6,437	2,448	24.8	F
9	TARRANT	TX	1,620,479	454,241	135,975	40,427	78,750	46,443	17,246	23.0	F
10	SACRAMENTO	CA	1,363,482	373,540	148,453	33,245	71,513	40,041	16,380	22.7	F
11	EL DORADO	CA	176,841	40,674	20,691	3,620	9,947	5,690	2,445	21.7	F
12	VENTURA	CA	796,106	219,068	85,140	19,497	41,865	23,620	9,781	19.8	F
13	NEVADA	CA	98,394	19,619	16,654	1,746	5,797	3,404	1,686	19.5	F
14	PLACER	CA	317,028	73,536	44,284	6,545	17,684	10,074	4,519	19.3	F
15	BRAZORIA	TX	278,484	76,508	24,776	6,809	13,689	8,104	3,089	15.5	F
16	DALLAS	TX	2,305,454	656,796	191,724	58,455	110,979	65,235	23,942	14.5	F
17	MARIPOSA	CA	18,069	3,401	3,127	303	1,075	627	308	14.3	F
18	EAST BATON ROUGE PARISH	LA	411,417	100,912	42,753	8,981	18,476	12,510	4,959	13.5	F
19	DENTON	TX	554,642	149,313	29,438	13,289	26,950	15,647	4,893	13.3	F
20	FAIRFIELD	CT	902,775	230,031	117,749	20,473	54,510	28,109	12,603	12.7	F
21	HARFORD	MD	239,259	62,288	25,922	5,544	14,772	7,278	3,027	10.7	F
22	CAMDEN	NJ	518,249	135,151	62,868	12,028	28,542	15,783	6,811	10.5	F
22	OCEAN	NJ	558,341	129,714	117,169	11,545	31,736	18,338	9,891	10.5	F
24	CALAVERAS	CA	46,871	9,219	8,077	820	2,766	1,621	804	10.0	F
25	KINGS	CA	143,420	40,411	10,597	3,597	7,337	3,951	1,324	9.3	F
25	STANISLAUS	CA	505,505	150,921	50,172	13,432	25,566	14,234	5,657	9.3	F
25	IBERVILLE PARISH	LA	32,386	7,838	3,635	698	1,455	997	409	9.3	F

(1) Counties are ranked by weighted average.

(2) **Total Population** represent the at-risk populations in counties with ozone monitors.

(3) Those **18 & under** and **65 & over** are vulnerable to ozone and are, therefore, included. They should not be used as population denominators for disease estimates.

(4) **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2005, 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 2005, 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 2005, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(7) **Emphysema** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on national rates (NHIS) applied to county population estimates (U.S. Census).

(8) Adding across rows does not produce valid estimates, e.g., summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

(9) The **weighted average** was derived by counting the number of days in each unhealthful range (orange, red, purple) in each year (2003-2005), multiplying the total in each range by the assigned standard weights (i.e., 1 for orange, 1.5 for red, 2.0 for purple), and calculating the average.

(10) **Grade** is assigned by weighted average as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.

Table 4: *Counties with the Worst Particle Pollution ($PM_{2.5}$ 24-Hour and Annual Averages) in Each State*

			Short-Term (24-Hour)		Annual	
County	**ST**[1]	**Metropolitan Statistical Area**	Weighted Average[2]	Grade[3]	Design Value[4]	Pass/ Fail[5]
JEFFERSON	AL	Birmingham-Hoover-Cullman, AL	29.0	F	18.2	FAIL
FAIRBANKS NORTH STAR BOROUGH	AK	Fairbanks, AK	11.0	F	*	INC
PULASKI	AR	Little Rock-North Little Rock-Pine Bluff, AR	6.3	F	14.2	PASS
MARICOPA	AZ	Phoenix-Mesa-Scottsdale, AZ	2.3	D	11.6	PASS
SANTA CRUZ	AZ	Nogales, AZ	0.7	B	11.9	PASS
RIVERSIDE	CA	Los Angeles-Long Beach-Riverside, CA	61.5	F	22.6	FAIL
DENVER	CO	Denver-Aurora-Boulder, CO	2.7	D	9.7	PASS
ADAMS	CO	Denver-Aurora-Boulder, CO	0.7	B	10.1	PASS
NEW HAVEN	CT	New York-Newark-Bridgeport, NY-NJ-CT-PA	13.7	F	13.5	PASS
NEW CASTLE	DE	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	10.8	F	15.1	FAIL
DISTRICT OF COLUMBIA	DC	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	11.0	F	14.8	PASS
ESCAMBIA	FL	Pensacola-Ferry Pass-Brent, FL	3.3	F	11.8	PASS
LEON	FL	Tallahassee, FL	0.7	B	12.6	PASS
FULTON	GA	Atlanta-Sandy Springs-Gainesville, GA-AL	10.0	F	17.4	FAIL
HONOLULU	HI	Honolulu, HI	2.7	D	5.2	PASS
SCOTT	IA	Davenport-Moline-Rock Island, IA-IL	6.0	F	12	PASS
CLINTON	IA	Clinton, IA	3.3	F	12.6	PASS
SHOSHONE	ID		4.0	F	12.1	PASS
MADISON	IL	St. Louis-St. Charles-Farmington, MO-IL	9.3	F	17.7	FAIL
COOK	IL	Chicago-Naperville-Michigan City, IL-IN-WI	18.7	F	17.2	FAIL
MARION	IN	Indianapolis-Anderson-Columbus, IN	13.7	F	17.8	FAIL
JEFFERSON	KY	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN	10.7	F	15.8	FAIL
ORLEANS PARISH	LA	New Orleans-Metairie-Bogalusa, LA	2.3	D	12.3	PASS
CUMBERLAND	ME	Portland-Lewiston-South Portland, ME	1.0	C	11.7	PASS
BALTIMORE CITY	MD	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	20.0	F	16.6	FAIL
HAMPDEN	MA	Springfield, MA	6.3	F	12.5	PASS
SUFFOLK	MA	Boston-Worcester-Manchester, MA-RI-NH	5.3	F	13.9	PASS
WAYNE	MI	Detroit-Warren-Flint, MI	21.7	F	18.2	FAIL
RAMSEY	MN	Minneapolis-St. Paul-St. Cloud, MN-WI	1.8	C	11.6	PASS
ST LOUIS CITY	MO	St. Louis-St. Charles-Farmington, MO-IL	8.3	F	14.7	PASS
JONES	MS	Laurel, MS	0.3	B	14.4	PASS
HARRISON	MS	Gulfport-Biloxi-Pascagoula, MS	4.3	F	12.3	PASS
LINCOLN	MT		6.5	F	15.1	FAIL
DOUGLAS	NE	Omaha-Council Bluffs-Fremont, NE-IA	3.7	F	10.2	PASS
HILLSBOROUGH	NH	Boston-Worcester-Manchester, MA-RI-NH	1.7	C	10.2	PASS
CHESHIRE	NH	Keene, NH	0.3	B	11.6	PASS
CLARK	NV	Las Vegas-Paradise-Pahrump, NV	2.5	D	8.8	PASS
UNION	NJ	New York-Newark-Bridgeport, NY-NJ-CT-PA	13.3	F	15.5	FAIL
DOÑA ANA	NM	Las Cruces, NM	2.7	D	10.4	PASS
BRONX	NY	New York-Newark-Bridgeport, NY-NJ-CT-PA	10.7	F	15.7	FAIL
NEW YORK	NY	New York-Newark-Bridgeport, NY-NJ-CT-PA	4.7	F	17	FAIL
MECKLENBURG	NC	Charlotte-Gastonia-Salisbury, NC-SC	6.0	F	15.3	FAIL
CATAWBA	NC	Hickory-Lenoir-Morganton, NC	3.0	D	15.3	FAIL
CUYAHOGA	OH	Cleveland-Akron-Elyria, OH	20.3	F	18.1	FAIL
LANE	OR	Eugene-Springfield, OR	20.8	F	12.4	PASS
KAY	OK	Ponca City, OK	1.3	C	10.6	PASS
MAYES	OK		1.3	C	11.8	PASS
MUSKOGEE	OK	Muskogee, OK	0.7	B	12.1	PASS
ALLEGHENY	PA	Pittsburgh-New Castle, PA	60.7	F	20.8	FAIL
PROVIDENCE	RI	Boston-Worcester-Manchester, MA-RI-NH	3.7	F	12.4	PASS

Table 4: **(continued)** *Counties with the Worst Particle Pollution ($PM_{2.5}$ 24-Hour and Annual Averages) in Each State*

			Short-Term (24-Hour)		Annual	
County	**ST**[1]	**Metropolitan Statistical Area**	Weighted Average[2]	Grade[3]	Design Value[4]	Pass/ Fail[5]
GREENVILLE	SC	Greenville-Spartanburg-Anderson, SC	5.7	F	15.7	FAIL
SHELBY	TN	Memphis, TN-MS-AR	7.0	F	13.8	PASS
HAMILTON	TN	Chattanooga-Cleveland-Athens, TN-GA	3.0	D	16.1	FAIL
EL PASO	TX	El Paso, TX	6.8	F	*	INC
CACHE	UT	Logan, UT-ID	31.0	F	12.1	PASS
SALT LAKE	UT	Salt Lake City-Ogden-Clearfield, UT	27.7	F	14.7	PASS
FAIRFAX	VA	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	7.0	F	14.1	PASS
SALEM CITY	VA	Roanoke, VA	1.7	C	14.7	PASS
PIERCE	WA	Seattle-Tacoma-Olympia, WA	4.7	F	10.8	PASS
KING	WA	Seattle-Tacoma-Olympia, WA	1.0	C	11.2	PASS
HANCOCK	WV	Weirton-Steubenville, WV-OH	8.3	F	16.6	FAIL
BROOKE	WV	Weirton-Steubenville, WV-OH	4.3	F	16.8	FAIL
MILWAUKEE	WI	Milwaukee-Racine-Waukesha, WI	5.3	F	13.2	PASS
DODGE	WI	Fond du Lac-Beaver Dam, WI	5.3	F	10.8	PASS
WAUKESHA	WI	Milwaukee-Racine-Waukesha, WI	3.7	F	13.5	PASS
FREMONT	WY	Riverton, WY	2	C	8.5	PASS
SHERIDAN	WY	Sheridan, WY	2	C	9.8	PASS

(1) States were not included if respective counties got a grade of B or better for the 24-hour standard and a Passing grade for the annual standard.

(2) The **Weighted Average** was derived by counting the number of days in each unhealthful range (orange, red, purple, maroon) in each year (2003-2005), 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.

(3) Grades are 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+.

(4) The **Design Value** is the calculated concentration of a pollutant based on the form of the National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the standard. The source for the Design Values is EPA, communication from the Office of Air Quality Planning & Standards, Mark Schmidt, October 30, 2006.

(5) Grades are based on EPA's determination of meeting or failing to meet the NAAQS for annual $PM_{2.5}$ levels during 2003-2005. Counties meeting the NAAQS received grades of Pass; counties not meeting the NAAQS received grades of Fail. "INC" indicates incomplete monitoring data.

Table 4a: *Counties with the Worst Ozone Air Pollution in Each State*

County	ST[1]	Metropolitan Statistical Area	Ozone Wgt. Avg.[2]	Grade[3]
JEFFERSON	AL	Birmingham-Hoover-Cullman, AL	3.7	F
MARICOPA	AZ	Phoenix-Mesa-Scottsdale, AZ	8.3	F
CRITTENDEN	AR	Memphis, TN-MS-AR	4.0	F
SAN BERNARDINO	CA	Los Angeles-Long Beach-Riverside, CA	103.3	F
JEFFERSON	CO	Denver-Aurora-Boulder, CO	5.7	F
FAIRFIELD	CT	New York-Newark-Bridgeport, NY-NJ-CT-PA	12.7	F
NEW CASTLE	DE	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	5.8	F
DISTRICT OF COLUMBIA	DC	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	4.0	F
ESCAMBIA	FL	Pensacola-Ferry Pass-Brent, FL	2.7	D
HILLSBOROUGH	FL	Tampa-St. Petersburg-Clearwater, FL	2.7	D
SARASOTA	FL	Sarasota-Bradenton-Venice, FL	2.7	D
FULTON	GA	Atlanta-Sandy Springs-Gainesville, GA-AL	6.5	F
MADISON	IL	St. Louis-St. Charles-Farmington, MO-IL	6.0	F
ALLEN	IN	Fort Wayne-Huntington-Auburn, IN	4.0	F
WYANDOTTE	KS	Kansas City-Overland Park-Kansas City, MO-KS	1.8	C
CAMPBELL	KY	Cincinnati-Middletown-Wilmington, OH-KY-IN C	4.5	F
EAST BATON ROUGE PARISH	LA	Baton Rouge-Pierre Part, LA	13.5	F
HANCOCK	ME		2.3	D
HARFORD	MD	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	10.7	F
BARNSTABLE	MA	Barnstable Town, MA	6.3	F
ALLEGAN	MI	Grand Rapids-Muskegon-Holland, MI	7.0	F
HARRISON	MS	Gulfport-Biloxi-Pascagoula, MS	3.0	D
ST CHARLES	MO	St. Louis-St. Charles-Farmington, MO-IL	7.7	F
CLARK	NV	Las Vegas-Paradise-Pahrump, NV	7.8	F
HILLSBOROUGH	NH	Boston-Worcester-Manchester, MA-RI-NH	2.7	D
CAMDEN	NJ	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	10.5	F
OCEAN	NJ	New York-Newark-Bridgeport, NY-NJ-CT-PA	10.5	F
BERNALILLO	NM	Albuquerque, NM	1.0	C
SUFFOLK	NY	New York-Newark-Bridgeport, NY-NJ-CT-PA	6.5	F
ROWAN	NC	Charlotte-Gastonia-Salisbury, NC-SC	8.0	F
LAKE	OH	Cleveland-Akron-Elyria, OH	6.5	F
TULSA	OK	Tulsa-Bartlesville, OK	5.0	F
PHILADELPHIA	PA	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6.7	F
WASHINGTON	RI	Boston-Worcester-Manchester, MA-RI-NH	6.0	F
RICHLAND	SC	Columbia-Newberry, SC	4.3	F
BLOUNT	TN	Knoxville-Sevierville-La Follette, TN	6.0	F
HARRIS	TX	Houston-Baytown-Sugar Land, TX	42.8	F
SALT LAKE	UT	Salt Lake City-Ogden-Clearfield, UT	3.7	F
FAIRFAX	VA	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8.7	F
KING	WA	Seattle-Tacoma-Olympia, WA	1.0	C
OHIO	WV	Wheeling, WV-OH	3.2	D
MILWAUKEE	WI	Milwaukee-Racine-Waukesha, WI	7.8	F

(1) States were not included if all monitored counties got a grade of B or higher.

(2) The **Weighted Average** was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1 for orange, 1.5 for red, 2.0 for purple), and calculating the average.

(3) **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+.

Table 5: *Cleanest U.S. Cities for Short-term Particle Pollution (24-Hour $PM_{2.5}$)*[1]

Metropolitan Statistical Area	Population
Amarillo, TX	238,664
Bismarck, ND	99,346
Cheyenne, WY	85,163
Colorado Springs, CO	587,500
Corpus Christi-Kingsville, TX	444,727
Fargo-Wahpeton, ND-MN	208,999
Farmington, NM	126,208
Flagstaff, AZ	123,866
Fort Collins-Loveland, CO	271,927
Jackson-Humboldt, TN	159,005
Longview-Marshall, TX	264,960
Lubbock-Levelland, TX	281,757
Miami-Fort Lauderdale-Miami Beach, FL	5,422,200
Midland-Odessa, TX	246,710
Pueblo, CO	151,322
Rapid City, SD	118,203
Redding, CA	179,904
Salinas, CA	412,104
San Luis Obispo-Paso Robles, CA	255,478
Santa Barbara-Santa Maria-Goleta, CA	400,762
Santa Fe-Espanola, NM	181,683
Shreveport-Bossier City-Minden, LA	424,589
Sioux Falls, SD	207,918
Tucson, AZ	924,786
Valdosta, GA	124,838

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

Table 5a: *Top 25 Cleanest U.S. Cities for Long-term Particle Pollution (Annual $PM_{2.5}$)*[1]

2007 Rank[2]	Design Value[3]	Metropolitan Statistical Area	Population
1	4.7	Cheyenne, WY	85,163
2	4.8	Santa Fe-Espanola, NM	181,683
3	5.2	Honolulu, HI	905,266
4	6	Great Falls, MT	79,569
5	6.1	Farmington, NM	126,208
6	6.2	Flagstaff, AZ	123,866
6	6.2	Tucson, AZ	924,786
8	6.6	Anchorage, AK	351,049
8	6.6	Bismarck, ND	99,346
10	6.9	Albuquerque, NM	797,940
11	7	Salinas, CA	412,104
12	7.2	Pueblo, CO	151,322
13	7.3	Fort Collins-Loveland, CO	271,927
14	7.4	Rapid City, SD	118,203
14	7.4	Redding, CA	179,904
16	7.6	Duluth, MN-WI	275,413
16	7.6	Phoenix-Mesa-Scottsdale, AZ	3,865,077
16	7.6	Pocatello, ID	85,908
19	7.7	Fargo-Wahpeton, ND-MN	208,999
19	7.7	Midland-Odessa, TX	246,710
21	7.8	Miami-Fort Lauderdale-Miami Beach, FL	5,422,200
22	7.9	Billings, MT	146,593
23	8	Colorado Springs, CO	587,500
23	8	San Luis Obispo-Paso Robles, CA	255,478
25	8.1	Reno-Sparks-Fernley, NV	441,461
25	8.1	Palm Bay-Melbourne-Titusville, FL	531,250

(1) This list represents cities with the lowest levels of annual $PM_{2.5}$ air pollution.

(2) Cities are ranked 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 NAAQS, and is used by EPA to determine whether or not the air quality in a county meets the standard. The source for the Design Values is EPA, communication from the Office of Air Quality Planning & Standards, Mark Schmidt, October 30, 2006.

Table 5b: *Cleanest U.S. Cities for Ozone Air Pollution*[1]

Metropolitan Statistical Area	Population	Metropolitan Statistical Area	Population
Ames-Boone, IA	106,554	Lincoln, NE	281,553
Bellingham, WA	183,471	Logan, UT-ID	110,426
Bloomington-Normal, IL	159,013	Medford, OR	195,322
Boise City-Nampa, ID	544,201	Montgomery-Alexander City, AL	409,123
Brunswick, GA	98,433	Mount Vernon-Anacortes, WA	113,171
Burlington-South Burlington, VT	205,230	Naples-Marco Island, FL	307,242
Carson City, NV	56,062	Omaha-Council Bluffs-Fremont, NE-IA	849,248
Cedar Rapids, IA	246,412	Palm Bay-Melbourne-Titusville, FL	531,250
Champaign-Urbana, IL	215,742	Peoria-Canton, IL	406,869
Davenport-Moline-Rock Island, IA-IL	376,309	Port St. Lucie-Fort Pierce, FL	381,033
Fort Polk South-De Ridder, LA	83,307	Portland-Vancouver-Beaverton, OR-WA	2,095,861
Decatur, IL	110,167	Prescott, AZ	198,701
Deltona-Daytona Beach-Palm Coast, FL	566,465	Rapid City, SD	118,203
Des Moines-Newton-Pella, IA	593,112	Rockford-Freeport-Rochelle, IL	441,433
Duluth, MN-WI	275,413	Salem, OR	375,560
Eugene-Springfield, OR	335,180	Salinas, CA	412,104
Fargo-Wahpeton, ND-MN	208,999	Savannah-Hinesville-Fort Stewart, GA	382,510
Farmington, NM	126,208	Sioux Falls, SD	207,918
Gadsden, AL	103,189	Spokane, WA	440,706
Gainesville, FL	240,254	Springfield, IL	205,527
Honolulu, HI	905,266	Waterloo-Cedar Falls, IA	161,897
Jackson-Yazoo City, MS	550,775	Wilmington, NC	315,144
Laredo, TX	224,695		

(1) This list represents cities with no monitored ozone air pollution in unhealthful ranges.

Table 6: *Cleanest Counties for Short-term Particle Pollution (24-Hour $PM_{2.5}$)*

County	ST	MSAs and Respective CSA[2]
BALDWIN	AL	Mobile-Daphne-Fairhope, AL
POLK	AR	
COCHISE	AZ	Sierra Vista-Douglas, AZ
COCONINO	AZ	Flagstaff, AZ
GILA	AZ	Payson, AZ
PIMA	AZ	Tucson, AZ
CALAVERAS	CA	
LAKE	CA	Clearlake, CA
MENDOCINO	CA	Ukiah, CA
MONO	CA	
MONTEREY	CA	Salinas, CA
NEVADA	CA	Sacramento—Arden-Arcade—Truckee, CA-NV
SAN LUIS OBISPO	CA	San Luis Obispo-Paso Robles, CA
SANTA BARBARA	CA	Santa Barbara-Santa Maria-Goleta, CA
SANTA CRUZ	CA	San Jose-San Francisco-Oakland, CA
SHASTA	CA	Redding, CA
ARCHULETA	CO	
BOULDER	CO	Denver-Aurora-Boulder, CO
DELTA	CO	
EL PASO	CO	Colorado Springs, CO
ELBERT	CO	Denver-Aurora-Boulder, CO
LARIMER	CO	Fort Collins-Loveland, CO
PUEBLO	CO	Pueblo, CO
ROUTT	CO	
SAN MIGUEL	CO	
WELD	CO	Denver-Aurora-Boulder, CO
BROWARD	FL	Miami-Fort Lauderdale-Miami Beach, FL
PALM BEACH	FL	Miami-Fort Lauderdale-Miami Beach, FL
HOUSTON	GA	Macon-Warner Robins-Fort Valley, GA
LOWNDES	GA	Valdosta, GA
MAUI	HI	Kahului-Wailuku, HI
BOUNDARY	ID	
IDAHO	ID	
CADDO PARISH	LA	Shreveport-Bossier City-Minden, LA
CONCORDIA PARISH	LA	Natchez, MS-LA
HANCOCK	ME	
MISSAUKEE	MI	Cadillac, MI
CASS	MN	Brainerd, MN
RANKIN	MS	Jackson-Yazoo City, MS
DUPLIN	NC	
MONTGOMERY	NC	
BILLINGS	ND	Dickinson, ND
BURKE	ND	
BURLEIGH	ND	Bismarck, ND
CASS	ND	Fargo-Wahpeton, ND-MN
MC KENZIE	ND	
MERCER	ND	
HALL	NE	Grand Island, NE
SCOTTS BLUFF	NE	Scottsbluff, NE
GRAFTON	NH	Claremont-Lebanon, NH-VT
CHAVES	NM	Roswell, NM
GRANT	NM	Silver City, NM
SAN JUAN	NM	Farmington, NM
SANTA FE	NM	Santa Fe-Espanola, NM
GARFIELD	OK	Enid, OK
COLUMBIA	OR	Portland-Vancouver-Beaverton, OR-WA
BROOKINGS	SD	Brookings, SD
BROWN	SD	Aberdeen, SD
JACKSON	SD	
MINNEHAHA	SD	Sioux Falls, SD
PENNINGTON	SD	Rapid City, SD
MADISON	TN	Jackson-Humboldt, TN
ROANE	TN	Knoxville-Sevierville-La Follette, TN
BREWSTER	TX	
ECTOR	TX	Midland-Odessa, TX
GALVESTON	TX	Houston-Baytown-Huntsville, TX
GREGG	TX	Longview-Marshall, TX
HARRISON	TX	Longview-Marshall, TX
JEFF DAVIS	TX	
KAUFMAN	TX	Dallas-Fort Worth, TX
KLEBERG	TX	Corpus Christi-Kingsville, TX
LUBBOCK	TX	Lubbock-Levelland, TX
NUECES	TX	Corpus Christi-Kingsville, TX
POTTER	TX	Amarillo, TX
ASHLAND	WI	
TAYLOR	WI	
VILAS	WI	
CAMPBELL	WY	Gillette, WY
CONVERSE	WY	
LARAMIE	WY	Cheyenne, WY

(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 unhealthful $PM_{2.5}$ levels.

(2) MSA and CSA are terms used by the U.S. Office of Management and Budget for statistical purposes. MSA stands for Metropolitan Statistical Area. CSA stands for Combined Statistical Area, which may include multiple metropolitan statistical areas and individual counties.

Table 6a: *Top 25 Cleanest Counties for Long-term Particle Pollution (Annual $PM_{2.5}$)*[1]

2007 Rank[2]	County	State	Design Value[3]
1	CONVERSE	WY	3.6
2	ELBERT	CO	4.4
3	LAKE	CA	4.6
4	BILLINGS	ND	4.7
4	LARAMIE	WY	4.7
6	SAN MIGUEL	CO	4.8
6	SANTA FE	NM	4.8
8	INYO	CA	4.9
8	MAUI	HI	4.9
10	MC KENZIE	ND	5.1
11	HONOLULU	HI	5.2
12	JACKSON	SD	5.5
13	CASS	MN	5.6
14	SCOTTS BLUFF	NE	5.7
15	BURKE	ND	5.9
15	GRANT	NM	5.9
17	CASCADE	MT	6
17	ASHLAND	WI	6
19	ESSEX	NY	6.1
19	MERCER	ND	6.1
19	SAN JUAN	NM	6.1
22	COCONINO	AZ	6.2
22	PIMA	AZ	6.2
22	HANCOCK	ME	6.2
25	CAMPBELL	WY	6.3

(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 NAAQS. EPA uses the design value to determine if a county meets the health-based standard. The source for the Design Values is EPA, communication from the Office of Air Quality Planning & Standards, Mark Schmidt, October 30, 2006.

Table 6b: *Cleanest Counties for Ozone Air Pollution*[1]

County	ST	Metropolitan Statistical Area
ELMORE	AL	Montgomery-Alexander City, AL
ETOWAH	AL	Gadsden, AL
MONTGOMERY	AL	Montgomery-Alexander City, AL
SUMTER	AL	
YUKON-KOYUKUK BOROUGH	AK	
COCHISE	AZ	
NAVAJO	AZ	
YAVAPAI	AZ	Prescott, AZ
COLUSA	CA	
GLENN	CA	
LAKE	CA	
MARIN	CA	San Jose-San Francisco-Oakland, CA
MENDOCINO	CA	
MONTEREY	CA	Salinas, CA
NAPA	CA	San Jose-San Francisco-Oakland, CA
PLUMAS	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
ADAMS	CO	Denver-Aurora-Boulder, CO
LA PLATA	CO	
MONTEZUMA	CO	
ALACHUA	FL	Gainesville, FL
BAKER	FL	Jacksonville, FL
BREVARD	FL	Palm Bay-Melbourne-Titusville, FL
BROWARD	FL	Miami-Fort Lauderdale-Miami Beach, FL
COLLIER	FL	Naples-Marco Island, FL
COLUMBIA	FL	
HIGHLANDS	FL	
OSCEOLA	FL	Orlando-The Villages, FL
PALM BEACH	FL	Miami-Fort Lauderdale-Miami Beach, FL
PINELLAS	FL	Tampa-St. Petersburg-Clearwater, FL
ST. LUCIE	FL	Port St. Lucie-Fort Pierce, FL
SEMINOLE	FL	Orlando-The Villages, FL
VOLUSIA	FL	Deltona-Daytona Beach-Palm Coast, FL
CHATHAM	GA	Savannah-Hinesville-Fort Stewart, GA
GLYNN	GA	Brunswick, GA
HONOLULU	HI	Honolulu, HI
ADA	ID	Boise City-Nampa, ID
BUTTE	ID	
CANYON	ID	Boise City-Nampa, ID
ELMORE	ID	
ADAMS	IL	
CHAMPAIGN	IL	Champaign-Urbana, IL
CLARK	IL	
EFFINGHAM	IL	
HAMILTON	IL	
MCLEAN	IL	Bloomington-Normal, IL
MACON	IL	Decatur, IL
PEORIA	IL	Peoria-Canton, IL
RANDOLPH	IL	
ROCK ISLAND	IL	Davenport-Moline-Rock Island, IA-IL
SANGAMON	IL	Springfield, IL
WINNEBAGO	IL	Rockford-Freeport-Rochelle, IL
BREMER	IA	Waterloo-Cedar Falls, IA
HARRISON	IA	Omaha-Council Bluffs-Fremont, NE-IA
LINN	IA	Cedar Rapids, IA
MONTGOMERY	IA	

Table 6b: (continued) *Cleanest Counties for Ozone Air Pollution*[1]

County	ST	Metropolitan Statistical Area
PALO ALTO	IA	
POLK	IA	Des Moines-Newton-Pella, IA
SCOTT	IA	Davenport-Moline-Rock Island, IA-IL
STORY	IA	Ames-Boone, IA
WARREN	IA	Des Moines-Newton-Pella, IA
LINN	KS	Kansas City-Overland Park-Kansas City, MO-KS
SUMNER	KS	Wichita-Winfield, KS
TREGO	KS	
BELL	KY	
HARDIN	KY	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN
HENDERSON	KY	Evansville, IN-KY
PERRY	KY	
PIKE	KY	
PULASKI	KY	
TRIGG	KY	Clarksville, TN-KY
WARREN	KY	Bowling Green, KY
BEAUREGARD PARISH	LA	Fort Polk South-De Ridder, LA
ORLEANS PARISH	LA	New Orleans-Metairie-Bogalusa, LA
CUMBERLAND	ME	Portland-Lewiston-South Portland, ME
OXFORD	ME	
CARLTON	MN	Duluth, MN-WI
GOODHUE	MN	Minneapolis-St. Paul-St. Cloud, MN-WI
LAKE	MN	
OLMSTED	MN	Rochester, MN
ST LOUIS	MN	Duluth, MN-WI
STEARNS	MN	Minneapolis-St. Paul-St. Cloud, MN-WI
WASHINGTON	MN	Minneapolis-St. Paul-St. Cloud, MN-WI
BOLIVAR	MS	
HINDS	MS	Jackson-Yazoo City, MS
LEE	MS	
FLATHEAD	MT	
DOUGLAS	NE	Omaha-Council Bluffs-Fremont, NE-IA
LANCASTER	NE	Lincoln, NE
WHITE PINE	NV	
CARSON CITY	NV	Carson City, NV
BELKNAP	NH	Boston-Worcester-Manchester, MA-RI-NH
CHESHIRE	NH	
GRAFTON	NH	Claremont-Lebanon, NH-VT
EDDY	NM	
SANDOVAL	NM	Albuquerque, NM
SAN JUAN	NM	Farmington, NM
AVERY	NC	
HAYWOOD	NC	Asheville-Brevard, NC
NEW HANOVER	NC	Wilmington, NC
SWAIN	NC	
BILLINGS	ND	
CASS	ND	Fargo-Wahpeton, ND-MN
DUNN	ND	
MC KENZIE	ND	
MERCER	ND	
OLIVER	ND	
PITTSBURG	OK	
CLACKAMAS	OR	Portland-Vancouver-Beaverton, OR-WA
COLUMBIA	OR	Portland-Vancouver-Beaverton, OR-WA
JACKSON	OR	Medford, OR
LANE	OR	Eugene-Springfield, OR
MARION	OR	Salem, OR
MULTNOMAH	OR	Portland-Vancouver-Beaverton, OR-WA
AIKEN	SC	Augusta-Richmond County, GA-SC

Table 6b: (continued) *Cleanest Counties for Ozone Air Pollution*[1]

County	ST	Metropolitan Statistical Area
BARNWELL	SC	
BERKELEY	SC	Charleston-North Charleston, SC
COLLETON	SC	
WILLIAMSBURG	SC	
JACKSON	SD	
MINNEHAHA	SD	Sioux Falls, SD
PENNINGTON	SD	Rapid City, SD
BREWSTER	TX	
WEBB	TX	Laredo, TX
CACHE	UT	Logan, UT-ID
SAN JUAN	UT	
CHITTENDEN	VT	Burlington-South Burlington, VT
ROCKBRIDGE	VA	
CLALLAM	WA	
CLARK	WA	Portland-Vancouver-Beaverton, OR-WA
KLICKITAT	WA	
LEWIS	WA	
SKAGIT	WA	Mount Vernon-Anacortes, WA
SPOKANE	WA	Spokane, WA
THURSTON	WA	Seattle-Tacoma-Olympia, WA
WHATCOM	WA	Bellingham, WA
FLORENCE	WI	
ONEIDA	WI	
SAUK	WI	Madison-Baraboo, WI
VILAS	WI	
TETON	WY	

(1) This list represents counties with no monitored ozone air pollution in unhealthful ranges.

Health Effects of Ozone and Particle Pollution

You and your children are sitting in traffic behind a large truck with black fumes spewing from the tailpipe. Ever wonder just what that exhaust is doing to you? To your kids? That black plume is more complex—and more dangerous—than you might think. New research explains why we must do more to clean up the air.

New studies are confirming that not only can that black plume of smoke make you cough and blink, but it can do much worse—it could take months to years off your life. It can harm your children's lungs—for life. As you stare at that dark and gritty smoke, be aware that you can't actually see all its dangers.

Spewing out are some of the raw ingredients for ozone and particle pollution, the most widespread and deadly types of air pollution. Scientists keep finding out more about how dangerous they are.

What Is Ozone?

Ozone (O_3) is an extremely reactive gas molecule composed of three oxygen atoms. It is the primary ingredient of smog air pollution and is very harmful to breathe. Ozone essentially 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 anything but beneficial. It causes serious health problems.

Where Does Ozone Come From?

What you see coming out of the tailpipe on that truck isn't ozone, but the raw ingredients for making ozone. Like some types of particle pollution, ozone is formed by chemical reactions in the atmosphere from two 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 or coal are burned or when fossil fuel-based chemicals, such as paints, evaporate. When they come in contact with both heat and sunlight, these molecules combine and form ozone. NO_X is emitted from power plants, motor vehicles and other sources of high-heat combustion. VOCs are emitted from motor vehi-

cles, chemical plants, refineries, factories, gas stations, paints and other sources. The recipe for ozone is simple and, like any recipe, the ingredients must all be present and in the right proportions to make the final product.

NO_X + VOC + Heat + Sunlight = Ozone

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 evaporating gasoline vapors turn into ozone in the heat and sun. If you take away the sunlight, then ozone doesn't form, so refilling your gas tank after dark is better on high ozone days. In the same way, if we reduce the chemical raw ingredients (NO_X and VOCs) in the right proportions, ozone doesn't form. Since we can't control sunlight and heat, we must reduce the chemical raw ingredients if we want to reduce ozone.

How Ozone Pollution Harms Your Health

Studies show ozone can shorten lives.

Scientists have studied the effects of ozone on health for decades. Time and time again research has 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 investigations documented that short-term exposure to ozone can shorten lives. Numerous earlier studies had linked short-term exposure to ozone to an increased risk of premature death, so these probes focused directly on that question. 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 below the current national standard, 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.[1] Another study, published the same week, looked at 23 European cities and found similar effects on mortality from short-term exposure to ozone.[2]

Confirmation came in the summer of 2005. EPA commissioned three groups of researchers working independently to review all the research surrounding deaths associated with short-term high levels of ozone. The three teams—at Harvard, Johns Hopkins and New York University—used different approaches and conducted additional research, all published in the journal *Epidemiology*. All three studies reported a small but robust association between daily ozone levels and increased deaths.[3] Writing a commentary on these reviews, David Bates, MD, explained how these premature deaths could occur:

> *"Ozone is capable of causing inflammation in the lung at lower concentrations than any other gas. Such an effect would be a hazard to anyone with heart failure and pulmonary congestion, and would worsen the function of anyone with advanced lung disease."*[4]

Groups at risk

Five groups of people are especially vulnerable to the effects of breathing ozone: Children, senior citizens, people who work or exercise outdoors, people with preexisting respiratory disease (e.g., asthma or COPD) and "responders" who are otherwise healthy but have an enhanced reaction to ozone.

Ozone's effect on an individual's health can depend on many factors, including whether they are part of a susceptible population group, how much ozone is in the air, how rapidly they breathe and how long they are exposed to the ozone.

Other risks from breathing 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. These immediate problems are:

- shortness of breath
- chest pain when inhaling deeply
- wheezing and coughing
- increased susceptibility to respiratory infections

Exposure to ozone increases:

- risk of premature mortality;
- pulmonary inflammation;
- the risk of asthma attacks;
- the need for people with lung diseases, such as asthma or chronic obstructive pulmonary disease (COPD), to receive medical treatment and to go to the hospital.[5]

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.[6]

Short-term exposure to ozone also has been linked to aggravation of chronic obstructive pulmonary disease (COPD).[7] Repeated inflammation due to exposure to ozone over a period of years can lead to a chronic "stiffening" of the lungs.

Inhaling ozone may affect the heart as well as the lungs. One new study linked exposure 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.[8] 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.

Particle Pollution

Remember that dirty truck exhaust?

The dirty, smoky part of that stream of exhaust is made of particle pollution. More new evidence shows that particle pollution—such as that coming from that exhaust smoke—can shorten lives, contribute to heart disease, lung cancer and asthma attacks and 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 be seen only with an electron microscope. Because of their small size, you can't see the individual particles. You can see only 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.

Some particles can pass into the blood, like oxygen does.

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

Researchers categorize particles according to size, grouping them as coarse, fine and ultrafine. Coarse particles fall between 2.5 microns and 10 microns in diameter and are called $PM_{10\text{-}2.5}$. Fine particles are 2.5 microns in diameter or smaller and are called $PM_{2.5}$. Ultrafine particles are smaller than 0.1 micron in diameter[10] and are small enough to pass through the lung tissue into the bloodstream, 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 also can be composed of many complex 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."[11] The mixtures differ between the eastern and western

United States. For example, the eastern states have more sulfate particles than the western, largely due to the high levels of sulfur dioxide emitted by large, coal-fired power plants. In contrast, in southern California, nitrate particles from motor vehicle exhaust form a larger proportion of the unhealthful mix.[12]

Where Does Particle Pollution Come From?

Particle pollution is so complex in part because its components come from many sources. It is generally produced through two separate processes: mechanical and chemical.

The simpler process is mechanical, which means the breaking down of bigger bits into smaller bits with the material remaining essentially the same, only becoming smaller. Mechanical processes primarily form coarse particles.[13] Dust storms, construction and demolition, mining operations, agriculture, and coal and oil combustion are among the activities that produce coarse particles.

In 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 simply vaporize and then condense to become a particle of the same chemical compound. Or they can react with other gases or particles in the atmosphere to form a particle of a different chemical compound. Particles formed by this latter process come from the reaction of elemental carbon (soot), heavy metals, sulfur dioxide (SO_2), nitrogen oxides (NO_X) and volatile organic compounds with water and other compounds in the atmosphere.[14] Burning fossil fuels in factories, power plants, steel mills, smelters, diesel- and gasoline-powered motor vehicles (cars and trucks) and equipment generates a large part of the raw materials for fine particles. So does burning wood in residential fireplaces and wood stoves and burning agricultural fields or forests.

What Can Particles Do to Your Health?

That irritating dark smoke coming out of the truck's tailpipe is probably directly emitting carbon particles and the raw ingredients for other fine particles into the air. That dark stream mixes with exhaust from other cars, trucks and heavy equipment as well as the exhaust plumes from power plants, factories and many other sources to create the particle pollution problem we have in many places in the United States today.

Particle pollution can damage the body in ways similar to cigarette smoking, researchers have discovered. In a 2005 review of the research on how particles cause harm, researchers found that the body responds to particles in ways similar as its response to cigarette smoke. This finding helps explain why particle pollution can cause heart attacks and strokes.[15]

Study upon Study upon Study…

Studies showing the dangers of particle pollution are pouring in by the thousands. More than 2,000 peer-reviewed studies on the subject have been published since

1996, when the EPA last reviewed the standards for particle pollution. The new studies validate the research done before 1996, showing the strong relationship between particle pollution, illness, hospitalization and premature death.[16]

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.[17]

Short-Term Exposure Can Be Deadly

First and foremost, short-term exposure to particle pollution can kill. Deaths can occur on the very day that particle levels are high or within one to two months afterward. Unfortunately, particle pollution does not just make people die a few days earlier than they might otherwise; these are deaths that would not have occurred if the air were cleaner.[18] Particle pollution also diminishes lung function, causes greater use of asthma medications and increased rates of school absenteeism, emergency room visits and hospital admissions. Other adverse effects can be coughing, wheezing, cardiac arrhythmias and heart attacks. According to the findings from some of the latest studies, short-term increases in particle pollution have been linked to:

- death from respiratory and cardiovascular causes, including strokes;[19,20,21,22]
- increased mortality in infants and young children;[23]
- increased numbers of heart attacks, especially among the elderly and in people with heart conditions;[24]
- inflammation of lung tissue in young, healthy adults;[25]
- increased hospitalization for cardiovascular disease, including strokes and congestive heart failure;[26,27,28]
- increased emergency room visits for patients suffering from acute respiratory ailments;[29]
- increased hospitalization for asthma among children; and[30,31,32]
- increased severity of asthma attacks in children.[33]

Year-Round Exposure

Breathing high levels of particle pollution day in and day out also can be deadly, as landmark studies in the 1990s showed conclusively.[34] Chronic exposure to particle pollution can shorten life by one to three years.[35] Other impacts range from premature births to serious respiratory disorders, even when the particle levels are very low.

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

- increased hospitalization for asthma attacks for children living near roads with heavy truck or trailer traffic;[36,37]
- slowed lung function growth in children and teenagers;[38,39]
- significant damage to the small airways of the lungs;[40]
- increased risk of dying from lung cancer; and[41]
- increased risk of death from cardiovascular disease.[42]

Alarmingly, the risks may be even greater than previously thought. Earlier studies of the long-term health risks of air pollution relied on estimates of the average exposure to people in the community. New evidence from studies published since 2005 suggests that those estimates may be far too low. Tracking 23,000 residents of Los Angeles and looking at data from monitors nearest to these, researchers found that the risk of premature death from fine particle pollution may be *three times higher* than previously reported.[43] New research into the health risks of 65,000 women over age 50 found that those who lived in areas with higher levels of particle pollution faced a much greater risk of dying from heart disease than had been previously estimated. Even women who lived within the same city faced differing levels of risk depending on the annual levels of pollution in their neighborhoods.[44]

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.[45]

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.[46] In addition, the body's defenses that help adults fight off infections are still developing in young bodies.[47] Children have more respiratory

infections than adults, which also seems to increase their susceptibility to air pollution.[48]

Furthermore, children don't behave like adults, which also affects their vulnerability. They are outside for longer periods and are usually more active when outdoors. Consequently, they inhale more polluted outdoor air than adults typically do.[49]

Major Reviews Confirm Harm to Children

The effects of air pollution on children are striking. In 2004, two major analyses concluded that air pollution is especially harmful to children.

Scientists concluded that particle pollution causes infant deaths.

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 caused 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);
- aggravation 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 tract infections.[50]

The American Academy of Pediatrics published a statement on the dangers of outdoor air pollution to children's health, pointing out the special differences for children.[51] The Academy reported many of the same health effects cited by the WHO study, but also focused on the sources common to far too many children. Both the WHO monograph and the Academy statement highlighted recent studies showing that children living near highly 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 children riding in a car.[52]

New 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.[53] 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.[54] 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.[55]

Air Pollution Linked to Asthma Attacks, New Onset of Asthma

Researchers from Yale University studied children with asthma whose mothers had tracked their symptoms on a daily basis. The study, published in the *Journal of the American Medical Association,* found that children with asthma were particularly vulnerable to ozone even at levels below the EPA's current eight-hour ozone standard.[56] An accompanying editorial warned, "Air pollution is one of the most underappreciated contributors to asthma exacerbation."[57]

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.[58]

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 an increased risk of having underdeveloped lungs, that 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.[59]

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.[60] 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.[61]

Cleaning Up Pollution Can Reduce Risk to Children

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

Changes in air pollution from the reunification of Germany proved a real-life laboratory. Both East and West Germany had different levels and sources of particles. Outdoor particle levels were much higher in East Germany, where they came from factories and homes. West Germany had higher concentrations of traffic-generated particles. After reunification, emissions from the factories and homes dropped, but traffic increased. A German study explored the impact on the lungs

of six-year olds from both East and West Germany. Total lung capacity improved with the lower particle levels. However, for those children living near busy roads, the increased pollution from the increased traffic kept them from benefiting from the overall cleaner air.[62]

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.[63]

In this country, a 2001 study of the 1996 Olympics in Atlanta, Georgia remains one of the most interesting cases. Atlanta is a prime example of an urban area with a history of serious ozone problems. The determined efforts of the city to reduce traffic during the Olympics succeeded in not just reducing congestion, but in improving the health of children with asthma. Concerned about an expected traffic nightmare, the city brought in more buses and 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 that researchers determined that weather was not the determining factor in the reduced ozone levels.[64]

Living Near Highways May Be Especially Dangerous

One more warning about the exhaust from that truck we talked about earlier: 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.

Among the most vulnerable are children and teenagers. In southern California, a 2007 study found that air pollution may limit the capacity of the lungs in 10- to 18-year-olds who live within about one-third of a mile of a freeway. Such changes to lung function can reduce their capacity to breathe for the rest of their lives and increase their risk of serious lung diseases. Other recent research found that children who live near freeways had a higher risk of being diagnosed with asthma.[65,66] However, children are certainly not the only ones at risk. Studies have found increased risk of premature death to those who live near a major highway or an urban road.[67] Another study found an increase in risk of heart attacks from being in traffic, whether driving or taking public transportation.[68]

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
- Eliminate indoor smoking
- Reduce the use of fireplaces and woodburning 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.

Living near busy freeway can affect a child's ability to breathe—maybe for life.

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Protecting the Nation from Air Pollution

Large areas in the nation still have air pollution levels that hurt too many people. Scientists agree that the most widespread air pollutant, ozone smog, threatens public health at levels deemed to be safe just 10 years ago.

Congress requires the EPA to take specific steps to protect all Americans from those dangers. First step—strengthen the official limit on the amount of ozone smog in the air. Second step—help the states clean up pollution by requiring cleaner diesel engines and power plants. Despite failing to set safe levels for particle pollution last year, the EPA still has opportunities to protect public health—if they will take them.

EPA Should Strengthen the Ozone Standard

In October 2006, 22 of the nation's top scientists sent a letter to the U.S. Environmental Protection Agency on ozone air pollution, commonly known as smog. They had served since 2005 on an elite panel, known as the Clean Air Scientific Advisory Committee, to review the most up-to-date research on ozone science. They had the formal responsibility both to tell the EPA what they thought the research showed about the health effects and to advise where the official limits, called the National Ambient Air Quality Standards, should be set on ozone. The Administrator of EPA must set the level of ozone that he considers safe for the public to breathe, including those people most affected by its harm. In effect, science advisors help the Administrator determine the goal for all the states to meet to have clean air.

Scientists agree: ozone is more dangerous than previously accepted.

The EPA last reviewed and tightened the ozone standard in 1997. But new research has revealed that ozone may be more dangerous than had been thought: it might even be deadly.

What the scientists told the EPA could not be clearer. "[The 1997 ozone standard] needs to be substantially reduced to protect human health," they wrote in an October 2006 letter, "particularly in sensitive subpopulations" such as children, people with lung disease and seniors. "There is no scientific justification for retaining the existing [standard]."[1] To drive home the point, they repeated this statement several times.

EPA's career staff scientists agreed with the Scientific Advisory Committee. In a report issued in late January 2007, the staff scientists recommended that the

Administrator consider setting the limit at levels well below the current standards, which are 0.08 parts per million of ozone.[2]

EPA must adopt more protective standards for ozone

The Clean Air Act gives the EPA Administrator the authority to decide where to set the standards but requires that he set them based solely on the requirement to protect public health with "an adequate margin of safety." In 1997 polluters challenged that authority all the way to the U.S. Supreme Court. In 2002 the Court ruled unanimously that public health was the sole basis for setting the standard.[3]

EPA should set an ozone standard that protects public health.

On or before June 20, 2007, the EPA Administrator is scheduled to propose an ozone standard; he will then issue a final decision on the standard by March 12, 2008. This deadline is set as a requirement of the successful legal action that the American Lung Association took in 2002 to force the EPA to start the current review process. The Lung Association has been shepherding the review step-by-step since the EPA originally agreed to a schedule in 2003 to complete the review. Over the next year, the Lung Association will take every step possible to persuade the Administrator to set an ozone standard that fully protects public health.

EPA failed to set protective particle standards

Just last year, the EPA completed a similar process for fine particle pollution, $PM_{2.5}$, also a result of the Lung Association's legal challenges. Unfortunately, the Administrator failed to adequately protect public health in setting the standards for fine particle pollution. The Administrator did tighten the daily standard for fine particle pollution, although the Lung Association had urged an even more protective standard.[4] In his most far-reaching and disappointing decision, the Administrator retained the weak 1997 standard for year-round exposure to this deadly air pollutant, despite clear evidence of harm at lower levels. The American Lung Association, several environmental groups and 13 states sued the EPA in December 2006 to force a review of that decision.

Why the standards matter

Although they seem like highly technical jumbles of numbers and terminology, the national air quality standards make a difference in the lives of millions of Americans.

The EPA uses the national air quality standards to officially determine which counties have too much air pollution. The Clean Air Act gives the states the responsibility for cleaning up and making sure pollution levels in each county stay under these limits. The states draw up plans to cut pollution, working with the public, industries, businesses and local governments to find the best ways to remove pollution in their area. Some states, such as California and some northeast states, have taken aggressive steps to address large sources of pollution, e.g., regulating emissions from automobiles or emerging sources such as outdoor wood boilers.

Thanks to this process, emissions in the U.S. have dropped by approximately 53 percent since 1970 when Congress wrote the Clean Air Act. These reductions have not hampered growth in the economy or even in the number of miles people drive their cars. These reductions came despite the population's growing by 42 percent as well.[5] But the overwhelming evidence of the harm from air pollution compels us to do more to protect the millions of Americans who still breathe unhealthful levels where they live, work and play.

Cleaner air helps those most at risk

Cleaner air serves everyone, but millions benefit more because they are more easily harmed by pollution. One study shows how quickly improving air quality helps some of those most at risk. In 1996 Atlanta, Georgia, hosted the Olympic Games for the first time. To reduce the city's notorious traffic jams during the games, local officials encouraged people to work at home, carpool, and take advantage of the temporarily expanded public transit network. One unanticipated effect was that the city's high ozone levels dropped during those two hot summer weeks by over 25 percent. Researchers studied hospital and Medicaid records and found that children with asthma—especially poor children—had markedly fewer problems with their asthma that required medical attention during those two weeks. Hospital admissions for children with asthma on Medicaid dropped by as much as 40 percent.[6] When the Games ended, traffic jams returned to normal levels. Unfortunately, so did ozone levels and hospital visits due to asthma.

Ways to Clean Up Our Air

Clean up coal-fired power plants

Old coal-fired power plants are among the biggest industrial polluters, especially in the eastern half of the United States. The toll of death, disease and environmental destruction caused by coal-fired power plant pollution continues to mount. An analysis released in 2004 attributed 24,000 premature deaths *each year* to power plant pollution. In addition, the research estimates that over 550,000 asthma attacks, 38,000 heart attacks and 12,000 hospital admissions are caused annually by power plant pollution.[7]

Cleaning up power plants cleans up air pollution.

Cleaning up power plants does work. In 1998, the EPA required 13 eastern states to greatly reduce the tons of nitrogen oxides from their power plants and industries in order to prevent the spread of emissions across their borders. EPA examined what happened to ozone levels between 2002 and 2005, after power plants had installed the required equipment in 11 of the 13 states as mandated by May 31, 2004 (two additional states will proceed in 2007). EPA examined the results of these clean up measures in a study that controlled for changes in ozone levels due to weather. EPA found that before these measures were implemented, ozone levels dropped about one percent per year in most states. After 2002, ozone levels dropped about five percent per year on average in both 2002 and 2003.[8]

Unfortunately, actual ozone levels rose again in 2005 with that summer's warmer weather and an increased demand for electricity, with actual levels dramatically

higher than those in 2004. (Electricity production rose 7 percent in 2005 over 2004.)[9] Even adjusting for weather, ozone levels were slightly elevated in 2005 over the year before, despite a reported 11 percent drop in nitrogen oxide emissions.[10] Although the ozone levels remain lower than in 2002, the increased production of electricity threatens to push them still higher.

Although the measures in the late 1990s have helped reduce pollution, coal-fired power plants remain major sources of emissions that must be cleaned up. On March 10, 2005, EPA issued the Clean Air Interstate Rule, or CAIR, that requires 28 states and the District of Columbia to further reduce power plant emissions by 2015. CAIR is similar to the approach EPA used to reduce nitrogen oxide emissions in the late 1990s. The Clean Air Act gives EPA the authority to force the plants to clean up by requiring states to reduce the pollution that blows across state lines.

The Clean Air Interstate Rule targets the problem of regional pollution, especially from sources that may be hundreds of miles upwind. Under this rule, these 28 states and the District of Columbia are directing power plants and other sources to clean up emissions that contribute to ozone and particle pollution. Power plant emissions of sulfur dioxide and nitrogen oxide also contribute to pollution problems nearer to the plants, so cleaner smokestacks mean less harm to people living in a widespread geographic area.

According to EPA, CAIR will help 450 counties in the eastern United States reduce ozone and particle pollution. EPA estimates that cleaning up these polluters will provide $85 billion to $100 billion in annual health benefits. When the clean up is finished in 2015, EPA estimates that emissions of sulfur dioxide, which are major sources of particle pollution in the eastern states, will be 57 percent lower than in 2003. Emissions of nitrogen oxide, a key ingredient in ozone, are expected to be 61 percent lower than in 2003.[11]

Despite these benefits, EPA could have and should have required power plants to reduce even more pollution and to make those cuts sooner than 2015. Several Northeastern states are considering adopting even more stringent requirements for their power plants in a program they call “CAIR Plus.” The American Lung Association repeatedly urged EPA to use this opportunity to clean up even more pollution, more quickly. The American Lung Association also supports efforts in Congress to strengthen the Clean Air Act to further clean up these heavy polluters by requiring a “third step” of additional emissions reductions to be achieved even faster than CAIR.

Courts tell EPA to close its loopholes for industrial pollution

Last year, the federal courts ruled that EPA could not follow up some of its more outrageous plans to gut Clean Air Act rules for polluting industries. These decisions came in legal challenges brought by the American Lung Association, its environmental and public health colleagues, and 14 states and the District of Columbia to enforce clear requirements of the Clean Air Act.

EPA's rollbacks in this arena began formally in 2003, when EPA took the first two major actions that cut the legs out from under an important enforcement provision of the Clean Air Act, called New Source Review (NSR). NSR is a process designed to ensure that communities with unhealthful levels of air pollution don't get more polluted when a new source of pollution comes to the community—such as a new industrial facility or an existing facility that is modified in ways that enable it to emit more pollution.

Back in 1999, EPA charged that many electricity-generating utilities had failed to comply with the NSR requirements because they increased emissions of hazardous pollutants at their coal-fired plants without taking the required steps to clean them up. EPA took dozens of these plants to court and began enforcement action against others. As a result of enforcing the law, several utilities began cleaning up some of the dirtiest plants in the nation.

Then in 2002 and 2003, the rules changed. In two sweeping new regulations, EPA rewrote the NSR provisions, providing huge loopholes to industry that allow polluters to significantly increase pollution from existing plants without having to clean up the pollution.

Under the most damaging set of changes, EPA greatly expanded the list of activities defined as "routine maintenance," which were already exempted from the required clean up. EPA redefined "routine maintenance" to mean any project that cost less than 20 percent of the replacement cost of the entire plant, no matter how much additional pollution the project creates. Given that large plants may be worth billions, a company could reconstruct entire wings of its buildings and still have the work considered "routine maintenance." By basing this definition on the cost of the plant rather than on how much pollution is created, the new definition would effectively exempt plants from having to install or upgrade their emissions reduction equipment.

In March 2006, the U.S. District Court of Appeals closed this loophole with a tight knot. The Court noted that unlike the EPA decision, the Clean Air Act stated that "any" changes that resulted in an increase in pollution had to be addressed, despite EPA's arguments to the contrary:

> "*Only in a Humpty Dumpty world*," explained the Court, would "*a clear word like 'any' not mean what Congress clearly intended it to mean. Indeed, EPA's interpretation would produce a 'strange,' if not an 'indeterminate,' result: a law intended to limit increases in air pollution would allow sources operating below applicable emission limits to increase significantly the pollution they emit without government review.*"[12]

Clean up of diesel locomotive, marine engines announced

In 2006, new rules took effect requiring cleaner highway diesel trucks, buses and diesel fuel. Beginning in 2010, similar requirements will bring cleaner heavy

equipment and construction and agricultural diesel engines and their fuel. The last major category of new diesel engines, locomotives and marine sources, remained governed only under older, weaker requirements. EPA promised new emission standards in 2004, but had delayed issuing them.

EPA must issue final rules to clean up diesel trains and ships.

Diesel locomotives and marine vessels, such as barges and freighters, contribute tons of pollution annually to communities nationwide. EPA predicted that without a strong federal emission standard by 2030, marine diesel engines and locomotives would account for more than one-fourth of the national mobile source emissions inventory of smog-forming nitrogen oxides and nearly one-half of the national mobile source emissions inventory of diesel particle pollution.[13] Locomotive engines operate trains in cities and ports across the nation, providing long-haul, switch, and passenger-rail service.[14] Marine diesel engines operate recreational and small fishing boats, barges, ferries, Great Lakes freighters, to marine auxiliary engines that operate on anything including onboard ocean-going vessels.[15]

On March 2, 2007, EPA announced its long-overdue proposal to cut pollution from locomotive and marine diesel engines. The multi-faceted proposal will require existing locomotives to be cleaned up when they are remanufactured beginning in 2008. From 2009 through 2014, new interim standards will be phased in to clean up new locomotives and marine engines. Finally, from 2014 to 2017, standards will be phased in requiring an 80 percent reduction of nitrogen oxide emissions and a 90 percent reduction of emissions of particle pollution from locomotive and marine engines. In addition, EPA is proposing new requirements to limit locomotive idling emissions.[16]

EPA projected that by 2030 this rule will prevent 1,500 premature deaths each year and will eliminate over 1,100 hospitalizations. Along with the other benefits of much lower pollution, EPA estimated that cleaning up these diesel engines will save the economy approximately $12 billion. The American Lung Association will push EPA to make these rules final before the end of 2007.[17]

Emerging Concerns

More air pollution from new power plants

According to the U.S. Department of Energy, as of January 2007, 159 new coal-fired power plants have been proposed nationwide that would generate 96 gigawatts of electricity, enough to meet the needs of 96 million homes. Sixteen new power plants are proposed in Illinois alone. Over 70 are proposed east of the Mississippi River, where increased electricity generation from coal plants already shows signs of increasing air pollution levels.[18] In unregulated electricity markets, competing power systems are proposing duplicate facilities for the same customers, so not all of these are needed.

These new power plants could add significantly to the local air pollution burden for ozone and particulate pollution. Even if they use the best emissions reduction technology available—and current law does not ensure that—pollution levels are

likely to rise in some locations. The Lung Association is working for legislation to ensure that emissions from all power plants are capped nationwide at levels needed to eliminate unhealthy levels of air pollution. New power plants would be required to obtain emissions reductions from old ones in order to meet the cap requirements. The Lung Association supports measures to conserve electricity use in order to minimize the number of new power plants that are needed.

Dirty outdoor wood boilers

As the price of energy rises, many homeowners are installing large outdoor incinerators that burn fuel to heat water. These outdoor wood boilers have increased in popularity, so that sales have more than doubled in recent years.[19] Unfortunately, these devices are not yet equipped with pollution controls. Some owners are using these boilers to burn trash and other wastes including hazardous waste. In studies released in 2006, researchers found that these boilers produce dangerous amounts of air pollution, often in suburban areas where the soot and ash are just the visible part of the hazardous plumes.[20] In early 2007, the EPA issued voluntary guidelines for the manufacturers to follow in the boilers manufactured for the 2007-2008 heating season.[21] NESCAUM, the association of air quality agencies of the Northeast States, issued model state rules that would require even cleaner boilers if the states adopt the rules.[22] EPA recommended that the states adopt the model NESCAUM rules. Some localities have already passed ordinances banning boilers.

Burning even seasoned wood contributes particle pollution and harmful gases both indoors and outdoors. The American Lung Association recommends against using outdoor wood boilers.

What You Can Do to Protect Your Family

The American Lung Association encourages everyone to take steps to combat air pollution and to support national, state and local efforts to clean the air. Reduce your driving by combining trips, walking, biking or carpooling. Turn off your lights and use power-saving appliances to keep electric power production down. Don't burn wood or trash. These simple things can make a difference as we join forces to curb air pollution.

But your actions alone aren't enough. Let political leaders in your city, county and state know you want cleaner air. Many communities are developing plans to reach national standards for ozone and particle pollution. Let local and state officials know you support strong measures to clean up the biggest polluters, especially dirty diesel and coal-fired power plants.

Finally, support measures to set standards that will protect public health and clean up major sources of air pollution. Log on to www.lungusa.org to join in that work.

Over 136 million people live in areas of the United States where dirty air is a danger to public health. At risk are our children, our parents, our families, our neighbors and our friends. Too many people remain endangered and there is too much we

can do to protect them to turn back the clean air clock now. The American Lung Association pledges to continue fighting for clean air for everyone.

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State Tables

Notes for all state data tables

1. **Total Population** is based on 2005 U.S. Census and represents the at-risk populations in counties with ozone or $PM_{2.5}$ pollution monitors; it does not represent the entire state's sensitive populations.
2. Those **18 & Under** and **65 & Over** are vulnerable to ozone and $PM_{2.5}$. They should not be used as population denominators for disease estimates.
3. **Pediatric Asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2005 based on national rates (NHIS) applied to county population estimates (U.S. Census).
4. **Adult Asthma** estimates are for those 18 years of age and older and represent the estimated number of people who had asthma during 2005 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
5. **Chronic Bronchitis** estimates are for adults aged 18 and over who had been diagnosed in 2005 based on national rates (NHIS) applied to county population estimates (U.S. Census).
6. **Emphysema** estimates are for adults aged 18 and over who have been diagnosed within their lifetime based on national rates (NHIS) applied to county population estimates (U.S. Census).
7. **CV Disease** estimates are for adults aged 18 and over who had been diagnosed in 2005 based on national rates (NHIS) applied to county population estimates (U.S. Census. CV Disease includes coronary heart disease, hypertension and stroke. Coronary heart disease includes coronary heart disease, angina pectoris and heart attack.
8. **Diabetes** estimates are for adults aged 18 and over who have been diagnosed within their lifetime based on national rates (NHIS) applied to county population estimates (U.S. Census).
9. Adding across rows does not produce valid estimates. For example, because of differences in the surveys used to gather the information, adding Pediatric and Adult Asthma does not produce an accurate estimate of total population with asthma. Adding emphysema and chronic bronchitis will double count people with both diseases.
10. Changes to the county grades and monitoring from those found in the 2006 report are noted on the last page of each state's section.

ALABAMA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
BALDWIN	162,586	36,411	26,429	3,241	8,942	5,303	2,542	43,916	10,267
CLAY	13,964	2,992	2,426	266	777	465	229	3,935	917
COLBERT	54,660	11,952	8,775	1,064	3,041	1,805	865	14,997	3,516
DE KALB	67,271	16,168	9,328	1,439	3,634	2,117	952	16,725	3,948
ELMORE	73,937	17,672	8,105	1,573	4,014	2,275	919	16,621	3,984
ESCAMBIA	38,082	8,756	5,397	779	2,088	1,220	553	9,704	2,290
ETOWAH	103,189	23,606	16,194	2,101	5,658	3,349	1,592	27,625	6,477
HOUSTON	94,249	23,358	13,109	2,079	5,055	2,958	1,347	23,661	5,585
JACKSON	53,650	12,189	7,836	1,085	2,962	1,742	806	14,122	3,331
JEFFERSON	657,229	156,950	88,180	13,969	35,690	20,749	9,239	163,164	38,633
LAWRENCE	34,605	8,111	4,414	722	1,895	1,096	478	8,504	2,022
LIMESTONE	70,469	16,241	8,212	1,445	3,875	2,212	919	16,523	3,950
MADISON	298,192	71,285	35,776	6,344	16,214	9,304	3,940	70,515	16,817
MOBILE	401,427	105,264	48,855	9,368	21,164	12,215	5,287	94,138	22,391
MONTGOMERY	221,619	56,370	26,165	5,017	11,784	6,752	2,850	50,954	12,142
MORGAN	113,740	27,178	14,937	2,419	6,189	3,595	1,592	28,209	6,692
RUSSELL	49,326	12,401	6,717	1,104	2,633	1,537	695	12,225	2,889
SHELBY	171,465	43,138	14,820	3,839	9,244	5,169	1,951	36,258	8,823
SUMTER	13,819	3,642	1,959	324	720	421	192	3,353	787
TALLADEGA	80,457	19,071	10,805	1,697	4,384	2,551	1,138	20,111	4,764
TUSCALOOSA	168,908	37,855	18,712	3,369	9,317	5,256	2,092	37,843	9,065
WALKER	70,117	15,735	10,776	1,400	3,870	2,283	1,072	18,671	4,386
TOTALS	**3,012,961**	**726,345**	**387,927**	**64,645**	**163,151**	**94,373**	**41,251**	**731,775**	**173,674**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BALDWIN	1	0	0	0.3	B
CLAY	1	0	0	0.3	B
COLBERT	1	0	0	0.3	B
DE KALB	DNC	DNC	DNC	DNC	DNC
ELMORE	0	0	0	0.0	A
ESCAMBIA	DNC	DNC	DNC	DNC	DNC
ETOWAH	0	0	0	0.0	A
HOUSTON	*	*	*	*	*
JACKSON	*	*	*	*	*
JEFFERSON	11	0	0	3.7	F
LAWRENCE	1	0	0	0.3	B
LIMESTONE	2	*	*	*	*
MADISON	1	0	0	0.3	B
MOBILE	5	0	0	1.7	C
MONTGOMERY	0	0	0	0.0	A
MORGAN	1	0	0	0.3	B
RUSSELL	1	0	0	0.3	B
SHELBY	9	0	0	3.0	D
SUMTER	0	0	0	0.0	A
TALLADEGA	*	*	*	*	*
TUSCALOOSA	1	0	0	0.3	B
WALKER	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BALDWIN	0	0	0	0.0	A	11.8	PASS
CLAY	4	0	0	1.3	C	13.3	PASS
COLBERT	3	0	0	1.0	C	12.6	PASS
DE KALB	4	0	0	1.3	C	14.4	PASS
ELMORE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ESCAMBIA	2	0	0	0.7	B	13	PASS
ETOWAH	8	0	0	2.7	D	14.7	PASS
HOUSTON	4	0	0	1.3	C	*	INC
JACKSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	87	0	0	29.0	F	18.2	FAIL
LAWRENCE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LIMESTONE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MADISON	4	0	0	1.3	C	13.9	PASS
MOBILE	3	1	1	2.2	D	12.9	PASS
MONTGOMERY	5	0	0	1.7	C	14.1	PASS
MORGAN	3	0	0	1.0	C	13.2	PASS
RUSSELL	8	0	0	2.7	D	15.7	FAIL
SHELBY	7	0	0	2.3	D	14.5	PASS
SUMTER	1	0	0	0.3	B	11.9	PASS
TALLADEGA	6	0	0	2.0	C	14.5	PASS
TUSCALOOSA	2	0	0	0.7	B	13.1	PASS
WALKER	4	0	0	1.3	C	13.6	PASS

Ozone
- Sumter and Elmore Counties each improved its grade from a B to an A.
- Madison, Clay, Colbert and Morgan Counties each improved its grade from a C to a B.
- Montgomery County's grade improved from a C to an A.
- Shelby County's grade improved from an F to a D.
- Russell County now has enough data to grade.
- Houston County now has ozone monitors but not enough data to grade.
- Walker County no longer has ozone monitors.

PM
- Escambia and Tuscaloosa Counties each dropped its grade from an A to a B.
- Clay, Colbert, De Kalb, Madison, Morgan and Walker Counties each dropped its grade from an A to a C.
- Houston, Montgomery and Talladega Counties each dropped its grade from a B to C.
- Etowah County's grade dropped from an A to a D.
- Shelby County's grade dropped from a B to a D.
- Russell and Mobile Counties each dropped its grade from a C to a D.
- Tuscaloosa and Walker Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

ALASKA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ANCHORAGE BOROUGH	275,043	77,655	17,615	6,911	15,331	7,894	2,768	52,891	13,061
FAIRBANKS NORTH STAR BOROUGH	87,560	25,337	4,785	2,255	4,857	2,425	783	15,210	3,779
JUNEAU BOROUGH	30,987	7,758	2,220	690	1,797	953	355	6,732	1,659
MATANUSKA-SUSITNA BOROUGH	76,006	20,909	5,145	1,861	4,271	2,228	805	15,298	3,771
SKAGWAY-HOONAH-ANGOON BOROUGH	3,126	661	288	59	189	104	42	782	191
YUKON-KOYUKUK	6,143	1,859	509	165	330	177	70	1,307	318
TOTALS	**478,865**	**134,179**	**30,562**	**11,942**	**26,775**	**13,780**	**4,823**	**92,219**	**22,780**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ANCHORAGE BOROUGH	DNC	DNC	DNC	DNC	DNC
FAIRBANKS NORTH STAR BOROUGH	DNC	DNC	DNC	DNC	DNC
JUNEAU BOROUGH	DNC	DNC	DNC	DNC	DNC
MATANUSKA-SUSITNA BOROUGH	DNC	DNC	DNC	DNC	DNC
SKAGWAY-HOONAH-ANGOON BOROUGH	DNC	DNC	DNC	DNC	DNC
YUKON-KOYUKUK	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANCHORAGE BOROUGH	2	0	0	0	0.7	B	6.6	PASS
FAIRBANKS NORTH STAR BOROUGH	8	4	2	6	11.0	F	*	INC
JUNEAU BOROUGH	3	0	0	0	1.0	C	*	INC
MATANUSKA-SUSITNA BOROUGH	2	0	0	0	0.7	B	*	INC
SKAGWAY-HOONAH-ANGOON BOROUGH	*	*	*	*	*	*	*	INC
YUKON-KOYUKUK	*	*	*	*	*	*	*	INC

Ozone
- There were no changes in grades or monitoring.

PM
- There were no changes in grades or monitoring.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

ARIZONA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
COCHISE	126,106	31,940	20,243	2,843	7,165	3,982	1,939	33,408	7,800
COCONINO	123,866	33,558	9,478	2,987	6,606	3,592	1,295	24,321	5,946
GILA	51,663	12,563	10,801	1,118	3,054	1,714	947	15,846	3,638
LA PAZ	20,238	3,985	5,860	355	1,272	730	458	7,399	1,660
MARICOPA	3,635,528	996,838	403,053	88,719	192,537	106,331	43,513	780,514	186,111
NAVAJO	108,432	35,071	11,935	3,121	5,426	2,994	1,272	22,658	5,386
PIMA	924,786	225,441	132,644	20,064	52,096	28,917	13,146	229,677	54,011
PINAL	229,549	56,997	33,306	5,073	12,682	7,075	3,204	55,748	13,069
SANTA CRUZ	42,009	13,437	4,897	1,196	2,143	1,181	518	9,186	2,179
YAVAPAI	198,701	39,885	43,656	3,550	12,285	6,911	3,790	63,346	14,526
YUMA	181,277	52,886	31,615	4,707	9,465	5,361	2,712	45,663	10,494
TOTALS	**5,642,155**	**1,502,601**	**707,488**	**133,731**	**304,730**	**168,787**	**72,794**	**1,287,766**	**304,820**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Arizona
102 West McDowell Road
Phoenix, AZ 85003-1299
(602) 258-7505 www.lungusa.org/arizona

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
COCHISE	0	0	0	0.0	A
COCONINO	1	0	0	0.3	B
GILA	5	0	0	1.7	C
LA PAZ	*	*	*	*	*
MARICOPA	25	0	0	8.3	F
NAVAJO	0	0	0	0.0	A
PIMA	2	0	0	0.7	B
PINAL	7	0	0	2.3	D
SANTA CRUZ	DNC	DNC	DNC	DNC	DNC
YAVAPAI	0	0	0	0.0	A
YUMA	1	0	0	0.3	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
COCHISE	0	0	0	0.0	A	7	PASS
COCONINO	0	0	0	0.0	A	6.2	PASS
GILA	0	0	0	0.0	A	8.9	PASS
LA PAZ	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARICOPA	7	0	0	2.3	D	11.6	PASS
NAVAJO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PIMA	0	0	0	0.0	A	6.2	PASS
PINAL	1	0	0	0.3	B	7.6	PASS
SANTA CRUZ	2	0	0	0.7	B	11.9	PASS
YAVAPAI	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YUMA	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Coconino County's grade dropped from an A to a B.
- Yavapai County's grade improved from a C to an A.
- Pinal County's grade dropped from a C to a D.
- Gila County's grade improved from a D to a C.
- Yuma County now has sufficient data to grade.
- La Paz County now has ozone monitors but not enough data to grade.

PM
- Pinal and Santa Cruz Counties each dropped its grade from an A to a B.
- Coconino County now has sufficient data to grade its annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

ARKANSAS

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ARKANSAS	20,073	4,786	3,145	426	1,141	648	312	5,414	1,270
ASHLEY	23,178	5,785	3,220	515	1,300	729	334	5,866	1,386
CRAIGHEAD	86,735	20,745	10,202	1,846	4,922	2,666	1,099	19,692	4,693
CRITTENDEN	51,882	15,549	5,071	1,384	2,719	1,479	597	10,856	2,610
FAULKNER	97,147	23,102	9,416	2,056	5,523	2,922	1,095	20,086	4,843
GARLAND	93,551	19,639	19,352	1,748	5,490	3,179	1,693	28,436	6,537
JEFFERSON	81,700	20,472	10,429	1,822	4,574	2,532	1,111	19,705	4,677
MARION	16,735	3,178	3,573	283	1,010	593	321	5,407	1,246
MILLER	43,162	10,710	5,922	953	2,421	1,344	604	10,615	2,505
MISSISSIPPI	47,911	13,883	5,922	1,236	2,542	1,411	626	11,070	2,624
MONTGOMERY	9,274	1,994	1,810	177	542	314	164	2,780	643
NEWTON	8,452	1,826	1,364	163	496	285	139	2,412	567
PHILLIPS	24,107	7,481	3,398	666	1,241	702	335	5,821	1,365
POLK	20,176	4,817	3,600	429	1,144	655	332	5,666	1,315
POPE	56,580	13,323	7,376	1,186	3,225	1,767	764	13,515	3,201
PULASKI	366,463	92,259	43,126	8,211	20,507	11,287	4,801	86,011	20,529
SEBASTIAN	118,750	30,536	15,138	2,718	6,590	3,649	1,605	28,439	6,745
UNION	44,186	10,705	6,959	953	2,498	1,415	681	11,787	2,760
WASHINGTON	180,357	45,417	17,008	4,042	10,068	5,327	1,992	36,588	8,828
WHITE	71,332	16,470	9,764	1,466	4,087	2,244	985	17,325	4,089
TOTALS	**1,461,751**	**362,677**	**185,795**	**32,278**	**82,039**	**45,148**	**19,592**	**347,491**	**82,432**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Arkansas
211 Natural Resources Drive
Little Rock, AR 72205-1539
(501) 224-5864 www.lungusa.org/arkansas

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ARKANSAS	DNC	DNC	DNC	DNC	DNC
ASHLEY	DNC	DNC	DNC	DNC	DNC
CRAIGHEAD	DNC	DNC	DNC	DNC	DNC
CRITTENDEN	9	2	0	4.0	F
FAULKNER	DNC	DNC	DNC	DNC	DNC
GARLAND	DNC	DNC	DNC	DNC	DNC
JEFFERSON	DNC	DNC	DNC	DNC	DNC
MARION	DNC	DNC	DNC	DNC	DNC
MILLER	DNC	DNC	DNC	DNC	DNC
MISSISSIPPI	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	*	*	*	*	*
NEWTON	3	0	0	1.0	C
PHILLIPS	DNC	DNC	DNC	DNC	DNC
POLK	*	*	*	*	*
POPE	DNC	DNC	DNC	DNC	DNC
PULASKI	6	0	0	2.0	C
SEBASTIAN	DNC	DNC	DNC	DNC	DNC
UNION	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC
WHITE	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ARKANSAS	3	0	0	1.0	C	12.5	PASS
ASHLEY	3	0	0	1.0	C	12.2	PASS
CRAIGHEAD	*	*	*	*	*	*	INC
CRITTENDEN	7	0	0	2.3	D	*	INC
FAULKNER	4	0	0	1.3	C	13.1	PASS
GARLAND	2	0	0	0.7	B	12.3	PASS
JEFFERSON	*	*	*	*	*	*	INC
MARION	*	*	*	*	*	*	INC
MILLER	*	*	*	*	*	*	INC
MISSISSIPPI	5	0	0	1.7	C	12.6	PASS
MONTGOMERY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEWTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PHILLIPS	3	0	0	1.0	C	12.2	PASS
POLK	0	0	0	0.0	A	11.2	PASS
POPE	1	0	0	0.3	B	12.6	PASS
PULASKI	19	0	0	6.3	F	14.2	PASS
SEBASTIAN	2	0	0	0.7	B	*	INC
UNION	4	0	0	1.3	C	12.8	PASS
WASHINGTON	*	*	*	*	*	*	INC
WHITE	4	0	0	1.3	C	12.4	PASS

Ozone
- Montgomery County no longer has enough data to grade.
- Pulaski County's grade improved from an F to a C.

PM
- Washington County no longer has enough data to grade.
- Garland, Pope and Sebastian Counties each dropped its grade from an A to a B.
- Arkansas, Faulkner, Mississippi, Philips and White Counties each dropped its grade from an A to a C.
- Ashley and Union Counties each dropped its grade from a B to a C.
- Crittenden County's grade dropped from a B to a D.
- Pulaski County's grade dropped from a B to an F.
- Sebastian and Crittenden Counties no longer have sufficient data to grade their annual levels.
- Garland County now has sufficient data to grade its annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

CALIFORNIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ALAMEDA	1,448,905	363,065	152,258	32,313	78,658	44,174	17,862	324,337	77,959
AMADOR	38,471	6,896	6,815	614	2,307	1,339	655	11,281	2,634
BUTTE	214,185	47,685	31,909	4,244	12,060	6,851	3,108	54,168	12,715
CALAVERAS	46,871	9,219	8,077	820	2,766	1,621	804	13,897	3,256
COLUSA	21,095	6,144	2,751	547	1,082	613	273	4,786	1,127
CONTRA COSTA	1,017,787	263,646	116,038	23,464	54,874	31,174	13,249	238,126	56,968
EL DORADO	176,841	40,674	20,691	3,620	9,947	5,690	2,445	44,069	10,569
FRESNO	877,584	270,845	84,678	24,105	43,682	24,239	9,523	172,725	41,424
GLENN	27,759	7,982	3,418	710	1,433	811	354	6,259	1,482
HUMBOLDT	128,376	27,514	16,079	2,449	7,324	4,149	1,771	31,667	7,550
IMPERIAL	155,823	47,199	16,035	4,201	7,813	4,335	1,731	31,151	7,437
INYO	18,156	3,976	3,293	354	1,043	616	316	5,416	1,262
KERN	756,825	232,363	67,288	20,680	37,686	20,780	7,858	144,004	34,715
KINGS	143,420	40,411	10,597	3,597	7,337	3,951	1,324	24,918	6,077
LAKE	65,147	14,907	10,523	1,327	3,676	2,136	1,036	17,942	4,203
LOS ANGELES	9,935,475	2,739,469	998,963	243,813	519,004	288,953	114,234	2,074,467	498,089
MADERA	142,788	40,385	15,222	3,594	7,376	4,105	1,653	29,748	7,103
MARIN	246,960	50,322	35,936	4,479	14,463	8,435	3,954	69,828	16,573

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of California
424 Pendleton Way
Oakland, CA 94621
(510) 638-5864 www.lungusa.org/california

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALAMEDA	5	0	0	1.7	C
AMADOR	8	0	0	2.7	D
BUTTE	12	0	0	4.0	F
CALAVERAS	30	0	0	10.0	F
COLUSA	0	0	0	0.0	A
CONTRA COSTA	1	0	0	0.3	B
EL DORADO	59	4	0	21.7	F
FRESNO	135	14	0	52.0	F
GLENN	0	0	0	0.0	A
HUMBOLDT	DNC	DNC	DNC	DNC	DNC
IMPERIAL	22	0	0	7.3	F
INYO	4	0	0	1.3	C
KERN	221	53	2	101.5	F
KINGS	28	0	0	9.3	F
LAKE	0	0	0	0.0	A
LOS ANGELES	158	35	16	80.8	F
MADERA	14	0	0	4.7	F
MARIN	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALAMEDA	4	0	0	1.3	C	9.4	PASS
AMADOR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BUTTE	9	1	0	3.5	F	12.6	PASS
CALAVERAS	0	0	0	0.0	A	7.8	PASS
COLUSA	2	0	0	0.7	B	7.4	PASS
CONTRA COSTA	21	1	0	7.5	F	*	INC
EL DORADO	*	*	*	*	*	*	INC
FRESNO	106	13	0	41.8	F	17.2	FAIL
GLENN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HUMBOLDT	1	0	0	0.3	B	*	INC
IMPERIAL	6	2	0	3.0	D	12.7	PASS
INYO	1	1	0	0.8	B	4.9	PASS
KERN	96	14	0	39.0	F	19	FAIL
KINGS	28	3	0	10.8	F	17	FAIL
LAKE	0	0	0	0.0	A	4.6	PASS
LOS ANGELES	128	14	0	49.7	F	19.7	FAIL
MADERA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

CALIFORNIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MARIPOSA	18,069	3,401	3,127	303	1,075	627	308	5,315	1,244
MENDOCINO	88,161	20,893	12,073	1,859	4,925	2,846	1,306	23,068	5,471
MERCED	241,706	79,143	21,318	7,044	11,676	6,437	2,448	44,726	10,764
MODOC	9,524	2,079	1,745	185	547	321	165	2,815	654
MONO	12,509	2,713	1,013	241	712	398	149	2,797	686
MONTEREY	412,104	117,547	40,925	10,462	21,222	11,791	4,640	84,227	20,213
NAPA	132,764	31,099	19,260	2,768	7,405	4,249	1,955	34,226	8,065
NEVADA	98,394	19,619	16,654	1,746	5,797	3,404	1,686	29,232	6,863
ORANGE	2,988,072	803,073	315,351	71,473	157,985	88,492	35,849	648,274	155,387
PLACER	317,028	73,536	44,284	6,545	17,684	10,074	4,519	79,428	18,749
PLUMAS	21,477	4,181	3,960	372	1,275	755	388	6,657	1,554
RIVERSIDE	1,946,419	555,060	223,169	49,400	100,091	55,726	22,965	408,833	96,994
SACRAMENTO	1,363,482	373,540	148,453	33,245	71,513	40,041	16,380	294,666	70,406
SAN BENITO	55,936	17,241	4,569	1,534	2,796	1,554	587	10,878	2,642
SAN BERNARDINO	1,963,535	605,131	158,725	53,857	97,597	53,654	19,657	364,436	88,409
SAN DIEGO	2,933,462	760,274	324,496	67,664	156,702	87,417	35,427	637,292	152,194
SAN FRANCISCO	739,426	109,497	109,305	9,745	45,518	25,638	11,086	195,645	46,235
SAN JOAQUIN	664,116	197,268	64,201	17,557	33,628	18,670	7,314	132,941	31,924

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of California
424 Pendleton Way
Oakland, CA 94621
(510) 638-5864 www.lungusa.org/california

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
MARIPOSA	40	2	0	14.3	F
MENDOCINO	0	0	0	0.0	A
MERCED	67	5	0	24.8	F
MODOC	DNC	DNC	DNC	DNC	DNC
MONO	DNC	DNC	DNC	DNC	DNC
MONTEREY	0	0	0	0.0	A
NAPA	0	0	0	0.0	A
NEVADA	54	3	0	19.5	F
ORANGE	22	1	0	7.8	F
PLACER	52	4	0	19.3	F
PLUMAS	0	0	0	0.0	A
RIVERSIDE	159	57	8	86.8	F
SACRAMENTO	53	10	0	22.7	F
SAN BENITO	3	0	0	1.0	C
SAN BERNARDINO	150	76	23	103.3	F
SAN DIEGO	19	0	0	6.3	F
SAN FRANCISCO	0	0	0	0.0	A
SAN JOAQUIN	4	0	0	1.3	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MARIPOSA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MENDOCINO	0	0	0	0.0	A	6.8	PASS
MERCED	24	0	0	8.0	F	15	PASS
MODOC	*	*	*	*	*	*	INC
MONO	0	0	0	0.0	A	*	INC
MONTEREY	0	0	0	0.0	A	7	PASS
NAPA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEVADA	0	0	0	0.0	A	7.1	PASS
ORANGE	59	3	0	21.2	F	16.3	FAIL
PLACER	2	0	0	0.7	B	10	PASS
PLUMAS	8	0	0	2.7	D	11.8	PASS
RIVERSIDE	159	17	0	61.5	F	22.6	FAIL
SACRAMENTO	49	5	0	18.8	F	11.8	PASS
SAN BENITO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SAN BERNARDINO	50	9	0	21.2	F	21.2	FAIL
SAN DIEGO	35	2	1	13.3	F	15	PASS
SAN FRANCISCO	15	0	0	5.0	F	9.9	PASS
SAN JOAQUIN	13	0	0	4.3	F	13.1	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
SAN LUIS OBISPO	255,478	51,060	36,524	4,544	14,838	8,438	3,752	66,085	15,617
SAN MATEO	699,610	164,895	90,654	14,676	38,955	22,259	9,835	174,686	41,518
SANTA BARBARA	400,762	99,296	51,490	8,837	21,786	12,265	5,274	93,271	22,071
SANTA CLARA	1,699,052	428,298	177,135	38,119	91,888	51,418	20,589	373,949	89,856
SANTA CRUZ	249,666	57,604	25,560	5,127	13,956	7,871	3,170	57,966	13,999
SHASTA	179,904	42,386	27,306	3,772	10,034	5,787	2,727	47,478	11,155
SISKIYOU	45,259	9,648	8,190	859	2,622	1,547	793	13,603	3,173
SOLANO	411,593	114,016	42,204	10,147	21,560	12,116	4,921	89,243	21,435
SONOMA	466,477	110,454	58,617	9,830	25,969	14,856	6,524	116,370	27,733
STANISLAUS	505,505	150,921	50,172	13,432	25,566	14,234	5,657	102,463	24,565
SUTTER	88,876	24,282	10,768	2,161	4,672	2,632	1,125	19,960	4,734
TEHAMA	61,197	15,501	9,227	1,380	3,324	1,907	896	15,537	3,640
TULARE	410,874	134,343	38,049	11,957	19,900	11,028	4,302	78,170	18,763
TUOLUMNE	59,380	10,550	10,510	939	3,566	2,068	1,009	17,394	4,062
VENTURA	796,106	219,068	85,140	19,497	41,865	23,620	9,781	176,557	42,313
YOLO	184,932	44,493	17,617	3,960	10,056	5,503	2,029	37,263	8,984
TOTALS	**35,983,323**	**9,664,812**	**3,852,362**	**860,168**	**1,901,231**	**1,063,615**	**431,358**	**7,784,240**	**1,863,215**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of California
424 Pendleton Way
Oakland, CA 94621
(510) 638-5864 www.lungusa.org/california

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
SAN LUIS OBISPO	2	0	0	0.7	B
SAN MATEO	0	0	0	0.0	A
SANTA BARBARA	7	0	0	2.3	D
SANTA CLARA	7	0	0	2.3	D
SANTA CRUZ	0	0	0	0.0	A
SHASTA	11	0	0	3.7	F
SISKIYOU	0	0	0	0.0	A
SOLANO	1	0	0	0.3	B
SONOMA	0	0	0	0.0	A
STANISLAUS	28	0	0	9.3	F
SUTTER	7	0	0	2.3	D
TEHAMA	7	0	0	2.3	D
TULARE	210	19	0	79.5	F
TUOLUMNE	8	0	0	2.7	D
VENTURA	58	1	0	19.8	F
YOLO	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
SAN LUIS OBISPO	0	0	0	0.0	A	8	PASS
SAN MATEO	1	0	0	0.3	B	9	PASS
SANTA BARBARA	0	0	0	0.0	A	10.5	PASS
SANTA CLARA	42	0	0	14.0	F	11.7	PASS
SANTA CRUZ	0	0	0	0.0	A	*	INC
SHASTA	0	0	0	0.0	A	7.4	PASS
SISKIYOU	*	*	*	*	*	*	INC
SOLANO	7	0	0	2.3	D	10	PASS
SONOMA	1	0	0	0.3	B	8.2	PASS
STANISLAUS	24	1	0	8.5	F	14	PASS
SUTTER	4	0	0	1.3	C	9.6	PASS
TEHAMA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TULARE	29	2	0	10.7	F	18	FAIL
TUOLUMNE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VENTURA	6	1	0	2.5	D	12.6	PASS
YOLO	1	0	0	0.3	B	9.1	PASS

Ozone
- Inyo County's grade dropped from a B to a C.
- Contra Costa and Yolo Counties each improved its grade from a C to a B.
- San Benito and Alameda Counties each improved its grade from a D to a C.
- Shasta County's grade dropped from a D to an F.
- Santa Clara, Amador, Santa Barbara, Tehama, Sutter and Tuolumne Counties each improved its grade from an F to a D.
- Mono County no longer has ozone monitors.

PM
- El Dorado County no longer has enough data to grade.
- Mendocino and Lake Counties each improved its grade from a B to an A.
- Mono County now has enough data to grade.
- Humboldt County's grade dropped from an A to a B.
- Sonoma County's grade improved from a C to a B.
- Inyo County's grade improved from a D to a B.
- Sutter County's grade dropped from a B to a C.
- Alameda County's grade improved from a D to a C.
- Ventura, Plumas and Solano Counties each dropped its grade from a C to a D.
- Butte County's grade dropped from a D to an F.
- Santa Cruz, Humboldt and Contra Costa Counties no longer have sufficient data to grade their annual levels.
- Stanislaus and Merced Counties each went from failing to passing their annual levels.
- Plumas County now has sufficient data to grade its annual levels.
- Siskiyou County now has PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

COLORADO

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ADAMS	399,426	115,892	28,691	10,314	23,545	11,065	3,818	72,010	17,614
ARAPAHOE	529,090	139,526	50,071	12,418	31,974	15,770	6,175	113,310	27,389
ARCHULETA	11,886	2,556	1,576	227	755	392	175	3,121	743
BOULDER	280,440	62,041	24,522	5,522	18,021	8,711	3,211	59,840	14,572
DELTA	29,947	6,677	5,822	594	1,857	999	522	8,825	2,037
DENVER	557,917	135,922	60,996	12,097	34,700	16,843	6,679	120,563	28,831
DOUGLAS	249,416	72,873	11,886	6,486	14,724	6,864	2,149	42,279	10,572
ELBERT	22,788	5,882	1,620	523	1,387	695	259	4,916	1,212
EL PASO	565,582	153,511	51,404	13,662	33,954	16,443	6,241	114,833	27,765
GUNNISON	14,226	2,526	1,074	225	975	451	148	2,831	696
JEFFERSON	526,801	127,920	58,743	11,385	32,471	16,552	6,982	126,232	30,314
LA PLATA	47,452	9,661	5,004	860	3,099	1,533	607	11,093	2,676
LARIMER	271,927	61,755	27,635	5,496	17,294	8,411	3,255	59,512	14,340
MESA	129,872	30,412	19,950	2,707	8,049	4,133	1,927	33,431	7,830
MONTEZUMA	24,778	6,316	3,693	562	1,489	778	368	6,403	1,504
PUEBLO	151,322	37,802	22,389	3,364	9,202	4,694	2,164	37,591	8,809
ROUTT	21,313	4,340	1,268	386	1,405	679	229	4,458	1,111
SAN MIGUEL	7,213	1,243	284	111	498	233	70	1,407	357
WELD	228,943	62,016	19,094	5,519	13,834	6,533	2,341	43,505	10,558
TOTALS	**4,070,339**	**1,038,871**	**395,722**	**92,460**	**249,233**	**121,779**	**47,321**	**866,160**	**208,930**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Colorado
5600 Greenwood Plaza Blvd., Suite 100
Greenwood Village, CO 80111
(303) 388-4327 www.lungusa.org/colorado

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAMS	0	0	0	0.0	A
ARAPAHOE	3	2	0	2.0	C
ARCHULETA	DNC	DNC	DNC	DNC	DNC
BOULDER	2	0	0	0.7	B
DELTA	DNC	DNC	DNC	DNC	DNC
DENVER	3	1	0	1.5	C
DOUGLAS	8	2	0	3.7	F
EL PASO	1	0	0	0.3	B
ELBERT	DNC	DNC	DNC	DNC	DNC
GUNNISON	DNC	DNC	DNC	DNC	DNC
JEFFERSON	17	0	0	5.7	F
LA PLATA	0	0	0	0.0	A
LARIMER	8	0	0	2.7	D
MESA	DNC	DNC	DNC	DNC	DNC
MONTEZUMA	0	0	0	0.0	A
PUEBLO	DNC	DNC	DNC	DNC	DNC
ROUTT	DNC	DNC	DNC	DNC	DNC
SAN MIGUEL	DNC	DNC	DNC	DNC	DNC
WELD	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	2	0	0	0.7	B	10.1	PASS
ARAPAHOE	2	0	0	0.7	B	8.1	PASS
ARCHULETA	0	0	0	0.0	A	DNC	INC
BOULDER	0	0	0	0.0	A	8.5	PASS
DELTA	0	0	0	0.0	A	7.7	PASS
DENVER	8	0	0	2.7	D	9.7	PASS
DOUGLAS	*	*	*	*	*	*	INC
EL PASO	0	0	0	0.0	A	8	PASS
ELBERT	0	0	0	0.0	A	4.4	PASS
GUNNISON	1	0	0	0.3	B	*	INC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LA PLATA	*	*	*	*	*	*	INC
LARIMER	0	0	0	0.0	A	7.3	PASS
MESA	2	0	0	0.7	B	9.2	PASS
MONTEZUMA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PUEBLO	0	0	0	0.0	A	7.2	PASS
ROUTT	0	0	0	0.0	A	*	INC
SAN MIGUEL	0	0	0	0.0	A	4.8	PASS
WELD	0	0	0	0.0	A	8.5	PASS

Ozone
- El Paso County's grade dropped from an A to a B.
- Boulder County's grade improved from a C to a B.
- Arapahoe County's grade improved from a D to a C.
- Larimer County's grade improved from an F to a D.

PM
- Gunnison County's grade dropped from an A to a B.
- Denver County's grade dropped from a B to a D.
- Douglas County now has PM 24-hr and PM Annual monitors but not enough data to grade.
- Archuleta, Gunnison and Routt Counties no longer have sufficient data to grade their annual levels.
- Mesa County now has enough data to grade its annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

CONNECTICUT

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
FAIRFIELD	902,775	230,031	117,749	20,473	54,510	28,109	12,603	223,020	52,900
HARTFORD	877,393	207,694	125,053	18,485	54,182	28,012	12,842	225,294	53,161
LITCHFIELD	190,071	42,726	27,356	3,803	11,880	6,246	2,903	51,082	12,086
MIDDLESEX	163,214	36,109	22,499	3,214	10,294	5,316	2,395	42,316	10,030
NEW HAVEN	846,766	199,416	117,232	17,748	52,515	26,860	12,072	212,417	50,184
NEW LONDON	266,618	62,157	35,002	5,532	16,625	8,441	3,701	65,583	15,554
TOLLAND	147,634	30,332	15,568	2,700	9,630	4,737	1,864	34,063	8,212
TOTALS	**3,394,471**	**808,465**	**460,459**	**71,953**	**209,636**	**107,720**	**48,381**	**853,775**	**202,126**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
FAIRFIELD	24	8	1	12.7	F
HARTFORD	6	0	0	2.0	C
LITCHFIELD	14	0	0	4.7	F
MIDDLESEX	12	3	0	5.5	F
NEW HAVEN	17	6	0	8.7	F
NEW LONDON	8	2	0	3.7	F
TOLLAND	10	1	0	3.8	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
FAIRFIELD	17	0	0	5.7	F	13.3	PASS
HARTFORD	16	0	0	5.3	F	11.4	PASS
LITCHFIELD	*	*	*	*	*	*	INC
MIDDLESEX	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEW HAVEN	41	0	0	13.7	F	13.5	PASS
NEW LONDON	6	0	0	2.0	C	11.5	PASS
TOLLAND	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Hartford County's grade improved from an F to a C.

PM
- Fairfield County's grade dropped from a D to an F.
- Litchfield County now has PM 24-hr and PM Annual monitors but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

DELAWARE

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
KENT	143,968	35,850	17,734	3,191	9,229	4,408	1,876	33,374	7,927
NEW CASTLE	523,008	123,538	60,219	10,995	34,158	16,310	6,773	121,889	29,153
SUSSEX	176,548	36,491	34,261	3,248	11,547	5,985	3,089	52,328	12,095
TOTALS	**843,524**	**195,879**	**112,214**	**17,433**	**54,934**	**26,704**	**11,738**	**207,591**	**49,175**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
KENT	5	0	0	1.7	C
NEW CASTLE	13	3	0	5.8	F
SUSSEX	12	3	0	5.5	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
KENT	7	1	0	2.8	D	12.8	PASS
NEW CASTLE	31	1	0	10.8	F	15.1	FAIL
SUSSEX	6	1	0	2.5	D	13.3	PASS

Ozone
- Kent County's grade improved from an F to a C.

PM
- Kent and Sussex Counties' grades dropped from a C to a D.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

DISTRICT OF COLUMBIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
DISTRICT OF COLUMBIA	550,521	112,837	67,208	10,042	40,280	17,596	7,188	128,809	30,689
TOTALS	**550,521**	**112,837**	**67,208**	**10,042**	**40,280**	**17,596**	**7,188**	**128,809**	**30,689**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the District of Columbia
1725 K St., NW #1209
Washington, DC 20006
(202) 466-5864 www.lungusa.org/districtofcolumbia

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
DISTRICT OF COLUMBIA	9	2	0	4.0	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
DISTRICT OF COLUMBIA	33	0	0	11.0	F	14.8	PASS

Ozone
• No changes occurred in ozone grades or monitors.
PM
• No changes occurred in ozone grades or monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

FLORIDA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ALACHUA	223,852	43,536	22,832	3,875	12,113	7,068	2,615	47,968	11,558
BAKER	24,569	6,359	2,377	566	1,238	735	288	5,268	1,272
BAY	161,558	38,008	22,587	3,383	8,438	5,172	2,357	41,470	9,804
BREVARD	531,250	111,002	106,910	9,879	28,589	18,095	9,543	160,991	37,124
BROWARD	1,777,638	435,899	249,266	38,795	91,270	55,779	25,343	444,478	104,814
CITRUS	134,370	22,291	41,163	1,984	7,578	5,039	3,188	51,333	11,492
COLLIER	307,242	64,112	72,924	5,706	16,418	10,549	5,978	98,497	22,366
COLUMBIA	64,040	15,400	9,003	1,371	3,310	2,024	919	16,129	3,805
DUVAL	826,436	221,401	85,596	19,705	41,215	24,650	10,014	181,655	43,644
ESCAMBIA	296,772	69,919	43,181	6,223	15,421	9,439	4,329	75,673	17,810
HIGHLANDS	95,496	18,300	29,643	1,629	5,178	3,445	2,214	35,320	7,852
HILLSBOROUGH	1,132,152	288,129	129,929	25,643	57,383	34,468	14,409	258,605	61,753
HOLMES	19,264	4,227	3,060	376	1,019	626	294	5,089	1,191
LAKE	277,035	55,035	73,863	4,898	14,922	9,700	5,774	93,744	21,078
LEE	544,758	111,541	123,668	9,927	29,329	18,759	10,401	172,627	39,388

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Florida
5526 Arlington Road
Jacksonville, FL 32211-5216
(904) 743-2933 www.lungusa.org/florida

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALACHUA	0	0	0	0.0	A
BAKER	0	0	0	0.0	A
BAY	5	0	0	1.7	C
BREVARD	0	0	0	0.0	A
BROWARD	0	0	0	0.0	A
CITRUS	DNC	DNC	DNC	DNC	DNC
COLLIER	0	0	0	0.0	A
COLUMBIA	0	0	0	0.0	A
DUVAL	4	0	0	1.3	C
ESCAMBIA	8	0	0	2.7	D
HIGHLANDS	0	0	0	0.0	A
HILLSBOROUGH	8	0	0	2.7	D
HOLMES	1	0	0	0.3	B
LAKE	3	0	0	1.0	C
LEE	1	0	0	0.3	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALACHUA	2	0	0	0.7	B	9.6	PASS
BAKER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BAY	2	0	0	0.7	B	11.3	PASS
BREVARD	1	0	0	0.3	B	8.1	PASS
BROWARD	0	0	0	0.0	A	8.2	PASS
CITRUS	1	0	0	0.3	B	9	PASS
COLLIER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COLUMBIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DUVAL	7	0	0	2.3	D	10.4	PASS
ESCAMBIA	10	0	0	3.3	F	11.8	PASS
HIGHLANDS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HILLSBOROUGH	6	0	0	2.0	C	11	PASS
HOLMES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LAKE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEE	1	0	0	0.3	B	8.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
LEON	245,756	52,697	21,443	4,690	13,054	7,613	2,743	51,164	12,452
MANATEE	306,779	65,754	68,897	5,852	16,320	10,442	5,794	96,161	21,940
MARION	303,442	62,733	71,541	5,583	16,265	10,444	5,896	97,283	22,112
MIAMI-DADE	2,376,014	588,746	327,227	52,398	121,222	73,735	33,030	579,768	136,706
ORANGE	1,023,023	266,043	97,670	23,678	51,314	30,311	11,679	214,036	51,650
OSCEOLA	231,578	60,590	26,233	5,393	11,577	6,919	2,852	51,158	12,202
PALM BEACH	1,268,548	276,293	271,278	24,590	67,157	42,684	23,132	385,894	88,318
PASCO	429,065	89,124	92,950	7,932	22,992	14,603	7,905	131,836	30,163
PINELLAS	928,032	184,333	193,067	16,406	50,742	32,299	17,296	291,453	67,192
POLK	542,912	133,104	95,300	11,846	27,756	17,293	8,649	147,245	34,112
SANTA ROSA	143,105	34,134	17,179	3,038	7,450	4,513	1,937	34,713	8,291
SARASOTA	366,256	61,127	108,147	5,440	20,668	13,681	8,509	137,701	30,933
SEMINOLE	401,619	97,357	43,250	8,665	20,841	12,549	5,196	94,298	22,685
ST. LUCIE	241,305	52,925	50,872	4,710	12,725	8,058	4,325	72,188	16,522
VOLUSIA	490,055	98,818	102,110	8,795	26,551	16,818	8,944	150,246	34,545
WAKULLA	28,212	6,281	3,381	559	1,497	903	382	6,864	1,641
TOTALS	**15,742,133**	**3,635,218**	**2,606,547**	**323,534**	**821,553**	**508,411**	**245,933**	**4,230,857**	**986,416**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Florida
5526 Arlington Road
Jacksonville, FL 32211-5216
(904) 743-2933 www.lungusa.org/florida

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
LEON	1	0	0	0.3	B
MANATEE	4	0	0	1.3	C
MARION	1	0	0	0.3	B
MIAMI-DADE	2	0	0	0.7	B
ORANGE	4	0	0	1.3	C
OSCEOLA	0	0	0	0.0	A
PALM BEACH	0	0	0	0.0	A
PASCO	2	0	0	0.7	B
PINELLAS	0	0	0	0.0	A
POLK	1	0	0	0.3	B
SANTA ROSA	4	0	0	1.3	C
SARASOTA	8	0	0	2.7	D
SEMINOLE	0	0	0	0.0	A
ST. LUCIE	0	0	0	0.0	A
VOLUSIA	0	0	0	0.0	A
WAKULLA	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LEON	2	0	0	0.7	B	12.6	PASS
MANATEE	1	0	0	0.3	B	8.8	PASS
MARION	2	0	0	0.7	B	10.1	PASS
MIAMI-DADE	2	0	0	0.7	B	9.5	PASS
ORANGE	4	0	0	1.3	C	9.8	PASS
OSCEOLA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PALM BEACH	0	0	0	0.0	A	7.8	PASS
PASCO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PINELLAS	4	0	0	1.3	C	9.8	PASS
POLK	1	0	0	0.3	B	9.7	PASS
SANTA ROSA	*	*	*	*	*	DNC	INC
SARASOTA	1	0	0	0.3	B	8.9	PASS
SEMINOLE	1	0	0	0.3	B	9.4	PASS
ST. LUCIE	1	0	0	0.3	B	8.7	PASS
VOLUSIA	1	0	0	0.3	B	9.2	PASS
WAKULLA	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Leon and Polk Counties grade each dropped from an A to a B.
- Broward County's grade improved from a B to an A.
- Orange County's grade dropped from a B to a C.
- Hillsborough County's grade dropped from a C to a D.

PM
- Santa Rosa County no longer has sufficient data to grade.
- Broward County's grade improved from a B to an A.
- Alachua, Brevard, Lee, Manatee, Marion, Polk, St. Lucie, Sarasota, Seminole and Volusia Counties each dropped their grade from an A to a B.
- Miami-Dade County's grade improved from a C to a B.
- Hillsborough, Orange and Pinellas Counties each dropped their grade from an A to a C.
- Duval County's grade dropped from an A to a D.
- Escambia County's grade dropped from a B to an F.
- Manatee County now has sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

GEORGIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BIBB	154,918	41,620	19,593	3,704	8,256	4,664	2,045	36,163	8,565
CHATHAM	238,410	59,900	30,032	5,331	13,012	7,277	3,121	55,333	13,115
CHATTOOGA	26,570	5,975	3,671	532	1,501	844	371	6,532	1,542
CLARKE	104,439	18,079	8,859	1,609	6,311	3,213	1,010	19,013	4,620
CLAYTON	267,966	79,988	18,329	7,119	13,710	7,326	2,498	47,307	11,597
COBB	663,818	172,958	53,272	15,393	35,771	19,588	7,164	134,034	32,713
COLUMBIA	103,812	27,550	9,457	2,452	5,555	3,103	1,213	22,366	5,423
COWETA	109,903	29,655	9,505	2,639	5,850	3,190	1,186	21,965	5,328
DAWSON	19,731	4,673	2,068	416	1,097	608	242	4,401	1,059
DEKALB	677,959	169,656	55,411	15,099	37,057	20,106	7,249	135,529	33,038
DOUGHERTY	94,882	26,143	11,010	2,327	5,010	2,800	1,181	21,068	5,013
DOUGLAS	112,760	30,750	7,920	2,737	5,978	3,232	1,123	21,287	5,227
FAYETTE	104,248	25,370	10,415	2,258	5,740	3,288	1,355	24,834	6,013
FLOYD	94,198	23,266	13,003	2,071	5,170	2,917	1,302	22,832	5,380
FULTON	915,623	228,319	69,999	20,320	50,093	27,265	9,713	183,023	44,821
GLYNN	71,874	17,754	10,300	1,580	3,942	2,261	1,042	18,221	4,292

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Southeast Region
2452 Spring Road
Smyrna, GA 30080-3862
(770) 434-5864 www.lungusa.org/georgia

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BIBB	8	0	0	2.7	D
CHATHAM	0	0	0	0.0	A
CHATTOOGA	*	*	*	*	*
CLARKE	5	0	0	1.7	C
CLAYTON	DNC	DNC	DNC	DNC	DNC
COBB	4	1	0	1.8	C
COLUMBIA	*	*	*	*	*
COWETA	2	0	0	0.7	B
DAWSON	2	0	0	0.7	B
DEKALB	15	1	0	5.5	F
DOUGHERTY	DNC	DNC	DNC	DNC	DNC
DOUGLAS	13	0	0	4.3	F
FAYETTE	7	0	0	2.3	D
FLOYD	DNC	DNC	DNC	DNC	DNC
FULTON	15	3	0	6.5	F
GLYNN	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BIBB	7	0	0	2.3	D	16.1	FAIL
CHATHAM	5	0	0	1.7	C	13.9	PASS
CHATTOOGA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARKE	3	0	0	1.0	C	*	INC
CLAYTON	12	0	0	4.0	F	16.5	FAIL
COBB	10	0	0	3.3	F	16	FAIL
COLUMBIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COWETA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DAWSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DEKALB	27	0	0	9.0	F	15.6	FAIL
DOUGHERTY	5	0	0	1.7	C	14	PASS
DOUGLAS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FAYETTE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FLOYD	9	0	0	3.0	D	16.2	FAIL
FULTON	30	0	0	10.0	F	17.4	FAIL
GLYNN	3	0	0	1.0	C	12.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

GEORGIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
GWINNETT	726,273	203,160	41,908	18,081	38,137	20,405	6,660	128,834	31,944
HALL	165,771	45,511	15,401	4,050	8,770	4,760	1,796	32,925	7,937
HENRY	167,848	46,626	11,204	4,150	8,842	4,703	1,568	29,885	7,347
HOUSTON	126,163	33,634	12,552	2,993	6,745	3,718	1,461	26,614	6,402
LOWNDES	96,705	24,819	9,199	2,209	5,244	2,821	1,049	19,215	4,627
MURRAY	40,812	10,948	3,547	974	2,177	1,183	438	8,101	1,964
MUSCOGEE	185,271	50,541	21,566	4,498	9,821	5,472	2,298	41,005	9,753
PAULDING	112,411	33,056	6,244	2,942	5,791	3,025	936	18,178	4,505
RICHMOND	195,769	52,924	21,622	4,710	10,412	5,783	2,376	42,696	10,196
ROCKDALE	78,545	20,843	7,275	1,855	4,204	2,340	914	16,815	4,071
SUMTER	32,912	8,997	4,285	801	1,743	979	431	7,579	1,788
WALKER	63,890	14,844	8,769	1,321	3,574	2,026	902	15,893	3,756
WASHINGTON	20,118	5,138	2,708	457	1,091	621	279	4,902	1,158
WILKINSON	10,143	2,592	1,381	231	550	313	141	2,480	585
TOTALS	**5,783,742**	**1,515,289**	**500,505**	**134,861**	**311,157**	**169,831**	**63,063**	**1,169,033**	**283,777**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Southeast Region
2452 Spring Road
Smyrna, GA 30080-3862
(770) 434-5864 www.lungusa.org/georgia

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
GWINNETT	10	1	0	3.8	F
HALL	DNC	DNC	DNC	DNC	DNC
HENRY	10	1	0	3.8	F
HOUSTON	DNC	DNC	DNC	DNC	DNC
LOWNDES	DNC	DNC	DNC	DNC	DNC
MURRAY	6	0	0	2.0	C
MUSCOGEE	1	0	0	0.3	B
PAULDING	4	0	0	1.3	C
RICHMOND	4	0	0	1.3	C
ROCKDALE	11	0	0	3.7	F
SUMTER	1	0	0	0.3	B
WALKER	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC
WILKINSON	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
GWINNETT	6	0	0	2.0	C	16.2	FAIL
HALL	4	0	0	1.3	C	14.4	PASS
HENRY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HOUSTON	0	0	0	0.0	A	13.7	PASS
LOWNDES	0	0	0	0.0	A	12.3	PASS
MURRAY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MUSCOGEE	6	1	0	2.5	D	14.7	PASS
PAULDING	5	0	0	1.7	C	13.9	PASS
RICHMOND	7	0	0	2.3	D	15.5	FAIL
ROCKDALE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SUMTER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WALKER	3	0	0	1.0	C	15.8	FAIL
WASHINGTON	2	0	0	0.7	B	14.8	PASS
WILKINSON	9	0	0	3.0	D	15	PASS

Ozone
- Chatham County's grade improved from a B to an A.
- Dawson County's grade improved from a C to a B.
- Clarke and Richmond Counties each improved its grade from a D to a C.
- Coweta County's grade improved their grade from an F to a B.
- Bibb County's grade improved from an F to a D.
- Paulding, Murray and Cobb Counties each improved its grade from an F to a C.
- Columbia County now has ozone monitors but not enough data to grade.
- Cherokee County no longer has ozone monitors.

PM
- Clarke County's grade dropped from an A to a C.
- Chatham, Glynn, Hall, Paulding, Walker, Dougherty and Gwinnett Counties each dropped its grade from a B to a C.
- Richmond County's grade dropped from a B to a D.
- Floyd, Bibb, Wilkinson and Muscogee Counties each dropped its grade from a C to a D.
- Clayton County's grade dropped from a B to an F.
- Cobb County's grade dropped from a C to an F.
- De Kalb County's grade dropped from a D to an F.
- Clarke County no longer has sufficient data to grade annual levels.
- Richmond County's grade dropped from passing to failing its annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

HAWAII

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
HAWAII	167,293	42,178	22,269	3,754	9,472	5,256	2,385	42,140	9,990
HONOLULU	905,266	208,845	127,364	18,587	52,559	28,901	13,036	229,059	54,072
MAUI	139,884	33,460	16,051	2,978	8,095	4,420	1,879	33,876	8,122
TOTALS	**1,212,443**	**284,483**	**165,684**	**25,319**	**70,126**	**38,577**	**17,299**	**305,075**	**72,184**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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(808) 537-5966 www.lungusa.org/hawaii

HIGH OZONE DAYS 2003-2005[1]

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

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
HAWAII	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HONOLULU	2	4	0	2.7	D	5.2	PASS
MAUI	0	0	0	0.0	A	4.9	PASS

Ozone
- Hawaii County no longer has sufficient data to grade.

PM
- No changes occurred in ozone grades or monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

IDAHO

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ADA	344,727	87,735	32,528	7,808	18,773	10,332	3,985	73,227	17,704
BANNOCK	78,155	21,285	8,221	1,894	4,135	2,296	926	16,744	4,011
BENEWAH	9,218	2,198	1,484	196	503	302	149	2,588	607
BOISE	7,535	1,691	880	150	425	249	109	1,977	476
BONNER	40,908	8,808	5,706	784	2,318	1,373	636	11,267	2,679
BONNEVILLE	91,856	26,754	9,459	2,381	4,734	2,651	1,085	19,616	4,703
BOUNDARY	10,619	2,667	1,442	237	574	338	156	2,758	654
BUTTE	2,808	756	464	67	146	89	45	782	183
CANYON	164,593	48,098	16,617	4,281	8,471	4,639	1,826	33,005	7,898
CARIBOU	7,131	1,933	1,013	172	374	220	104	1,818	428
ELMORE	28,634	7,886	2,326	702	1,520	803	281	5,226	1,268
FRANKLIN	12,371	4,065	1,360	362	601	338	143	2,544	604
GEM	16,273	4,022	2,575	358	877	516	248	4,284	1,001
IDAHO	15,697	3,269	2,802	291	887	540	275	4,731	1,105
KOOTENAI	127,668	31,077	16,663	2,766	6,978	4,007	1,772	31,391	7,446
LATAH	34,714	6,306	3,412	561	2,077	1,105	398	7,341	1,774
LEMHI	7,909	1,696	1,425	151	443	272	140	2,407	562
NEZ PERCE	37,931	8,246	6,436	734	2,120	1,254	612	10,536	2,458
POWER	7,753	2,305	861	205	395	225	96	1,727	412
SHOSHONE	13,157	2,694	2,489	240	744	456	237	4,050	942
TWIN FALLS	69,419	17,817	9,877	1,586	3,709	2,138	977	17,062	4,011
VALLEY	8,332	1,637	1,264	146	482	290	139	2,446	580
TOTALS	**1,137,408**	**292,945**	**129,304**	**26,072**	**61,284**	**34,435**	**14,341**	**257,527**	**61,508**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADA	0	0	0	0.0	A
BANNOCK	DNC	DNC	DNC	DNC	DNC
BENEWAH	DNC	DNC	DNC	DNC	DNC
BOISE	DNC	DNC	DNC	DNC	DNC
BONNER	DNC	DNC	DNC	DNC	DNC
BONNEVILLE	DNC	DNC	DNC	DNC	DNC
BOUNDARY	DNC	DNC	DNC	DNC	DNC
BUTTE	0	0	0	0.0	A
CANYON	0	0	0	0.0	A
CARIBOU	DNC	DNC	DNC	DNC	DNC
ELMORE	0	0	0	0.0	A
FRANKLIN	DNC	DNC	DNC	DNC	DNC
GEM	DNC	DNC	DNC	DNC	DNC
IDAHO	DNC	DNC	DNC	DNC	DNC
KOOTENAI	*	*	*	*	*
LATAH	DNC	DNC	DNC	DNC	DNC
LEMHI	DNC	DNC	DNC	DNC	DNC
NEZ PERCE	DNC	DNC	DNC	DNC	DNC
POWER	DNC	DNC	DNC	DNC	DNC
SHOSHONE	DNC	DNC	DNC	DNC	DNC
TWIN FALLS	DNC	DNC	DNC	DNC	DNC
VALLEY	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADA	2	0	0	0.7	B	8.3	PASS
BANNOCK	1	1	0	0.8	B	7.6	PASS
BENEWAH	6	1	0	2.5	D	*	INC
BOISE	*	*	*	*	*	*	INC
BONNER	*	*	*	*	*	*	INC
BONNEVILLE	2	0	0	0.7	B	*	INC
BOUNDARY	0	0	0	0.0	A	*	INC
BUTTE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CANYON	9	0	0	3.0	D	8.6	PASS
CARIBOU	*	*	*	*	*	*	INC
ELMORE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FRANKLIN	*	*	*	*	*	*	INC
GEM	*	*	*	*	*	*	INC
IDAHO	0	0	0	0.0	A	*	INC
KOOTENAI	*	*	*	*	*	*	INC
LATAH	*	*	*	*	*	*	INC
LEMHI	3	0	0	1.0	C	*	INC
NEZ PERCE	*	*	*	*	*	*	INC
POWER	3	0	0	1.0	C	*	INC
SHOSHONE	12	0	0	4.0	F	12.1	PASS
TWIN FALLS	*	*	*	*	*	*	INC
VALLEY	*	*	*	*	*	*	INC

Ozone
- Ada County's grade improved from a B to an A.
- Boise, Bonner, Caribou and Nez Perce Counties each no longer have sufficient data to grade.
- Kootenai County now has ozone monitors but not enough data to grade.

PM
- Power County no longer has sufficient data to grade their annual levels.
- Ada and Bannock Counties each improved their grade from a C to a B.
- Power County's grade dropped from a B to a C.
- Lemhi and Benewah Counties both have sufficient data to grade.
- Shoshone County's grade dropped from a C to an F.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

ILLINOIS

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ADAMS	67,040	15,775	11,627	1,404	3,530	2,165	1,073	18,342	4,260
CHAMPAIGN	184,905	37,143	18,499	3,306	10,137	5,709	2,053	37,671	9,065
CLARK	16,976	3,939	2,891	351	899	551	272	4,658	1,085
COOK	5,303,683	1,371,667	620,638	122,078	272,217	160,101	67,175	1,201,153	286,128
DU PAGE	929,113	239,663	95,125	21,330	48,104	28,278	11,518	209,721	50,524
EFFINGHAM	34,581	9,056	4,956	806	1,765	1,064	492	8,580	2,016
HAMILTON	8,301	1,825	1,577	162	447	278	144	2,442	565
JERSEY	22,456	5,016	3,282	446	1,206	724	330	5,767	1,358
KANE	482,113	141,611	38,875	12,603	23,645	13,523	4,970	92,423	22,471
LAKE	702,682	198,619	63,180	17,677	35,109	20,374	7,904	145,466	35,217
LA SALLE	112,604	26,806	17,877	2,386	5,923	3,599	1,719	29,709	6,946
MACON	110,167	26,426	17,271	2,352	5,802	3,544	1,703	29,521	6,920
MACOUPIN	49,111	11,054	8,231	984	2,627	1,605	781	13,445	3,136

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAMS	0	0	0	0.0	A
CHAMPAIGN	0	0	0	0.0	A
CLARK	0	0	0	0.0	A
COOK	14	2	0	5.7	F
DU PAGE	1	0	0	0.3	B
EFFINGHAM	0	0	0	0.0	A
HAMILTON	0	0	0	0.0	A
JERSEY	6	0	0	2.0	C
KANE	5	0	0	1.7	C
LAKE	6	0	0	2.0	C
LA SALLE	DNC	DNC	DNC	DNC	DNC
MACON	0	0	0	0.0	A
MACOUPIN	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	3	0	0	1.0	C	12.9	PASS
CHAMPAIGN	6	0	0	2.0	C	12.6	PASS
CLARK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COOK	56	0	0	18.7	F	17.2	FAIL
DU PAGE	6	0	0	2.0	C	13.8	PASS
EFFINGHAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMILTON	*	*	*	*	*	*	INC
JERSEY	*	*	*	*	*	*	INC
KANE	4	0	0	1.3	C	13.5	PASS
LAKE	3	0	0	1.0	C	11.8	PASS
LA SALLE	4	0	0	1.3	C	12.8	PASS
MACON	4	0	0	1.3	C	13.3	PASS
MACOUPIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MADISON	264,309	62,521	36,769	5,564	13,960	8,352	3,750	65,908	15,556
MCHENRY	303,990	83,869	27,142	7,464	15,317	8,859	3,398	62,640	15,174
MCLEAN	159,013	35,356	15,548	3,147	8,518	4,838	1,781	32,691	7,879
PEORIA	182,328	45,718	25,314	4,069	9,451	5,668	2,567	45,025	10,616
RANDOLPH	33,122	6,945	4,940	618	1,806	1,081	490	8,560	2,013
ROCK ISLAND	147,808	34,345	22,880	3,057	7,845	4,758	2,246	38,987	9,142
SANGAMON	192,789	46,413	26,165	4,131	10,161	6,102	2,747	48,457	11,470
ST CLAIR	260,067	68,306	32,927	6,079	13,269	7,879	3,437	60,832	14,412
WILL	642,813	180,055	52,038	16,025	32,112	18,313	6,663	124,111	30,194
WINNEBAGO	288,695	74,114	36,771	6,596	14,865	8,844	3,871	68,564	16,255
TOTALS	**10,498,666**	**2,726,242**	**1,184,523**	**242,636**	**538,714**	**316,209**	**131,083**	**2,354,675**	**562,403**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
MADISON	18	0	0	6.0	F
MCHENRY	4	0	0	1.3	C
MCLEAN	0	0	0	0.0	A
PEORIA	0	0	0	0.0	A
RANDOLPH	0	0	0	0.0	A
ROCK ISLAND	0	0	0	0.0	A
SANGAMON	0	0	0	0.0	A
ST CLAIR	6	3	0	3.5	F
WILL	1	0	0	0.3	B
WINNEBAGO	0	0	0	0.0	A

Ozone
- Champaign, Adams, Effingham and Winnebago Counties each improved their grade from a B to an A.
- Du Page County's grade improved from a C to a B.
- Peoria, Macon and McLean Counties each improved their grade from a C to an A.
- Macoupin County's grade improved from a C to a B.
- Randolph and Clark Counties each improved their grade from a C to an A.
- Hamilton County's grade improved from a D to an A.
- Will County's grade improved from an F to a B.
- Jersey and Lake Counties each improved their grade from an F to a C.

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MADISON	28	0	0	9.3	F	17.7	FAIL
MCHENRY	6	0	0	2.0	C	12.5	PASS
MCLEAN	3	0	0	1.0	C	*	INC
PEORIA	8	0	0	2.7	D	13.7	PASS
RANDOLPH	1	0	0	0.3	B	13.2	PASS
ROCK ISLAND	3	0	0	1.0	C	12.3	PASS
SANGAMON	6	0	0	2.0	C	13.3	PASS
ST CLAIR	10	0	0	3.3	F	15.6	FAIL
WILL	6	0	0	2.0	C	13.7	PASS
WINNEBAGO	6	0	0	2.0	C	DNC	INC

PM
- Randolph County's grade dropped from an A to a B.
- Adams, Champaign, Du Page, La Salle, McHenry, Macon, Rock Island and Sangamon Counties each dropped their grade from an A to a C.
- Kane, Lake, McLean, Winnebago and Will Counties each dropped their grade from a B to a C.
- Peoria County's grade dropped from a B to a D.
- St. Clair County's grade dropped from a C to an F.
- Madison County's grade dropped from a D to an F.
- Hamilton County now has PM 24-hr and PM Annual monitors but not enough data to grade.
- McLean and Winnebago Counties no longer have sufficient data to grade their annual levels.
- La Salle County now has sufficient data to grade its annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

INDIANA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ALLEN	344,006	95,927	38,762	8,538	20,285	10,171	4,294	76,952	18,365
BOONE	52,061	13,878	5,883	1,235	3,126	1,572	665	11,946	2,856
CARROLL	20,426	5,047	2,793	449	1,256	643	292	5,145	1,217
CLARK	101,592	24,669	12,616	2,196	6,285	3,167	1,365	24,325	5,787
DELAWARE	116,362	24,542	16,236	2,184	7,465	3,726	1,615	28,416	6,701
DUBOIS	40,858	10,591	5,460	943	2,469	1,258	565	9,957	2,354
ELKHART	195,362	56,212	21,478	5,003	11,363	5,652	2,347	42,078	10,038
FLOYD	71,997	17,890	9,000	1,592	4,428	2,254	991	17,648	4,201
GIBSON	33,408	8,074	4,951	719	2,064	1,060	494	8,612	2,024
GREENE	33,479	8,089	5,012	720	2,069	1,067	501	8,723	2,050
HAMILTON	240,685	70,245	18,248	6,252	13,990	6,774	2,452	45,935	11,216
HANCOCK	63,138	15,974	7,457	1,422	3,861	1,949	835	14,960	3,571
HENDRICKS	127,483	33,109	12,616	2,947	7,727	3,805	1,497	27,320	6,582
HENRY	47,244	11,186	7,572	996	2,937	1,530	742	12,840	3,007
HOWARD	84,977	21,807	11,771	1,941	5,157	2,650	1,218	21,391	5,051
HUNTINGTON	38,236	9,427	5,666	839	2,346	1,204	561	9,772	2,295

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALLEN	12	0	0	4.0	F
BOONE	8	0	0	2.7	D
CARROLL	2	0	0	0.7	B
CLARK	7	0	0	2.3	D
DELAWARE	7	0	0	2.3	D
DUBOIS	DNC	DNC	DNC	DNC	DNC
ELKHART	9	0	0	3.0	D
FLOYD	6	0	0	2.0	C
GIBSON	*	*	*	*	*
GREENE	4	0	0	1.3	C
HAMILTON	8	1	0	3.2	D
HANCOCK	5	1	0	2.2	D
HENDRICKS	3	0	0	1.0	C
HENRY	DNC	DNC	DNC	DNC	DNC
HOWARD	DNC	DNC	DNC	DNC	DNC
HUNTINGTON	2	1	0	1.2	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALLEN	7	0	0	2.3	D	14.1	PASS
BOONE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARROLL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARK	9	0	0	3.0	D	16.5	FAIL
DELAWARE	8	1	0	3.2	D	14.2	PASS
DUBOIS	14	0	0	4.7	F	15.7	FAIL
ELKHART	8	0	0	2.7	D	DNC	INC
FLOYD	8	0	0	2.7	D	15	PASS
GIBSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMILTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HANCOCK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENDRICKS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENRY	6	0	0	2.0	C	13.6	PASS
HOWARD	5	0	0	1.7	C	14.3	PASS
HUNTINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

INDIANA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
JACKSON	42,237	10,731	5,685	955	2,569	1,303	583	10,258	2,423
JOHNSON	128,436	33,376	14,554	2,970	7,769	3,873	1,611	28,924	6,907
KNOX	38,366	8,565	6,035	762	2,424	1,246	587	10,174	2,383
KOSCIUSKO	76,072	20,363	9,532	1,812	4,549	2,303	1,012	17,934	4,255
LAKE	493,297	130,958	63,423	11,655	29,600	15,075	6,723	118,902	28,184
LA PORTE	110,512	26,542	15,051	2,362	6,855	3,494	1,571	27,691	6,551
MADISON	130,412	30,786	19,872	2,740	8,113	4,177	1,964	34,143	8,014
MARION	863,133	234,799	94,240	20,897	51,340	25,482	10,464	188,300	45,009
MORGAN	69,778	18,005	7,679	1,602	4,244	2,135	895	16,156	3,875
PERRY	19,032	4,059	2,847	361	1,219	622	285	4,980	1,172
PORTER	157,772	37,937	17,743	3,376	9,822	4,936	2,064	37,270	8,938
POSEY	26,852	6,597	3,440	587	1,660	852	382	6,791	1,616
ST JOSEPH	266,160	69,087	34,718	6,149	16,062	8,103	3,568	62,940	14,881
SHELBY	43,766	11,085	5,491	987	2,672	1,355	594	10,560	2,510
SPENCER	20,528	5,048	2,791	449	1,265	650	296	5,215	1,235
TIPPECANOE	153,875	31,955	14,484	2,844	9,929	4,686	1,643	30,358	7,330
VANDERBURGH	173,187	40,731	25,527	3,625	10,780	5,498	2,525	44,037	10,348
VIGO	102,592	23,583	13,892	2,099	6,436	3,238	1,419	25,030	5,916
WARRICK	56,362	14,021	6,435	1,248	3,474	1,761	752	13,544	3,246
TOTALS	**4,583,683**	**1,184,895**	**548,960**	**105,456**	**277,610**	**139,273**	**59,373**	**1,059,228**	**252,107**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
JACKSON	1	0	0	0.3	B
JOHNSON	3	0	0	1.0	C
KNOX	DNC	DNC	DNC	DNC	DNC
KOSCIUSKO	*	*	*	*	*
LA PORTE	7	0	0	2.3	D
LAKE	11	0	0	3.7	F
MADISON	9	0	0	3.0	D
MARION	7	0	0	2.3	D
MORGAN	2	0	0	0.7	B
PERRY	*	*	*	*	*
PORTER	9	1	0	3.5	F
POSEY	2	0	0	0.7	B
SHELBY	4	0	0	1.3	C
SPENCER	DNC	DNC	DNC	DNC	DNC
ST JOSEPH	11	0	0	3.7	F
TIPPECANOE	DNC	DNC	DNC	DNC	DNC
VANDERBURGH	3	0	0	1.0	C
VIGO	3	0	0	1.0	C
WARRICK	5	0	0	1.7	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
JACKSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KNOX	10	0	0	3.3	F	14.1	PASS
KOSCIUSKO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LA PORTE	7	0	0	2.3	D	13.1	PASS
LAKE	32	0	0	10.7	F	17.5	FAIL
MADISON	8	0	0	2.7	D	14.4	PASS
MARION	41	0	0	13.7	F	17.8	FAIL
MORGAN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PERRY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PORTER	7	0	0	2.3	D	13.3	PASS
POSEY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SHELBY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SPENCER	4	0	0	1.3	C	14.5	PASS
ST JOSEPH	9	0	0	3.0	D	13.7	PASS
TIPPECANOE	8	0	0	2.7	D	14.1	PASS
VANDERBURGH	10	0	0	3.3	F	15.1	FAIL
VIGO	11	0	0	3.7	F	14.1	PASS
WARRICK	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Gibson County no longer has sufficient data to grade.
- Jackson County's grade improved from an F to a B.
- Vigo, Hendricks, Huntington and Johnson Counties each improved their grade from an F to a C.
- Carroll, Posey and Morgan Counties each improved their grades from an F to a B.
- Delaware County's grade improved from an F to a D.
- Floyd, Greene, Vanderburgh and Shelby Counties each improved their grade from an F to a C.
- Boone, Clark and Elkhart Counties each improved their grades from an F to a D.
- Warrick County's grade improved from an F to a C.
- Hamilton, Hancock, Madison, Marion and La Porte Counties each improved their grade from an F to a D.

PM
- Spencer County's grade dropped from an A to a C.
- Henry and Howard Counties each dropped their grades from a B to a C.
- La Porte, Allen, Delaware, Elkhart, Madison, St. Joseph and Tippecanoe Counties each dropped their grade from a B to a D.
- Floyd, Porter and Clark Counties each dropped their grade from a C to a D.
- Knox County's grade dropped from a B to an F.
- Vigo, Dubois and Vanderburgh Counties each dropped their grade from a C to an F.
- Elkhart County no longer has sufficient data to grade their annual levels.
- Vanderburgh County's grade went from passing to failing their annual levels.
- Knox and Tippecanoe Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

IOWA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
BLACK HAWK	125,891	25,902	17,976	2,305	7,260	4,097	1,808	31,788	7,498
BREMER	23,677	4,824	3,898	429	1,357	792	378	6,542	1,531
CERRO GORDO	44,645	9,467	7,854	843	2,518	1,501	748	12,846	2,994
CLINTON	49,717	11,213	7,957	998	2,765	1,628	782	13,544	3,174
EMMET	10,534	2,317	1,964	206	588	351	180	3,060	709
HARRISON	15,884	3,592	2,699	320	881	522	258	4,427	1,033
JOHNSON	117,067	21,214	9,440	1,888	7,122	3,660	1,201	22,724	5,555
LINN	198,903	47,495	25,052	4,227	10,981	6,227	2,688	47,823	11,367
MONTGOMERY	11,313	2,550	2,152	227	624	380	199	3,372	781
MUSCATINE	42,756	10,523	5,382	937	2,331	1,337	585	10,415	2,477
PALO ALTO	9,697	2,038	2,058	181	545	331	179	3,000	689
POLK	401,006	98,938	43,962	8,805	22,002	12,268	5,003	90,401	21,663
POTTAWATTAMIE	89,738	21,334	12,153	1,899	4,943	2,842	1,272	22,442	5,312
SCOTT	160,998	39,085	19,505	3,479	8,825	5,043	2,171	38,820	9,260
STORY	79,952	12,607	8,423	1,122	5,001	2,573	907	16,632	3,996
VAN BUREN	7,786	1,684	1,501	150	435	263	137	2,322	537
WARREN	42,981	9,857	5,282	877	2,401	1,364	583	10,427	2,486
WOODBURY	102,605	27,090	13,157	2,411	5,467	3,121	1,378	24,370	5,772
WRIGHT	13,647	3,036	2,783	270	753	463	249	4,201	968
TOTALS	**1,548,797**	**354,766**	**193,198**	**31,574**	**86,800**	**48,764**	**20,706**	**369,156**	**87,803**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Iowa
5601 Douglas Avenue
Des Moines, IA 50310-1800
(520) 323-1812 www.lungusa.org/iowa

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BLACK HAWK	DNC	DNC	DNC	DNC	DNC
BREMER	0	0	0	0.0	A
CERRO GORDO	DNC	DNC	DNC	DNC	DNC
CLINTON	2	0	0	0.7	B
EMMET	DNC	DNC	DNC	DNC	DNC
HARRISON	0	0	0	0.0	A
JOHNSON	DNC	DNC	DNC	DNC	DNC
LINN	0	0	0	0.0	A
MONTGOMERY	0	0	0	0.0	A
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	0	0	0	0.0	A
STORY	0	0	0	0.0	A
VAN BUREN	1	0	0	0.3	B
WARREN	0	0	0	0.0	A
WOODBURY	DNC	DNC	DNC	DNC	DNC
WRIGHT	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BLACK HAWK	5	0	0	1.7	C	11.2	PASS
BREMER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CERRO GORDO	*	*	*	*	*	*	INC
CLINTON	10	0	0	3.3	F	12.6	PASS
EMMET	*	*	*	*	*	*	INC
HARRISON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSON	9	0	0	3.0	D	12.1	PASS
LINN	17	0	0	5.7	F	11	PASS
MONTGOMERY	2	0	0	0.7	B	9.8	PASS
MUSCATINE	12	0	0	4.0	F	13	PASS
PALO ALTO	*	*	*	*	*	*	INC
POLK	10	0	0	3.3	F	10.6	PASS
POTTAWATTAMIE	2	0	0	0.7	B	10.9	PASS
SCOTT	18	0	0	6.0	F	12	PASS
STORY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VAN BUREN	1	0	0	0.3	B	*	INC
WARREN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WOODBURY	1	0	0	0.3	B	10.3	PASS
WRIGHT	2	0	0	0.7	B	10.5	PASS

Ozone
- Harrison and Scott Counties each improved their grade from a B to an A.

PM
- Emmet and Cerro Gordo Counties no longer have sufficient data to grade.
- Montgomery, Pottawattamie, Van Buren and Woodbury Counties each dropped their grade from an A to a B.
- Wright County now has sufficient data to grade.
- Black Hawk County's grade dropped from an A to a C.
- Johnson County's grade dropped from an A to a D.
- Clinton, Polk, Scott, Linn and Muscatine Counties each dropped their grade from a B to an F.
- Palo Alto County now has PM 24-hr and PM Annual monitors, but not enough data to grade.
- Story County no longer has PM 24-hr and PM Annual monitors.
- Emmet County no longer has sufficient data to grade their annual levels.
- Montgomery and Wright Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

KANSAS

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
DOUGLAS	102,914	18,581	8,723	1,654	5,877	3,199	1,050	19,748	4,808
JOHNSON	506,562	127,484	51,541	11,346	26,512	15,409	6,168	112,435	27,084
LEAVENWORTH	73,113	17,838	7,389	1,588	3,863	2,233	881	16,089	3,877
LINN	9,914	2,188	1,710	195	529	329	163	2,808	655
SEDGWICK	466,061	125,494	52,551	11,169	23,672	13,891	5,801	104,071	24,842
SHAWNEE	172,365	41,421	23,999	3,686	9,050	5,461	2,480	43,596	10,298
SUMNER	24,797	6,209	3,819	553	1,280	791	382	6,635	1,557
TREGO	3,050	626	739	56	163	108	63	1,041	237
WYANDOTTE	155,750	43,402	16,627	3,863	7,818	4,558	1,865	33,620	8,045
TOTALS	**1,514,526**	**383,243**	**167,098**	**34,109**	**78,764**	**45,980**	**18,854**	**340,043**	**81,404**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
4300 SW Drury Lane
Topeka, KS 66604-2419
(785) 272-9290 www.lungusa.org/kansas

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
DOUGLAS	3	0	0	1.0	C
JOHNSON	3	1	0	1.5	C
LEAVENWORTH	3	0	0	1.0	C
LINN	0	0	0	0.0	A
SEDGWICK	1	0	0	0.3	B
SHAWNEE	DNC	DNC	DNC	DNC	DNC
SUMNER	0	0	0	0.0	A
TREGO	0	0	0	0.0	A
WYANDOTTE	4	1	0	1.8	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
DOUGLAS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSON	4	0	0	1.3	C	11.1	PASS
LEAVENWORTH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LINN	1	0	0	0.3	B	10.5	PASS
SEDGWICK	2	0	0	0.7	B	11	PASS
SHAWNEE	4	0	0	1.3	C	10.9	PASS
SUMNER	1	0	0	0.3	B	10.3	PASS
TREGO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WYANDOTTE	7	0	0	2.3	D	13.4	PASS

Ozone
- Sumner County's grade improved from a B to an A.
- Sedgwick County's grade improved from a C to a B.
- Douglas, Johnson and Leavenworth Counties now have sufficient data to grade.
- Jefferson County no longer has Ozone monitors.

PM
- Linn and Sumner Counties each dropped their grades from an A to a B.
- Johnson and Shawnee Counties each dropped their grades from a B to a C.
- Wyandotte County's grade dropped from a B to a D.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

KENTUCKY

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BELL	29,665	6,757	4,142	601	2,011	952	429	7,550	1,785
BOONE	106,272	28,329	8,913	2,521	6,751	3,108	1,150	21,389	5,202
BOYD	49,594	10,487	7,735	933	3,448	1,651	780	13,599	3,198
BULLITT	68,474	16,660	6,083	1,483	4,501	2,090	794	14,720	3,578
CAMPBELL	87,251	21,143	11,141	1,882	5,787	2,725	1,187	21,067	5,002
CARTER	27,306	6,285	3,626	559	1,840	866	380	6,726	1,594
CHRISTIAN	70,145	21,829	7,032	1,943	4,184	1,914	752	13,555	3,236
DAVIESS	93,060	22,954	13,213	2,043	6,164	2,931	1,347	23,600	5,564
EDMONSON	12,030	2,585	1,738	230	830	394	179	3,154	745
FAYETTE	268,080	57,241	27,965	5,094	18,279	8,413	3,249	59,320	14,279
FRANKLIN	48,207	10,505	6,034	935	3,303	1,562	674	12,061	2,878
GRAVES	37,625	8,894	5,860	792	2,531	1,207	573	9,942	2,330
GREENUP	37,184	8,065	5,861	718	2,571	1,236	591	10,279	2,416
HANCOCK	8,613	2,170	1,010	193	565	267	115	2,056	491
HARDIN	96,947	25,261	10,555	2,248	6,249	2,916	1,196	21,585	5,169

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Kentucky
P.O. Box 9067
Louisville, KY 40209-0067
(502) 363-2652 www.lungusa.org/kentucky

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BELL	0	0	0	0.0	A
BOONE	1	0	0	0.3	B
BOYD	6	1	0	2.5	D
BULLITT	1	0	0	0.3	B
CAMPBELL	12	1	0	4.5	F
CARTER	2	0	0	0.7	B
CHRISTIAN	3	0	0	1.0	C
DAVIESS	2	0	0	0.7	B
EDMONSON	1	0	0	0.3	B
FAYETTE	1	0	0	0.3	B
FRANKLIN	DNC	DNC	DNC	DNC	DNC
GRAVES	*	*	*	*	*
GREENUP	1	0	0	0.3	B
HANCOCK	1	0	0	0.3	B
HARDIN	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BELL	1	0	0	0.3	B	14.2	PASS
BOONE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BOYD	6	0	0	2.0	C	14.4	PASS
BULLITT	6	0	0	2.0	C	14.8	PASS
CAMPBELL	5	0	0	1.7	C	13.7	PASS
CARTER	4	0	0	1.3	C	12	PASS
CHRISTIAN	5	0	0	1.7	C	13.2	PASS
DAVIESS	7	0	0	2.3	D	*	INC
EDMONSON	*	*	*	*	*	*	INC
FAYETTE	5	0	0	1.7	C	15.1	FAIL
FRANKLIN	5	0	0	1.7	C	13.4	PASS
GRAVES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENUP	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HANCOCK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HARDIN	4	0	0	1.3	C	13.4	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

KENTUCKY

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
HENDERSON	45,573	10,599	6,018	943	3,070	1,458	648	11,491	2,728
JEFFERSON	699,827	167,545	93,164	14,912	46,704	22,123	9,855	174,254	41,297
JESSAMINE	43,463	10,719	4,370	954	2,844	1,316	515	9,406	2,265
KENTON	153,665	39,709	16,811	3,534	9,949	4,665	1,932	34,875	8,358
LAUREL	56,338	13,610	6,504	1,211	3,731	1,750	732	13,155	3,145
LIVINGSTON	9,760	1,975	1,498	176	686	329	154	2,694	635
MADISON	77,749	16,702	7,824	1,486	5,275	2,404	899	16,475	3,968
MCCRACKEN	64,698	14,551	10,201	1,295	4,430	2,130	1,023	17,773	4,174
MCLEAN	9,926	2,259	1,446	201	675	323	149	2,621	619
OHIO	23,676	5,407	3,354	481	1,605	762	346	6,077	1,435
OLDHAM	53,533	12,798	4,045	1,139	3,542	1,654	611	11,537	2,836
PERRY	29,452	6,817	3,492	607	1,982	937	399	7,172	1,716
PIKE	66,922	14,580	8,603	1,298	4,593	2,180	954	17,022	4,056
PULASKI	59,200	13,155	9,445	1,171	4,056	1,933	919	15,920	3,728
SCOTT	39,380	9,942	3,312	885	2,544	1,164	422	7,869	1,914
SIMPSON	17,021	4,258	2,223	379	1,118	527	233	4,113	974
TRIGG	13,349	2,865	2,250	255	926	444	217	3,738	873
WARREN	98,960	22,019	10,656	1,960	6,676	3,077	1,208	21,942	5,266
TOTALS	**2,602,945**	**618,675**	**316,124**	**55,062**	**173,420**	**81,409**	**34,613**	**618,738**	**147,456**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Kentucky
P.O. Box 9067
Louisville, KY 40209-0067
(502) 363-2652 www.lungusa.org/kentucky

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
HENDERSON	0	0	0	0.0	A
JEFFERSON	6	0	0	2.0	C
JESSAMINE	1	0	0	0.3	B
KENTON	5	0	0	1.7	C
LAUREL	DNC	DNC	DNC	DNC	DNC
LIVINGSTON	2	0	0	0.7	B
MADISON	DNC	DNC	DNC	DNC	DNC
MCCRACKEN	1	0	0	0.3	B
MCLEAN	1	0	0	0.3	B
OHIO	*	*	*	*	*
OLDHAM	6	0	0	2.0	C
PERRY	0	0	0	0.0	A
PIKE	0	0	0	0.0	A
PULASKI	0	0	0	0.0	A
SCOTT	*	*	*	*	*
SIMPSON	1	0	0	0.3	B
TRIGG	0	0	0	0.0	A
WARREN	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
HENDERSON	5	0	0	1.7	C	*	INC
JEFFERSON	32	0	0	10.7	F	15.8	FAIL
JESSAMINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KENTON	7	0	0	2.3	D	14.5	PASS
LAUREL	1	0	0	0.3	B	12.6	PASS
LIVINGSTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MADISON	2	0	0	0.7	B	13.7	PASS
MCCRACKEN	6	0	0	2.0	C	13.2	PASS
MCLEAN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OHIO	*	*	*	*	*	*	INC
OLDHAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PERRY	1	0	0	0.3	B	13	PASS
PIKE	4	0	0	1.3	C	13.2	PASS
PULASKI	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SCOTT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SIMPSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TRIGG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WARREN	3	0	0	1.0	C	13.8	PASS

Ozone
- Scott and Graves Counties no longer have sufficient data to grade.
- Hardin, Pike and Pulaski Counties each improved their grade from B to an A.
- Perry County's grade improved from a C to an A.
- Fayette, Greenup, Daviess, Carter, Edmonson, Jessamine and McCracken Counties each improved their grade from a C to a B.
- Warren County's grade improved from a D to an A.
- Hancock County's grade improved from a D to a B.
- Henderson and Bell Counties each improved their grades from a D to an A.
- Bullitt, Livingston, McLean and Boone Counties each improved their grade from an F to a B.
- Christian, Oldham, Jefferson and Kenton Counties each improved their grade from an F to a C.
- Boyd County's grade improved from an F to D.
- Ohio County now has ozone monitors but not enough data to grade.
- Muhlenberg County no longer has Ozone monitors.

PM
- Laurel and Perry Counties each dropped their grade from an A to a B.
- Carter, Christian and Warren Counties each dropped their grade from an A to a C.
- Hardin, Boyd, Campbell, Franklin and McCracken Counties each dropped their grade from a B to a C.
- Kenton County's grade dropped from an A to a D.
- Daviess County's grade dropped from a C to a D.
- Ohio County now has PM 24-hr and PM Annual monitors, but not enough data to grade.
- Daviess County no longer has sufficient data to grade their annual levels.
- Fayette County's grade went from passing to failing their annual data.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

LOUISIANA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ASCENSION PARISH	90,501	24,829	6,757	2,210	3,930	2,593	919	17,292	4,230
BEAUREGARD PARISH	34,562	8,660	4,149	771	1,529	1,063	453	8,090	1,927
BOSSIER PARISH	105,541	27,684	11,803	2,464	4,624	3,159	1,303	23,408	5,591
CADDO PARISH	251,309	63,355	33,888	5,639	11,080	7,780	3,481	61,268	14,474
CALCASIEU PARISH	185,419	47,164	22,795	4,198	8,163	5,682	2,448	43,570	10,358
CONCORDIA PARISH	19,273	4,755	2,938	423	848	613	292	5,067	1,189
EAST BATON ROUGE PARISH	411,417	100,912	42,753	8,981	18,476	12,510	4,959	90,172	21,674
GRANT PARISH	19,503	5,024	2,420	447	853	598	260	4,622	1,098
IBERVILLE PARISH	32,386	7,838	3,635	698	1,455	997	409	7,377	1,766
JEFFERSON PARISH	452,824	108,890	56,536	9,691	20,189	14,252	6,200	110,506	26,310
LAFAYETTE PARISH	197,390	50,009	20,002	4,451	8,770	5,934	2,340	42,624	10,255
LAFOURCHE PARISH	92,179	22,750	10,871	2,025	4,114	2,832	1,188	21,270	5,071
LIVINGSTON PARISH	109,206	28,154	9,687	2,506	4,841	3,228	1,207	22,315	5,410
ORLEANS PARISH	454,863	115,425	52,396	10,273	20,069	13,877	5,815	104,339	24,914
OUACHITA PARISH	148,237	39,068	17,854	3,477	6,483	4,448	1,889	33,616	7,985
PLAQUEMINES PARISH	28,995	7,666	2,876	682	1,267	860	340	6,195	1,492
POINTE COUPEE PARISH	22,377	5,443	3,141	484	990	710	326	5,720	1,351
RAPIDES PARISH	128,462	32,732	16,846	2,913	5,644	3,957	1,753	30,951	7,325
ST BERNARD PARISH	65,364	15,575	8,696	1,386	2,924	2,069	920	16,279	3,859
ST CHARLES PARISH	50,633	13,339	4,724	1,187	2,201	1,515	595	10,932	2,646

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

Parish	Orange	Red	Purple	Wgt. Avg	Grade
ASCENSION PARISH	4	0	0	1.3	C
BEAUREGARD PARISH	0	0	0	0.0	A
BOSSIER PARISH	4	0	0	1.3	C
CADDO PARISH	4	0	0	1.3	C
CALCASIEU PARISH	10	0	0	3.3	F
CONCORDIA PARISH	DNC	DNC	DNC	DNC	DNC
EAST BATON ROUGE PARISH	33	5	0	13.5	F
GRANT PARISH	1	0	0	0.3	B
IBERVILLE PARISH	25	2	0	9.3	F
JEFFERSON PARISH	9	0	0	3.0	D
LAFAYETTE PARISH	8	0	0	2.7	D
LAFOURCHE PARISH	1	0	0	0.3	B
LIVINGSTON PARISH	3	0	0	1.0	C
ORLEANS PARISH	0	0	0	0.0	A
OUACHITA PARISH	2	0	0	0.7	B
PLAQUEMINES PARISH	DNC	DNC	DNC	DNC	DNC
POINTE COUPEE PARISH	5	2	0	2.7	D
RAPIDES PARISH	DNC	DNC	DNC	DNC	DNC
ST BERNARD PARISH	5	0	0	1.7	C
ST CHARLES PARISH	4	0	0	1.3	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
Parish	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ASCENSION PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BEAUREGARD PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BOSSIER PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CADDO PARISH	0	0	0	0.0	A	*	INC
CALCASIEU PARISH	1	0	0	0.3	B	*	INC
CONCORDIA PARISH	0	0	0	0.0	A	*	INC
EAST BATON ROUGE PARISH	3	0	0	1.0	C	*	INC
GRANT PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
IBERVILLE PARISH	2	0	0	0.7	B	*	INC
JEFFERSON PARISH	5	0	0	1.7	C	11.7	PASS
LAFAYETTE PARISH	2	0	0	0.7	B	*	INC
LAFOURCHE PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LIVINGSTON PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ORLEANS PARISH	7	0	0	2.3	D	12.3	PASS
OUACHITA PARISH	2	0	0	0.7	B	*	INC
PLAQUEMINES PARISH	*	*	*	*	*	*	INC
POINTE COUPEE PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RAPIDES PARISH	1	0	0	0.3	B	*	INC
ST BERNARD PARISH	2	0	0	0.7	B	10.9	PASS
ST CHARLES PARISH	*	*	*	*	*	*	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ST JAMES PARISH	21,150	5,620	2,535	500	914	641	277	4,941	1,176
ST JOHN THE BAPTIST PARISH	46,393	13,153	3,680	1,171	1,972	1,334	495	9,236	2,253
ST MARY PARISH	51,416	13,994	6,294	1,245	2,198	1,551	680	12,076	2,870
ST TAMMANY PARISH	220,295	56,043	23,012	4,988	9,657	6,739	2,758	50,123	12,062
TANGIPAHOA PARISH	106,502	27,311	11,157	2,431	4,714	3,192	1,274	23,107	5,545
TERREBONNE PARISH	107,491	28,713	11,453	2,555	4,669	3,200	1,305	23,580	5,651
WEST BATON ROUGE PARISH	21,634	5,453	2,232	485	956	659	266	4,839	1,165
TOTALS	**3,475,322**	**879,559**	**395,130**	**78,281**	**153,530**	**105,992**	**44,149**	**793,514**	**189,649**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Louisiana
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Metairie, LA 70001-6918
(504) 828-5864 www.lungusa.org/louisiana

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ST JAMES PARISH	2	0	0	0.7	B
ST JOHN THE BAPTIST PARISH	3	0	0	1.0	C
ST MARY PARISH	1	0	0	0.3	B
ST TAMMANY PARISH	DNC	DNC	DNC	DNC	DNC
TANGIPAHOA PARISH	DNC	DNC	DNC	DNC	DNC
TERREBONNE PARISH	DNC	DNC	DNC	DNC	DNC
WEST BATON ROUGE PARISH	11	2	0	4.7	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ST JAMES PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST JOHN THE BAPTIST PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST MARY PARISH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST TAMMANY PARISH	*	*	*	*	*	*	INC
TANGIPAHOA PARISH	4	0	0	1.3	C	*	INC
TERREBONNE PARISH	2	0	0	0.7	B	*	INC
WEST BATON ROUGE PARISH	4	0	0	1.3	C	*	INC

Ozone
- LaFourche Parish County's grade dropped from an A to a B.
- Bossier Parish, Caddo Parish and St. John the Baptist Counties each dropped their grades from a B to a C.
- Pointe Coupee Parish County's grade dropped from a B to a D.
- Lafayette Parish County's grade dropped from a C to a D.
- Calcasieu County's grade dropped from a C to an F.

PM
- Caddo Parish County's grade improved from a B to an A.
- Lafayette Parish and St. Bernard Parish Counties each dropped their grades from an A to a B.
- Tangipahoa Parish County's grade dropped from an A to a C.
- Jefferson, West Baton Rouge and East Baton Rouge Counties each dropped their grades from a B to a C.
- Orleans Parish County's grade dropped from a B to a D.
- Terrebonne Parish, Tangipahoa Parish, Lafayette Parish, Calcasieu Parish, Quachita Parish, Caddo Parish, Iberville Parish, West Baton Rouge and East Baton Rouge Counties no longer have sufficient data to grade their annual levels.
- Plaquemines Parish, St. Charles Parish and St. Tammany Parish Counties now have PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MAINE

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ANDROSCOGGIN	108,039	23,908	15,490	2,128	8,599	3,498	1,585	27,840	6,570
AROOSTOOK	73,240	14,450	12,760	1,286	5,842	2,521	1,249	21,554	5,041
CUMBERLAND	274,950	58,773	37,355	5,231	22,031	9,027	4,028	71,399	16,952
HANCOCK	53,660	10,459	8,550	931	4,317	1,843	881	15,376	3,622
KENNEBEC	120,986	25,203	17,366	2,243	9,701	4,027	1,840	32,428	7,677
KNOX	41,219	8,060	7,101	717	3,295	1,422	702	12,126	2,840
OXFORD	56,628	11,798	8,560	1,050	4,505	1,901	892	15,633	3,690
PENOBSCOT	147,068	29,925	19,983	2,663	11,997	4,864	2,146	38,076	9,041
SAGADAHOC	36,962	8,341	4,958	742	2,897	1,205	543	9,639	2,291
WASHINGTON	33,448	6,850	5,949	610	2,640	1,141	572	9,829	2,293
YORK	202,315	44,192	28,054	3,933	16,024	6,645	3,013	53,265	12,632
TOTALS	**1,148,515**	**241,959**	**166,126**	**21,534**	**91,847**	**38,093**	**17,452**	**307,164**	**72,650**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Maine
122 State Street
Augusta, ME 04330
(207) 622-6394 www.lungusa.org/maine

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ANDROSCOGGIN	*	*	*	*	*
AROOSTOOK	DNC	DNC	DNC	DNC	DNC
CUMBERLAND	0	0	0	0.0	A
HANCOCK	7	0	0	2.3	D
KENNEBEC	1	0	0	0.3	B
KNOX	3	1	0	1.5	C
OXFORD	0	0	0	0.0	A
PENOBSCOT	0	1	0	0.5	B
SAGADAHOC	4	0	0	1.3	C
WASHINGTON	*	*	*	*	*
YORK	3	0	0	1.0	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANDROSCOGGIN	3	0	0	1.0	C	10.6	PASS
AROOSTOOK	2	0	0	0.7	B	10.3	PASS
CUMBERLAND	3	0	0	1.0	C	11.7	PASS
HANCOCK	0	0	0	0.0	A	6.2	PASS
KENNEBEC	2	0	0	0.7	B	10.7	PASS
KNOX	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OXFORD	1	0	0	0.3	B	10.4	PASS
PENOBSCOT	2	0	0	0.7	B	9.7	PASS
SAGADAHOC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YORK	*	*	*	*	*	*	INC

Ozone
- Oxford County's grade improved from a B to an A.
- Cumberland County's grade improved from a C to an A.
- Kennebec and Penobscot Counties each improved their grade from a C to a B.
- Sagadahoc and Knox Counties each improved their grade from a D to a C.
- Hancock County's grade improved from an F to a D.
- York County's grade improved from an F to a C.

PM
- Hancock County's grade improved from a B to an A.
- Kennebec County's grade dropped from an A to a B.
- Aroostook County's grade improved from a C to a B.
- Cumberland County's grade dropped from an A to C.
- Androscoggin County's grade dropped from a B to a C.
- Knox County no longer has PM 24-hr or PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MARYLAND

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ANNE ARUNDEL	510,878	126,774	54,243	11,283	32,131	15,729	6,435	116,806	28,086
BALTIMORE	786,113	181,489	114,385	16,153	49,761	25,217	11,572	202,548	47,716
BALTIMORE CITY	635,815	161,148	77,079	14,342	39,479	19,440	8,295	147,866	35,175
CALVERT	87,925	22,912	8,037	2,039	5,472	2,641	1,029	18,967	4,599
CARROLL	168,541	42,176	18,612	3,754	10,543	5,205	2,173	39,258	9,418
CECIL	97,796	24,814	10,414	2,208	6,110	2,967	1,205	21,828	5,239
CHARLES	138,822	37,751	11,159	3,360	8,558	4,044	1,493	27,871	6,797
FREDERICK	220,701	58,328	21,535	5,191	13,636	6,588	2,612	47,748	11,519
GARRETT	29,909	6,935	4,697	617	1,879	969	463	8,025	1,882
HARFORD	239,259	62,288	25,922	5,544	14,772	7,278	3,027	54,720	13,130
KENT	19,899	3,686	3,821	328	1,314	686	345	5,871	1,359
MONTGOMERY	927,583	235,309	108,922	20,943	57,526	28,722	12,349	221,412	52,907
PRINCE GEORGE'S	846,123	226,928	71,471	20,197	52,346	24,820	9,294	172,656	41,992
WASHINGTON	141,895	32,245	19,606	2,870	9,075	4,502	1,989	34,994	8,261
TOTALS	**4,851,259**	**1,222,783**	**549,903**	**108,828**	**302,601**	**148,808**	**62,279**	**1,120,570**	**268,080**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Maryland
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Hunt Valley, MD 21031
(410) 560-2120 www.lungusa.org/maryland

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ANNE ARUNDEL	17	3	0	7.2	F
BALTIMORE	12	2	0	5.0	F
BALTIMORE CITY	*	*	*	*	*
CALVERT	*	*	*	*	*
CARROLL	8	0	0	2.7	D
CECIL	15	3	0	6.5	F
CHARLES	10	3	0	4.8	F
FREDERICK	4	1	0	1.8	C
GARRETT	*	*	*	*	*
HARFORD	24	4	1	10.7	F
KENT	6	2	0	3.0	D
MONTGOMERY	7	1	0	2.8	D
PRINCE GEORGE'S	15	1	1	6.2	F
WASHINGTON	6	0	0	2.0	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANNE ARUNDEL	12	0	0	4.0	F	15.3	FAIL
BALTIMORE	32	1	0	11.2	F	15.1	FAIL
BALTIMORE CITY	60	0	0	20.0	F	16.6	FAIL
CALVERT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARROLL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CECIL	2	1	0	1.2	C	*	INC
CHARLES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FREDERICK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GARRETT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HARFORD	6	1	0	2.5	D	12.9	PASS
KENT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	4	0	0	1.3	C	12.7	PASS
PRINCE GEORGE'S	8	0	0	2.7	D	13.2	PASS
WASHINGTON	6	0	0	2.0	C	14.1	PASS

Ozone
- Carroll and Montgomery Counties each improved their grade from an F to a D.
- Frederick and Washington Counties each improved their grade from an F to a C.
- Kent County's grade improved from an F to a D.
- Calvert and Garrett Counties now have Ozone monitors, but not enough data to grade.

PM
- Harford and Prince George's Counties each dropped their grades from a C to a D.
- Anne Arundel County's grade dropped from a D to an F.
- Baltimore County's grade went from passing to failing their annual levels.
- Prince George's County now has sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MASSACHUSETTS

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BARNSTABLE	226,514	41,847	52,174	3,724	17,302	8,060	4,478	74,590	17,067
BERKSHIRE	131,868	26,738	23,471	2,380	10,012	4,478	2,227	38,212	8,903
BRISTOL	546,331	127,732	73,800	11,368	40,440	17,268	7,638	134,769	31,880
DUKES	15,592	3,124	2,257	278	1,199	529	244	4,313	1,023
ESSEX	738,301	182,512	99,017	16,244	53,609	23,140	10,389	183,298	43,389
HAMPDEN	461,591	113,126	64,207	10,068	33,589	14,435	6,513	114,293	26,954
HAMPSHIRE	153,339	25,937	18,478	2,308	12,434	5,108	2,042	36,862	8,819
MIDDLESEX	1,459,011	322,523	187,519	28,705	110,130	46,648	20,065	357,020	84,850
NORFOLK	653,595	150,887	92,567	13,429	48,397	21,032	9,601	168,755	39,868
PLYMOUTH	492,409	123,902	58,418	11,027	35,713	15,282	6,582	117,889	28,152
SUFFOLK	654,428	132,590	73,392	11,801	51,116	20,454	7,816	141,353	33,780
WORCESTER	783,262	190,404	96,505	16,946	57,480	24,327	10,415	185,645	44,167
TOTALS	**6,316,241**	**1,441,322**	**841,805**	**128,278**	**471,422**	**200,761**	**88,010**	**1,556,999**	**368,853**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Massachusetts
460 Totten Pond Road, Suite 400
Waltham, MA 02451
(781) 890-4262 www.lungusa.org/massachusetts

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BARNSTABLE	16	2	0	6.3	F
BERKSHIRE	9	0	0	3.0	D
BRISTOL	9	1	0	3.5	F
DUKES	*	*	*	*	*
ESSEX	12	0	0	4.0	F
HAMPDEN	12	0	0	4.0	F
HAMPSHIRE	11	0	0	3.7	F
MIDDLESEX	4	0	0	1.3	C
NORFOLK	10	1	0	3.8	F
PLYMOUTH	DNC	DNC	DNC	DNC	DNC
SUFFOLK	7	0	0	2.3	D
WORCESTER	6	0	0	2.0	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BARNSTABLE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BERKSHIRE	5	0	0	1.7	C	11.2	PASS
BRISTOL	2	0	0	0.7	B	10.2	PASS
DUKES	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ESSEX	7	0	0	2.3	D	9.3	PASS
HAMPDEN	19	0	0	6.3	F	12.5	PASS
HAMPSHIRE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MIDDLESEX	*	*	*	*	*	*	INC
NORFOLK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PLYMOUTH	3	0	0	1.0	C	10.1	PASS
SUFFOLK	16	0	0	5.3	F	13.9	PASS
WORCESTER	9	0	0	3.0	D	*	INC

Ozone
- Worcester County's grade improved from a D to a C.
- Middlesex County's grade improved from an F to a C.
- Suffolk County's grade improved from an F to a D.

PM
- Berkshire County's grade dropped from a B to a C.
- Hampshire and Norfolk Counties no longer have PM 24-hr or PM Annual monitors.
- Berkshire, Bristol and Essex Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MICHIGAN

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ALLEGAN	113,174	29,584	12,669	2,633	7,566	3,427	1,434	25,800	6,172
BAY	109,029	25,153	16,508	2,239	7,528	3,541	1,670	29,127	6,853
BENZIE	17,644	3,837	3,193	341	1,241	586	294	5,016	1,164
BERRIEN	162,611	40,813	24,005	3,632	10,947	5,127	2,411	42,018	9,879
CASS	51,996	12,120	7,456	1,079	3,575	1,683	781	13,711	3,240
CHIPPEWA	38,780	7,429	5,091	661	2,857	1,269	533	9,486	2,252
CLINTON	69,329	17,324	7,917	1,542	4,688	2,152	913	16,428	3,934
DICKINSON	28,032	6,149	5,658	547	1,955	947	505	8,499	1,959
GENESEE	443,883	117,774	53,111	10,482	29,470	13,455	5,804	103,514	24,647
HURON	34,640	7,541	6,948	671	2,418	1,175	625	10,549	2,434
INGHAM	278,592	62,967	27,382	5,604	19,781	8,524	3,202	58,748	14,169
IRON	12,299	2,293	2,808	204	889	440	245	4,091	938
KALAMAZOO	240,536	56,381	28,133	5,018	16,780	7,441	3,057	54,861	13,087
KENT	596,666	164,788	61,698	14,666	39,321	17,440	7,013	126,954	30,441
LEELANAU	22,157	4,651	4,209	414	1,554	764	400	6,820	1,586
LENAWEE	102,033	24,535	13,262	2,184	6,996	3,211	1,415	25,081	5,952

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALLEGAN	15	4	0	7.0	F
BAY	DNC	DNC	DNC	DNC	DNC
BENZIE	12	0	0	4.0	F
BERRIEN	11	0	0	3.7	F
CASS	10	0	0	3.3	F
CHIPPEWA	DNC	DNC	DNC	DNC	DNC
CLINTON	4	0	0	1.3	C
DICKINSON	DNC	DNC	DNC	DNC	DNC
GENESEE	8	0	0	2.7	D
HURON	7	0	0	2.3	D
INGHAM	7	0	0	2.3	D
IRON	DNC	DNC	DNC	DNC	DNC
KALAMAZOO	6	0	0	2.0	C
KENT	8	1	0	3.2	D
LEELANAU	2	0	0	0.7	B
LENAWEE	7	1	0	2.8	D

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALLEGAN	20	0	0	6.7	F	12	PASS
BAY	5	0	0	1.7	C	11.1	PASS
BENZIE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BERRIEN	3	0	0	1.0	C	11.9	PASS
CASS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHIPPEWA	1	0	0	0.3	B	8	PASS
CLINTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DICKINSON	*	*	*	*	*	*	INC
GENESEE	4	0	0	1.3	C	11.8	PASS
HURON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
INGHAM	5	0	0	1.7	C	12.5	PASS
IRON	*	*	*	*	*	*	INC
KALAMAZOO	6	0	0	2.0	C	13.1	PASS
KENT	24	1	0	8.5	F	13.1	PASS
LEELANAU	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LENAWEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MICHIGAN

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MACOMB	829,453	195,852	111,510	17,431	57,298	26,185	11,602	204,831	48,476
MASON	28,986	6,408	5,155	570	2,020	966	487	8,338	1,940
MISSAUKEE	15,299	3,625	2,348	323	1,052	489	230	3,998	937
MONROE	153,935	38,062	17,610	3,388	10,464	4,776	2,014	36,244	8,675
MUSKEGON	175,554	45,759	22,111	4,073	11,743	5,352	2,340	41,476	9,839
OAKLAND	1,214,361	298,007	141,589	26,523	82,483	38,059	16,299	292,949	70,108
OTTAWA	255,406	67,640	27,086	6,020	17,117	7,563	3,039	54,921	13,154
SAGINAW	208,356	52,782	28,725	4,698	14,006	6,506	2,971	52,202	12,329
SCHOOLCRAFT	8,819	1,807	1,749	161	627	302	158	2,679	619
ST CLAIR	171,426	42,277	21,374	3,763	11,660	5,343	2,324	41,379	9,844
WASHTENAW	341,847	73,791	29,388	6,567	24,634	10,508	3,733	69,736	16,976
WAYNE	1,998,217	555,354	232,698	49,427	130,544	59,355	25,424	453,881	108,107
TOTALS	**7,723,060**	**1,964,703**	**921,391**	**174,859**	**521,214**	**236,587**	**100,922**	**1,803,338**	**429,712**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
MACOMB	11	4	0	5.7	F
MASON	8	0	0	2.7	D
MISSAUKEE	3	0	0	1.0	C
MONROE	DNC	DNC	DNC	DNC	DNC
MUSKEGON	12	3	0	5.5	F
OAKLAND	5	1	0	2.2	D
OTTAWA	10	0	0	3.3	F
SAGINAW	DNC	DNC	DNC	DNC	DNC
SCHOOLCRAFT	5	1	0	2.2	D
ST CLAIR	8	2	0	3.7	F
WASHTENAW	6	1	0	2.5	D
WAYNE	9	0	0	3.0	D

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MACOMB	7	1	0	2.8	D	13	PASS
MASON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MISSAUKEE	0	0	0	0.0	A	8.2	PASS
MONROE	9	1	0	3.5	F	14.1	PASS
MUSKEGON	9	0	0	3.0	D	11.7	PASS
OAKLAND	11	0	0	3.7	F	14.3	PASS
OTTAWA	8	0	0	2.7	D	12.7	PASS
SAGINAW	4	0	0	1.3	C	10.6	PASS
SCHOOLCRAFT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST CLAIR	10	2	0	4.3	F	13.8	PASS
WASHTENAW	9	0	0	3.0	D	14.3	PASS
WAYNE	59	4	0	21.7	F	18.2	FAIL

Ozone
- Missaukee County's grade dropped from a B to a C.
- Schoolcraft County's grade dropped from a C to a D.
- Clinton County's grade improved from a D to a C.
- Ingham, Huron, Mason, Kent, Washtenaw, Genesee, Wayne, Lenawee and Oakland Counties each improved their grades from an F to a D.
- Kalamazoo County's grade improved from an F to a C.
- Leelanua County now has sufficient data to grade.

PM
- Missaukee County now has sufficient data to grade
- Bay, Genesee, Ingham and Saginaw Counties each dropped their grades from an A to a C.
- Kalamazoo County's grade dropped from a B to a C.
- Macomb, Washtenaw and Muskegon Counties each dropped their grade from a B to a D.
- Ottawa County's grade dropped from a C to a D.
- Oakland, St. Clair and Monroe Counties each dropped their grade from a C to an F.
- Allegan County's grade dropped from a D to an F.
- Dickinson and Iron Counties now have PM 24-hr and PM Annual monitors, but not enough data to grade.
- Alpena and Grand Traver Counties no longer have PM 24-hr or PM Annual monitors.
- Missaukee and Oakland Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MINNESOTA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ANOKA	323,996	85,325	26,360	7,594	19,899	9,565	3,540	66,102	16,122
BECKER	31,868	7,325	5,175	652	2,043	1,036	500	8,637	2,020
CARLTON	34,026	7,387	4,980	657	2,229	1,105	502	8,797	2,073
CASS	28,910	6,174	5,314	549	1,892	970	492	8,384	1,946
CROW WING	59,917	13,367	10,203	1,190	3,904	1,958	955	16,390	3,816
DAKOTA	383,592	102,504	30,855	9,123	23,393	11,282	4,180	78,110	19,062
GOODHUE	45,585	10,432	6,901	928	2,918	1,477	692	12,073	2,839
HENNEPIN	1,119,364	261,495	122,979	23,273	71,582	34,931	14,234	257,754	61,861
LAKE	11,156	2,089	2,325	186	750	393	209	3,536	816
LYON	24,472	5,640	3,524	502	1,589	775	349	6,101	1,435
MILLE LACS	25,680	5,919	3,870	527	1,668	816	375	6,517	1,528
OLMSTED	135,189	33,783	15,562	3,007	8,496	4,133	1,721	30,898	7,378
RAMSEY	494,920	121,518	61,457	10,815	31,271	15,310	6,571	116,935	27,792
SCOTT	119,825	33,932	7,194	3,020	7,315	3,319	1,072	20,664	5,108
ST LOUIS	197,179	38,775	31,076	3,451	13,174	6,643	3,106	54,141	12,727
STEARNS	142,654	32,195	16,478	2,865	9,419	4,410	1,767	31,756	7,575
WASHINGTON	220,426	57,950	18,410	5,158	13,421	6,584	2,498	46,521	11,341
WRIGHT	110,730	30,389	9,331	2,705	6,807	3,175	1,162	21,561	5,233
TOTALS	**3,509,489**	**856,199**	**381,994**	**76,202**	**221,769**	**107,883**	**43,925**	**794,877**	**190,670**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ANOKA	1	0	0	0.3	B
BECKER	*	*	*	*	*
CARLTON	0	0	0	0.0	A
CASS	DNC	DNC	DNC	DNC	DNC
CROW WING	*	*	*	*	*
DAKOTA	*	*	*	*	*
GOODHUE	0	0	0	0.0	A
HENNEPIN	DNC	DNC	DNC	DNC	DNC
LAKE	0	0	0	0.0	A
LYON	*	*	*	*	*
MILLE LACS	2	0	0	0.7	B
OLMSTED	0	0	0	0.0	A
RAMSEY	DNC	DNC	DNC	DNC	DNC
SCOTT	1	0	0	0.3	B
ST LOUIS	0	0	0	0.0	A
STEARNS	0	0	0	0.0	A
WASHINGTON	0	0	0	0.0	A
WRIGHT	1	0	0	0.3	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANOKA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BECKER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CARLTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CASS	0	0	0	0.0	A	5.6	PASS
CROW WING	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DAKOTA	1	0	0	0.3	B	9.3	PASS
GOODHUE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENNEPIN	1	0	0	0.3	B	9.8	PASS
LAKE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LYON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MILLE LACS	1	0	0	0.3	B	6.5	PASS
OLMSTED	1	0	0	0.3	B	10.1	PASS
RAMSEY	4	1	0	1.8	C	11.6	PASS
SCOTT	1	0	0	0.3	B	9	PASS
ST LOUIS	2	0	0	0.7	B	7.6	PASS
STEARNS	2	0	0	0.7	B	8.8	PASS
WASHINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WRIGHT	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Scott County's grade dropped from an A to a B.
- Dakota County no longer has sufficient data to grade.
- Washington County's grade improved from a B to an A.
- Goodhue, Olmsted, Stearns and Wright Counties now have sufficient data to grade.
- Becker and Lyon Counties now have Ozone monitors, but not enough data to grade.

PM
- Cass County now has sufficient data to grade.
- Dakota, Hennepin, Mille Lacs, Olmsted, Scott and Stearns Counties each dropped their grade from an A to a B.
- Ramsey County's grade dropped from an A to a C.
- Cass County now has sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MISSISSIPPI

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ADAMS	32,099	7,968	5,141	709	1,766	1,032	507	8,764	2,052
BOLIVAR	38,641	10,493	4,082	934	2,010	1,135	457	8,264	1,979
DESOTO	137,004	36,321	12,831	3,233	7,177	4,033	1,549	28,438	6,869
FORREST	75,095	17,446	8,759	1,553	4,080	2,284	910	16,308	3,880
HANCOCK	46,711	10,793	6,970	961	2,611	1,511	706	12,334	2,904
HARRISON	193,810	49,359	23,330	4,393	10,381	5,912	2,516	44,881	10,680
HINDS	249,345	66,995	26,813	5,963	13,069	7,407	3,030	54,677	13,092
JACKSON	135,940	34,822	15,586	3,099	7,294	4,165	1,762	31,651	7,567
JONES	66,160	16,275	9,324	1,448	3,599	2,065	936	16,385	3,859
LAUDERDALE	77,218	20,074	10,971	1,787	4,132	2,378	1,094	19,106	4,494
LEE	78,793	20,752	9,479	1,847	4,178	2,384	1,023	18,234	4,338
LOWNDES	59,895	16,168	7,145	1,439	3,148	1,797	772	13,747	3,270
MADISON	84,286	22,469	8,480	2,000	4,416	2,491	986	17,943	4,314
MARSHALL	35,659	8,940	4,078	796	1,920	1,092	455	8,182	1,955
PEARL RIVER	52,659	13,010	6,821	1,158	2,865	1,643	725	12,846	3,047
RANKIN	131,841	31,774	13,483	2,828	7,153	4,036	1,592	29,034	6,991
SCOTT	28,739	7,756	3,620	690	1,511	864	379	6,699	1,587
WARREN	49,131	13,476	5,734	1,199	2,582	1,481	642	11,487	2,741
TOTALS	**1,573,026**	**404,891**	**182,647**	**36,035**	**83,894**	**47,709**	**20,043**	**358,980**	**85,619**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAMS	3	0	0	1.0	C
BOLIVAR	0	0	0	0.0	A
DESOTO	5	0	0	1.7	C
FORREST	DNC	DNC	DNC	DNC	DNC
HANCOCK	6	0	0	2.0	C
HARRISON	9	0	0	3.0	D
HINDS	0	0	0	0.0	A
JACKSON	4	0	0	1.3	C
JONES	DNC	DNC	DNC	DNC	DNC
LAUDERDALE	1	0	0	0.3	B
LEE	0	0	0	0.0	A
LOWNDES	DNC	DNC	DNC	DNC	DNC
MADISON	*	*	*	*	*
MARSHALL	*	*	*	*	*
PEARL RIVER	DNC	DNC	DNC	DNC	DNC
RANKIN	DNC	DNC	DNC	DNC	DNC
SCOTT	DNC	DNC	DNC	DNC	DNC
WARREN	*	*	*	*	*

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	1	0	0	0.3	B	11.5	PASS
BOLIVAR	2	0	0	0.7	B	12.6	PASS
DESOTO	5	0	0	1.7	C	12.5	PASS
FORREST	1	0	0	0.3	B	13.4	PASS
HANCOCK	2	0	0	0.7	B	*	INC
HARRISON	13	0	0	4.3	F	12.3	PASS
HINDS	3	0	0	1.0	C	13.6	PASS
JACKSON	2	0	0	0.7	B	12.2	PASS
JONES	1	0	0	0.3	B	14.4	PASS
LAUDERDALE	2	0	0	0.7	B	13.2	PASS
LEE	6	0	0	2.0	C	12.5	PASS
LOWNDES	3	0	0	1.0	C	12.7	PASS
MADISON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARSHALL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PEARL RIVER	2	0	0	0.7	B	12.1	PASS
RANKIN	0	0	0	0.0	A	*	INC
SCOTT	1	0	0	0.3	B	12.1	PASS
WARREN	3	0	0	1.0	C	12.3	PASS

Ozone
- Warren and Madison Counties no longer have sufficient data to grade.
- Bolivar, Lee and Hinds Counties each improved their grade from a B to an A.
- Hancock and Desoto Counties each improved their grade from a D to a C.
- Alcorn County no longer has Ozone monitors.

PM
- Rankin County's grade improved from a B to an A.
- Adams, Forrest and Jones Counties each dropped their grade from an A to a B.
- Desoto and Lee Counties each dropped their grade from an A to a C.
- Hinds, Warren and Lowndes Counties each dropped their grade from a B to a C.
- Harrison County's grade dropped from a B to an F.
- Hancock and Rankin Counties no longer have sufficient data to grade.
- Hinds, Lauderdale and Scott Counties now have sufficient data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MISSOURI

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
BOONE	143,326	30,633	12,822	2,726	10,268	4,388	1,556	28,920	7,016
BUCHANAN	84,904	19,454	12,423	1,731	5,814	2,703	1,227	21,428	5,037
CASS	94,232	23,900	11,286	2,127	6,273	2,882	1,226	21,896	5,214
CEDAR	14,160	3,159	2,919	281	957	475	255	4,272	981
CLAY	202,078	50,053	21,646	4,455	13,610	6,181	2,508	45,451	10,911
CLINTON	20,715	4,868	2,858	433	1,405	658	296	5,207	1,231
GREENE	250,784	53,043	34,698	4,721	17,660	8,066	3,511	61,883	14,616
JACKSON	662,959	167,310	81,047	14,891	44,133	20,389	8,770	156,287	37,184
JASPER	110,624	27,812	14,733	2,475	7,378	3,397	1,497	26,351	6,223
JEFFERSON	213,669	53,301	21,069	4,744	14,362	6,520	2,586	47,331	11,429
LINCOLN	47,727	12,395	4,619	1,103	3,182	1,416	549	10,041	2,421
MARIES	8,989	2,081	1,393	185	609	291	138	2,393	562
MERCER	3,595	763	733	68	245	123	66	1,116	257
MONROE	9,379	2,182	1,630	194	631	306	153	2,618	609
PERRY	18,571	4,410	2,898	392	1,250	593	280	4,857	1,137
PLATTE	82,085	19,293	7,802	1,717	5,619	2,559	1,003	18,492	4,484
ST CHARLES	329,940	85,151	31,780	7,578	21,991	9,875	3,856	70,654	17,059
ST LOUIS	1,004,666	234,159	141,668	20,840	67,959	32,380	14,852	261,302	61,787
ST LOUIS CITY	344,362	86,780	41,983	7,723	23,019	10,501	4,458	79,382	18,864
STE GENEVIEVE	18,198	4,129	2,658	367	1,242	590	272	4,763	1,123
TOTALS	**3,664,963**	**884,876**	**452,665**	**78,754**	**247,606**	**114,291**	**49,059**	**874,645**	**208,146**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
1118 Hampton Avenue
St. Louis, MO 63139-3196
(314) 645-5505 www.lungusa.org/missouri

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BOONE	DNC	DNC	DNC	DNC	DNC
BUCHANAN	DNC	DNC	DNC	DNC	DNC
CASS	3	0	0	1.0	C
CEDAR	1	0	0	0.3	B
CLAY	22	0	0	7.3	F
CLINTON	*	*	*	*	*
GREENE	1	0	0	0.3	B
JACKSON	DNC	DNC	DNC	DNC	DNC
JASPER	DNC	DNC	DNC	DNC	DNC
JEFFERSON	6	1	0	2.5	D
LINCOLN	*	*	*	*	*
MARIES	DNC	DNC	DNC	DNC	DNC
MERCER	DNC	DNC	DNC	DNC	DNC
MONROE	1	0	0	0.3	B
PERRY	*	*	*	*	*
PLATTE	5	0	0	1.7	C
ST CHARLES	23	0	0	7.7	F
ST LOUIS	16	4	0	7.3	F
ST LOUIS CITY	12	2	0	5.0	F
STE GENEVIEVE	5	0	0	1.7	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BOONE	3	0	0	1.0	C	11.8	PASS
BUCHANAN	5	0	0	1.7	C	*	INC
CASS	2	0	0	0.7	B	10.8	PASS
CEDAR	1	0	0	0.3	B	11.1	PASS
CLAY	2	0	0	0.7	B	11.1	PASS
CLINTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	1	0	0	0.3	B	11.9	PASS
JACKSON	7	1	0	2.8	D	13.2	PASS
JASPER	*	*	*	*	*	*	INC
JEFFERSON	23	0	0	7.7	F	14	PASS
LINCOLN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARIES	*	*	*	*	*	*	INC
MERCER	*	*	*	*	*	*	INC
MONROE	2	0	0	0.7	B	10.9	PASS
PERRY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PLATTE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ST CHARLES	9	0	0	3.0	D	13.7	PASS
ST LOUIS	13	0	0	4.3	F	13.8	PASS
ST LOUIS CITY	25	0	0	8.3	F	14.7	PASS
STE GENEVIEVE	4	0	0	1.3	C	13.7	PASS

Ozone
- Cass County's grade dropped from a B to a C.
- Cedar and Monroe Counties each improved their grade from a C to a B.
- Ste. Genevieve County's grade improved from an F to a C.
- Jefferson County's grade improved from an F to a D.
- Lincoln County now has ozone monitors but not enough data to grade.

PM
- Maries, Mercer and Jasper Counties no longer have sufficient data to grade.
- Cedar, Greene and Monroe Counties each dropped their grade from an A to a B.
- Boone County's grade dropped from an A to a C.
- Buchanan and Ste. Genevieve Counties each dropped their grade from a B to a C.
- St. Charles and Jackson Counties each dropped their grade from a B to a D.
- St. Louis County's grade dropped from a B to an F.
- Jefferson County's grade dropped from a D to an F.
- Boone, Cass and Jackson Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

MONTANA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
CASCADE	79,569	18,619	11,875	1,657	4,751	2,562	1,198	20,908	4,920
FLATHEAD	83,172	18,379	10,875	1,636	5,052	2,732	1,223	21,782	5,191
GALLATIN	78,210	15,382	6,760	1,369	4,969	2,480	888	16,633	4,057
LAKE	28,297	6,786	4,217	604	1,674	911	431	7,527	1,773
LEWIS AND CLARK	58,449	12,576	7,266	1,119	3,580	1,928	845	15,163	3,628
LINCOLN	19,193	3,933	3,352	350	1,180	666	338	5,835	1,368
MISSOULA	100,086	19,794	10,405	1,762	6,320	3,240	1,265	23,189	5,600
RAVALLI	39,940	8,622	6,449	767	2,430	1,346	657	11,421	2,685
ROSEBUD	9,212	2,692	860	240	509	274	114	2,099	509
SANDERS	11,057	2,111	2,026	188	691	391	201	3,459	809
SILVER BOW	32,982	6,940	5,460	618	2,025	1,107	537	9,299	2,178
YELLOWSTONE	136,691	31,079	18,506	2,766	8,251	4,403	1,969	34,828	8,257
TOTALS	**676,858**	**146,913**	**88,051**	**13,075**	**41,434**	**22,041**	**9,667**	**172,143**	**40,974**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Northern Rockies
825 Helena Avenue
Helena, MT 59601-3459
(406) 442-6556 www.lungusa.org/montana

HIGH OZONE DAYS 2003-2005[1]

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
LAKE	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
ROSEBUD	DNC	DNC	DNC	DNC	DNC
SANDERS	DNC	DNC	DNC	DNC	DNC
SILVER BOW	DNC	DNC	DNC	DNC	DNC
YELLOWSTONE	*	*	*	*	*

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CASCADE	3	0	0	1.0	C	6	PASS
FLATHEAD	10	2	0	4.3	F	10.8	PASS
GALLATIN	4	0	0	1.3	C	*	INC
LAKE	3	3	0	2.5	D	9.1	PASS
LEWIS AND CLARK	8	1	0	3.2	D	*	INC
LINCOLN	18	1	0	6.5	F	15.1	FAIL
MISSOULA	13	3	0	5.8	F	10.9	PASS
RAVALLI	9	2	0	4.0	F	*	INC
ROSEBUD	1	0	0	0.3	B	*	INC
SANDERS	1	0	0	0.3	B	6.6	PASS
SILVER BOW	8	0	0	2.7	D	9.5	PASS
YELLOWSTONE	1	0	1	1.0	C	7.9	PASS

Ozone
- Yellowstone County now has ozone monitors but not enough data to grade.
- Missoula County no longer has Ozone monitors.

PM
- Rosebud and Sanders Counties each dropped their grade from an A to a B.
- Gallatin and Yellowstone Counties each dropped their grade from a B to a C.
- Silver Bow County's grade dropped from a C to a D.
- Lincoln and Ravalli Counties each dropped their grade from a D to an F.
- Rosebud County no longer has sufficient data to grade their annual levels.
- Missoula and Yellowstone Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEBRASKA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
CASS	25,734	6,329	3,095	563	1,302	803	345	6,174	1,473
DOUGLAS	486,929	125,742	51,952	11,191	24,269	14,611	5,903	106,783	25,597
HALL	55,104	14,633	7,492	1,302	2,710	1,680	761	13,348	3,148
LANCASTER	264,814	59,931	27,594	5,334	13,777	8,151	3,148	57,337	13,780
LINCOLN	35,636	8,604	5,341	766	1,808	1,136	534	9,305	2,187
SARPY	139,371	39,094	10,594	3,479	6,759	3,949	1,401	26,295	6,420
SCOTTS BLUFF	36,752	8,958	6,255	797	1,855	1,182	589	10,093	2,349
WASHINGTON	19,772	4,564	2,600	406	1,020	631	278	4,939	1,172
TOTALS	**1,064,112**	**267,855**	**114,923**	**23,839**	**53,501**	**32,144**	**12,960**	**234,273**	**56,127**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
7101 Newport Avenue, #303
Omaha, NE 68152
(402) 572-3030 www.lungusa.org/nebraska

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
CASS	DNC	DNC	DNC	DNC	DNC
DOUGLAS	0	0	0	0.0	A
HALL	DNC	DNC	DNC	DNC	DNC
LANCASTER	0	0	0	0.0	A
LINCOLN	DNC	DNC	DNC	DNC	DNC
SARPY	DNC	DNC	DNC	DNC	DNC
SCOTTS BLUFF	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CASS	2	0	0	0.7	B	10	PASS
DOUGLAS	11	0	0	3.7	F	10.2	PASS
HALL	0	0	0	0.0	A	*	INC
LANCASTER	3	0	0	1.0	C	9.3	PASS
LINCOLN	1	0	0	0.3	B	7.6	PASS
SARPY	1	0	0	0.3	B	9.9	PASS
SCOTTS BLUFF	0	0	0	0.0	A	5.7	PASS
WASHINGTON	2	0	0	0.7	B	9.4	PASS

Ozone
- There were no changes in grades or monitoring.

PM
- Lincoln, Sarpy and Washington Counties each dropped their grade from an A to a B.
- Lancaster County's grade dropped from a B to a C.
- Douglas County's grade dropped from a B to an F.
- Scotts Bluff County no longer has sufficient data to grade their annual levels.
- Cedar, Cherry and Deuel Counties no longer have PM 24-hr or PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEVADA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
CARSON CITY	56,062	13,029	8,783	1,160	2,995	1,805	855	14,824	3,472
CLARK	1,710,551	448,161	182,854	39,886	88,697	50,896	20,504	370,430	88,706
DOUGLAS	47,017	9,351	9,060	832	2,611	1,639	855	14,573	3,386
WASHOE	389,872	96,841	44,134	8,619	20,605	11,997	4,999	90,006	21,537
WHITE PINE	8,994	1,886	1,357	168	496	296	136	2,368	557
TOTALS	**2,212,496**	**569,268**	**246,188**	**50,665**	**115,404**	**66,632**	**27,349**	**492,201**	**117,658**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Nevada
P.O. Box 7056
Reno, NV 89510
(775) 829-5864 www.lungusa.org/nevada

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
CARSON CITY	0	0	0	0.0	A
CLARK	22	1	0	7.8	F
DOUGLAS	*	*	*	*	*
WASHOE	1	0	0	0.3	B
WHITE PINE	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CARSON CITY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARK	6	1	0	2.5	D	8.8	PASS
DOUGLAS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHOE	4	0	0	1.3	C	8.1	PASS
WHITE PINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Douglas County no longer has sufficient data to grade.
- Carson City now has sufficient data to grade.

PM
- Washoe County's grade dropped from an A to a C.
- Clark County's grade dropped from a C to a D.
- Douglas County no longer has PM 24-hr or PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEW HAMPSHIRE

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
BELKNAP	61,547	12,960	9,436	1,153	4,906	2,054	966	16,889	3,979
CHESHIRE	77,287	16,022	10,899	1,426	6,240	2,544	1,138	20,075	4,750
COOS	33,655	6,793	6,114	605	2,684	1,154	583	9,993	2,328
GRAFTON	84,708	16,539	12,206	1,472	6,949	2,823	1,261	22,222	5,253
HILLSBOROUGH	401,291	100,362	44,298	8,932	30,865	12,391	5,170	93,408	22,409
MERRIMACK	146,881	33,223	18,171	2,957	11,609	4,713	2,035	36,402	8,687
ROCKINGHAM	295,076	72,143	32,588	6,421	22,771	9,290	3,933	71,201	17,117
STRAFFORD	119,015	26,137	13,709	2,326	9,592	3,749	1,522	27,427	6,559
SULLIVAN	43,041	9,567	6,794	851	3,370	1,422	682	11,856	2,785
TOTALS	**1,262,501**	**293,746**	**154,215**	**26,143**	**98,986**	**40,140**	**17,290**	**309,472**	**73,868**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of New Hampshire
9 Cedarwood Drive, Unit 12
Bedford, NH 03110
(603) 669-2411 www.lungusa.org/newhampshire

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BELKNAP	0	0	0	0.0	A
CHESHIRE	0	0	0	0.0	A
COOS	3	0	0	1.0	C
GRAFTON	0	0	0	0.0	A
HILLSBOROUGH	8	0	0	2.7	D
MERRIMACK	1	0	0	0.3	B
ROCKINGHAM	1	0	0	0.3	B
STRAFFORD	*	*	*	*	*
SULLIVAN	1	0	0	0.3	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BELKNAP	1	0	0	0.3	B	7.3	PASS
CHESHIRE	1	0	0	0.3	B	11.6	PASS
COOS	1	0	0	0.3	B	10.4	PASS
GRAFTON	0	0	0	0.0	A	*	INC
HILLSBOROUGH	5	0	0	1.7	C	10.2	PASS
MERRIMACK	3	0	0	1.0	C	*	INC
ROCKINGHAM	4	0	0	1.3	C	9.2	PASS
STRAFFORD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SULLIVAN	1	0	0	0.3	B	10.2	PASS

Ozone
- Cheshire and Grafton Counties each improved their grade from a B to an A.
- Belknap County's grade improved from a C to an A.
- Sullivan and Merrimack Counties each improved their grade from a C to a B.
- Coos County's grade improved from a D to a C.
- Rockingham County's grade improved from an F to a B.
- Hillsborough County's grade improved from an F to a D.
- Carroll County no longer has Ozone monitors.

PM
- Coos County's grade dropped from an A to a B.
- Rockingham, Merrimack, Hillsborough Counties each dropped their grade from a B to a C.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEW JERSEY

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ATLANTIC	271,015	67,436	36,553	6,002	15,156	8,415	3,754	66,092	15,615
BERGEN	902,561	208,745	133,513	18,578	51,568	29,210	13,629	238,350	56,159
CAMDEN	518,249	135,151	62,868	12,028	28,542	15,783	6,811	121,338	28,867
CUMBERLAND	153,252	38,465	19,108	3,423	8,558	4,676	1,997	35,449	8,408
ESSEX	791,057	212,219	91,105	18,887	43,155	23,675	9,986	178,729	42,615
GLOUCESTER	276,910	67,789	31,875	6,033	15,591	8,572	3,592	64,573	15,440
HUDSON	603,521	140,843	66,804	12,535	34,562	18,479	7,332	132,393	31,666
HUNTERDON	130,404	31,573	14,367	2,810	7,358	4,153	1,775	32,182	7,748
MERCER	366,256	87,689	44,091	7,804	20,768	11,392	4,813	86,073	20,513
MIDDLESEX	789,516	189,884	93,672	16,900	44,723	24,390	10,186	182,366	43,471
MONMOUTH	635,952	161,532	79,656	14,376	35,305	19,851	8,801	156,635	37,286
MORRIS	490,593	121,999	60,337	10,858	27,436	15,404	6,766	120,796	28,807
OCEAN	558,341	129,714	117,169	11,545	31,736	18,338	9,891	164,798	37,671
PASSAIC	499,060	135,581	58,411	12,067	27,095	14,873	6,318	112,773	26,846
UNION	531,457	137,149	67,960	12,206	29,360	16,317	7,193	127,370	30,203
WARREN	110,376	27,548	13,772	2,452	6,168	3,436	1,502	26,734	6,360
TOTALS	**7,628,520**	**1,893,317**	**991,261**	**168,505**	**427,081**	**236,964**	**104,346**	**1,846,650**	**437,677**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ATLANTIC	5	2	0	2.7	D
BERGEN	14	0	0	4.7	F
CAMDEN	28	1	1	10.5	F
CUMBERLAND	8	2	0	3.7	F
ESSEX	*	*	*	*	*
GLOUCESTER	12	2	0	5.0	F
HUDSON	9	0	0	3.0	D
HUNTERDON	22	2	0	8.3	F
MERCER	12	2	0	5.0	F
MIDDLESEX	14	2	0	5.7	F
MONMOUTH	17	1	2	7.5	F
MORRIS	5	2	0	2.7	D
OCEAN	27	3	0	10.5	F
PASSAIC	11	0	0	3.7	F
UNION	DNC	DNC	DNC	DNC	DNC
WARREN	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ATLANTIC	3	0	0	1.0	C	11.5	PASS
BERGEN	11	0	0	3.7	F	13.3	PASS
CAMDEN	17	0	0	5.7	F	13.8	PASS
CUMBERLAND	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ESSEX	9	0	0	3.0	D	13.9	PASS
GLOUCESTER	6	0	0	2.0	C	13.5	PASS
HUDSON	12	0	0	4.0	F	14.7	PASS
HUNTERDON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MERCER	7	0	0	2.3	D	13	PASS
MIDDLESEX	9	0	0	3.0	D	12.5	PASS
MONMOUTH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MORRIS	7	0	0	2.3	D	11.9	PASS
OCEAN	8	0	0	2.7	D	11.3	PASS
PASSAIC	8	0	0	2.7	D	13.1	PASS
UNION	40	0	0	13.3	F	15.5	FAIL
WARREN	7	0	0	2.3	D	13.1	PASS

Ozone
- Atlantic and Morris Counties each improved their grade from an F to a D.

PM
- Essex, Middlesex, Morris, Ocean, Passaic and Warren Counties each dropped their grade from a C to a D.
- Bergen and Camden Counties each dropped their grade from a C to an F.
- Hudson County's grade dropped from a D to an F.
- Atlantic, Camden and Essex Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEW MEXICO

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BERNALILLO	603,562	145,109	70,602	12,915	40,593	18,816	7,921	142,236	33,990
CHAVES	61,860	16,173	8,937	1,439	4,035	1,907	886	15,436	3,626
DOÑA ANA	189,444	51,862	21,584	4,616	12,189	5,551	2,294	41,014	9,760
EDDY	51,437	13,346	7,261	1,188	3,363	1,607	749	13,125	3,096
GRANT	29,747	6,641	5,642	591	2,033	999	521	8,851	2,051
LEA	56,719	15,613	6,751	1,390	3,638	1,686	723	12,872	3,060
SANDOVAL	107,460	27,477	11,701	2,445	7,084	3,287	1,365	24,683	5,923
SAN JUAN	126,208	36,693	12,156	3,266	7,938	3,617	1,434	26,136	6,291
SANTA FE	140,855	29,935	16,777	2,664	9,815	4,639	1,993	35,942	8,624
VALENCIA	69,417	18,388	7,493	1,637	4,520	2,095	870	15,716	3,769
TOTALS	**1,436,709**	**361,237**	**168,904**	**32,150**	**95,207**	**44,203**	**18,757**	**336,010**	**80,190**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BERNALILLO	3	0	0	1.0	C
CHAVES	DNC	DNC	DNC	DNC	DNC
DOÑA ANA	1	0	0	0.3	B
EDDY	0	0	0	0.0	A
GRANT	*	*	*	*	*
LEA	*	*	*	*	*
SANDOVAL	0	0	0	0.0	A
SAN JUAN	0	0	0	0.0	A
SANTA FE	DNC	DNC	DNC	DNC	DNC
VALENCIA	*	*	*	*	*

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BERNALILLO	2	1	0	1.2	C	6.9	PASS
CHAVES	0	0	0	0.0	A	6.6	PASS
DOÑA ANA	8	0	0	2.7	D	10.4	PASS
EDDY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GRANT	0	0	0	0.0	A	5.9	PASS
LEA	1	0	0	0.3	B	*	INC
SANDOVAL	1	0	0	0.3	B	8.3	PASS
SAN JUAN	0	0	0	0.0	A	6.1	PASS
SANTA FE	0	0	0	0.0	A	4.8	PASS
VALENCIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Doña Ana County's grade improved from a C to a B.
- Grant County now has ozone monitors but not enough data to grade.

PM
- Lea and Sandoval Counties each dropped their grade from an A to a B.
- Bernalillo County's grade dropped from a B to a C.
- Doña Ana County's grade dropped from a C to a D.
- Lea County no longer has sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEW YORK

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ALBANY	297,414	62,427	40,772	5,556	21,667	9,667	4,238	74,918	17,738
BRONX	1,357,589	400,128	138,535	35,611	89,183	38,317	15,261	275,537	65,914
BROOME	196,947	41,476	32,264	3,691	14,253	6,497	3,086	53,317	12,461
CHAUTAUQUA	136,409	30,217	21,685	2,689	9,722	4,452	2,110	36,564	8,564
CHEMUNG	89,512	20,443	13,892	1,819	6,320	2,899	1,368	23,769	5,576
DUTCHESS	294,849	68,312	36,020	6,080	20,896	9,304	3,959	70,794	16,877
ERIE	930,703	210,684	144,672	18,751	65,878	30,232	14,270	247,948	58,172
ESSEX	38,676	7,591	6,280	676	2,843	1,306	618	10,733	2,517
FRANKLIN	51,033	10,005	6,649	890	3,798	1,670	707	12,588	2,992
HAMILTON	5,228	916	1,065	82	388	189	100	1,707	396
HERKIMER	63,780	14,029	10,352	1,249	4,542	2,101	1,010	17,483	4,093
JEFFERSON	116,384	28,819	13,454	2,565	8,169	3,491	1,409	25,218	6,000
KINGS	2,486,235	653,133	300,034	58,129	169,640	74,673	31,714	564,324	134,041
MADISON	70,337	15,390	8,961	1,370	5,064	2,262	973	17,345	4,128
MONROE	733,366	174,917	96,758	15,568	51,350	23,132	10,227	180,992	42,906
NASSAU	1,333,137	316,902	197,150	28,204	92,666	43,013	20,245	353,966	83,419

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALBANY	7	0	0	2.3	D
BRONX	4	0	0	1.3	C
BROOME	DNC	DNC	DNC	DNC	DNC
CHAUTAUQUA	15	2	0	6.0	F
CHEMUNG	1	0	0	0.3	B
DUTCHESS	4	0	0	1.3	C
ERIE	11	1	0	4.2	F
ESSEX	8	0	0	2.7	D
FRANKLIN	*	*	*	*	*
HAMILTON	3	0	0	1.0	C
HERKIMER	2	0	0	0.7	B
JEFFERSON	12	2	0	5.0	F
KINGS	DNC	DNC	DNC	DNC	DNC
MADISON	2	0	0	0.7	B
MONROE	3	0	0	1.0	C
NASSAU	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALBANY	8	0	0	2.7	D	11.8	PASS
BRONX	32	0	0	10.7	F	15.7	FAIL
BROOME	*	*	*	*	*	*	INC
CHAUTAUQUA	3	0	0	1.0	C	10.1	PASS
CHEMUNG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DUTCHESS	*	*	*	*	*	*	INC
ERIE	10	0	0	3.3	F	13.8	PASS
ESSEX	2	0	0	0.7	B	6.1	PASS
FRANKLIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMILTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HERKIMER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KINGS	10	0	0	3.3	F	14.6	PASS
MADISON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONROE	6	0	0	2.0	C	*	INC
NASSAU	9	0	0	3.0	D	12.1	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NEW YORK

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
NEW YORK	1,593,200	272,910	202,762	24,289	122,942	52,900	21,505	385,193	91,723
NIAGARA	217,008	49,299	32,990	4,388	15,332	7,055	3,313	57,754	13,580
ONEIDA	234,105	51,985	36,884	4,627	16,685	7,622	3,595	62,358	14,611
ONONDAGA	458,053	109,747	62,868	9,767	32,029	14,430	6,467	113,809	26,888
ORANGE	372,893	101,001	36,782	8,989	25,200	11,018	4,384	79,940	19,255
OSWEGO	123,373	28,927	14,251	2,575	8,732	3,855	1,600	28,798	6,887
PUTNAM	100,507	24,630	10,246	2,192	6,971	3,145	1,293	23,628	5,708
QUEENS	2,241,600	500,766	293,725	44,568	160,798	71,273	30,776	545,731	129,407
RENSSELAER	155,251	34,575	20,444	3,077	11,112	4,980	2,175	38,599	9,162
RICHMOND	464,573	112,567	54,376	10,018	32,467	14,456	6,097	109,448	26,151
SARATOGA	214,859	48,267	25,687	4,296	15,362	6,846	2,888	51,860	12,394
SCHENECTADY	149,078	34,719	23,027	3,090	10,462	4,803	2,270	39,425	9,248
ST. LAWRENCE	111,380	23,149	14,799	2,060	8,165	3,595	1,539	27,298	6,471
STEUBEN	98,632	23,109	14,915	2,057	6,901	3,181	1,497	26,095	6,135
SUFFOLK	1,474,927	370,387	181,681	32,964	101,576	45,722	19,868	354,054	84,279
ULSTER	182,693	38,871	24,146	3,460	13,217	5,964	2,614	46,475	11,048
WAYNE	93,609	23,288	11,870	2,073	6,445	2,936	1,300	23,122	5,500
WESTCHESTER	940,807	233,210	130,328	20,756	64,818	29,603	13,513	237,523	56,113
TOTALS	**17,428,147**	**4,136,796**	**2,260,324**	**368,175**	**1,225,593**	**546,589**	**237,991**	**4,218,313**	**1,000,355**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
NEW YORK	DNC	DNC	DNC	DNC	DNC
NIAGARA	8	2	0	3.7	F
ONEIDA	2	0	0	0.7	B
ONONDAGA	4	0	0	1.3	C
ORANGE	13	0	0	4.3	F
OSWEGO	5	2	0	2.7	D
PUTNAM	9	1	0	3.5	F
QUEENS	8	0	0	2.7	D
RENSSELAER	6	0	0	2.0	C
RICHMOND	12	3	0	5.5	F
SARATOGA	10	0	0	3.3	F
SCHENECTADY	2	0	0	0.7	B
ST. LAWRENCE	DNC	DNC	DNC	DNC	DNC
STEUBEN	DNC	DNC	DNC	DNC	DNC
SUFFOLK	15	3	0	6.5	F
ULSTER	3	0	0	1.0	C
WAYNE	2	0	0	0.7	B
WESTCHESTER	12	1	0	4.5	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
NEW YORK	14	0	0	4.7	F	17	FAIL
NIAGARA	8	0	0	2.7	D	12.3	PASS
ONEIDA	*	*	*	*	*	*	INC
ONONDAGA	3	0	0	1.0	C	10.5	PASS
ORANGE	5	0	0	1.7	C	11.4	PASS
OSWEGO	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PUTNAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
QUEENS	21	0	0	7.0	F	12.7	PASS
RENSSELAER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RICHMOND	10	0	0	3.3	F	11.8	PASS
SARATOGA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SCHENECTADY	*	*	*	*	*	*	INC
ST. LAWRENCE	2	0	0	0.7	B	7.7	PASS
STEUBEN	6	0	0	2.0	C	9.4	PASS
SUFFOLK	7	0	0	2.3	D	11.5	PASS
ULSTER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WAYNE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WESTCHESTER	5	0	0	1.7	C	11.9	PASS

Ozone
- Herkimer, Chemung and Schenectady Counties each improved their grade from a C to a B.
- Oswego County's grade dropped from a C to a D.
- Madison and Oneida Counties each improved their grade from a D to a B.
- Albany, Queens and Essex Counties each improved their grade from an F to a D.
- Bronx, Onondaga, Dutchess, Monroe and Rensselaer Counties grade improved from an F to a C.
- Wayne County's grade improved from an F to a B.

PM
- St. Lawrence County's grade improved from a C to a B.
- Chautauqua and Orange Counties each improved their grade from a B to C.
- Niagara and Suffolk Counties each dropped their grade from a B to a D.
- Nassau and Albany Counties each dropped their grade from a C to a D.
- Erie, Kings and Richmond Counties each dropped their grade from a C to an F.
- New York County's grade dropped from a D to an F.
- Albany and Essex Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NORTH CAROLINA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ALAMANCE	140,533	33,957	19,334	3,022	6,895	4,382	1,948	34,225	8,072
ALEXANDER	35,492	8,315	4,563	740	1,760	1,124	491	8,717	2,071
AVERY	17,641	3,284	2,959	292	928	595	279	4,820	1,125
BUNCOMBE	218,876	47,795	33,402	4,254	11,073	7,162	3,336	58,173	13,676
CABARRUS	150,244	39,359	16,376	3,503	7,179	4,496	1,837	33,123	7,927
CALDWELL	79,122	18,383	11,104	1,636	3,933	2,532	1,149	20,198	4,772
CAMDEN	8,967	2,046	1,006	182	448	281	115	2,069	496
CASWELL	23,608	5,319	3,321	473	1,185	766	349	6,146	1,454
CATAWBA	151,641	36,960	19,356	3,289	7,424	4,720	2,052	36,416	8,642
CHATHAM	58,002	13,017	8,050	1,159	2,911	1,850	819	14,412	3,403
CUMBERLAND	304,520	89,446	26,660	7,961	13,921	8,529	3,198	58,871	14,229
DAVIDSON	154,623	37,377	20,141	3,327	7,591	4,850	2,135	37,815	8,969
DAVIE	39,136	9,141	5,627	814	1,942	1,251	573	10,038	2,366
DUPLIN	51,985	13,618	6,787	1,212	2,482	1,574	692	12,200	2,882
DURHAM	242,582	58,918	23,088	5,244	11,885	7,258	2,717	49,913	12,046
EDGECOMBE	54,129	14,361	6,572	1,278	2,576	1,655	725	12,926	3,078
FORSYTH	325,967	80,620	40,803	7,175	15,882	10,072	4,344	77,216	18,340
FRANKLIN	54,429	13,216	5,774	1,176	2,668	1,662	663	12,024	2,887
GASTON	196,137	48,309	24,752	4,300	9,572	6,098	2,653	47,141	11,199

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of North Carolina
3801 Lake Boone Trail, Suite 190
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(919) 832-8326 www.lungusa.org/northcarolina

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALAMANCE	DNC	DNC	DNC	DNC	DNC
ALEXANDER	1	0	0	0.3	B
AVERY	0	0	0	0.0	A
BUNCOMBE	1	0	0	0.3	B
CABARRUS	DNC	DNC	DNC	DNC	DNC
CALDWELL	3	0	0	1.0	C
CAMDEN	*	*	*	*	*
CASWELL	3	0	0	1.0	C
CATAWBA	DNC	DNC	DNC	DNC	DNC
CHATHAM	1	0	0	0.3	B
CUMBERLAND	12	0	0	4.0	F
DAVIDSON	DNC	DNC	DNC	DNC	DNC
DAVIE	6	1	0	2.5	D
DUPLIN	*	*	*	*	*
DURHAM	3	0	0	1.0	C
EDGECOMBE	5	0	0	1.7	C
FORSYTH	6	0	0	2.0	C
FRANKLIN	4	0	0	1.3	C
GASTON	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALAMANCE	5	0	0	1.7	C	14.1	PASS
ALEXANDER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
AVERY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BUNCOMBE	1	0	0	0.3	B	12.7	PASS
CABARRUS	*	*	*	*	*	*	INC
CALDWELL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CAMDEN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CASWELL	3	0	0	1.0	C	13.2	PASS
CATAWBA	9	0	0	3.0	D	15.3	FAIL
CHATHAM	1	0	0	0.3	B	11.9	PASS
CUMBERLAND	2	0	0	0.7	B	13.8	PASS
DAVIDSON	7	0	0	2.3	D	15.2	FAIL
DAVIE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DUPLIN	0	0	0	0.0	A	11.5	PASS
DURHAM	9	0	0	3.0	D	13.7	PASS
EDGECOMBE	2	0	0	0.7	B	*	INC
FORSYTH	11	0	0	3.7	F	14.4	PASS
FRANKLIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GASTON	2	0	0	0.7	B	14.3	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
GRAHAM	8,085	1,779	1,477	158	408	270	138	2,348	545
GRANVILLE	53,674	12,653	5,822	1,126	2,656	1,659	667	12,092	2,901
GUILFORD	443,519	107,101	53,087	9,532	21,778	13,725	5,774	103,275	24,609
HAYWOOD	56,482	11,578	11,256	1,030	2,904	1,930	1,010	17,076	3,942
JACKSON	35,368	6,484	4,902	577	1,868	1,173	502	8,891	2,104
JOHNSTON	146,437	39,028	13,554	3,473	6,953	4,279	1,625	29,846	7,209
LENOIR	57,961	14,628	8,930	1,302	2,805	1,837	883	15,321	3,593
LINCOLN	69,851	17,325	8,240	1,542	3,402	2,159	916	16,414	3,918
MARTIN	24,643	6,022	3,988	536	1,206	795	390	6,741	1,577
MCDOWELL	43,201	9,815	6,438	874	2,161	1,394	644	11,248	2,646
MECKLENBURG	796,372	209,876	66,853	18,679	37,983	23,299	8,564	159,282	38,732
MITCHELL	15,784	3,195	3,013	284	814	541	278	4,728	1,096
MONTGOMERY	27,322	6,965	3,670	620	1,318	849	383	6,748	1,596
NASH	91,378	23,073	12,085	2,053	4,423	2,840	1,270	22,430	5,311
NEW HANOVER	179,553	37,936	23,715	3,376	9,164	5,780	2,480	44,000	10,435
NORTHAMPTON	21,483	5,024	3,938	447	1,065	708	365	6,209	1,440
ONSLOW	152,440	42,469	11,275	3,780	7,108	4,175	1,369	25,786	6,282
ORANGE	118,386	23,433	11,062	2,086	6,147	3,755	1,378	25,549	6,200
PASQUOTANK	38,270	9,398	4,966	836	1,868	1,183	515	9,100	2,155
PERSON	37,217	8,977	4,883	799	1,829	1,175	522	9,252	2,195
PITT	142,570	33,898	13,787	3,017	7,030	4,278	1,595	29,255	7,052
RANDOLPH	138,367	34,592	17,485	3,079	6,719	4,283	1,868	33,162	7,875
ROBESON	127,586	36,509	12,948	3,249	5,896	3,676	1,475	26,720	6,409
ROCKINGHAM	92,614	21,558	14,022	1,919	4,600	2,990	1,406	24,499	5,759

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of North Carolina
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(919) 832-8326 www.lungusa.org/northcarolina

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
GRAHAM	5	0	0	1.7	C
GRANVILLE	8	1	0	3.2	D
GUILFORD	4	1	0	1.8	C
HAYWOOD	0	0	0	0.0	A
JACKSON	1	0	0	0.3	B
JOHNSTON	4	0	0	1.3	C
LENOIR	4	0	0	1.3	C
LINCOLN	8	0	0	2.7	D
MARTIN	3	0	0	1.0	C
MCDOWELL	DNC	DNC	DNC	DNC	DNC
MECKLENBURG	15	3	0	6.5	F
MITCHELL	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	DNC	DNC	DNC	DNC	DNC
NASH	DNC	DNC	DNC	DNC	DNC
NEW HANOVER	0	0	0	0.0	A
NORTHAMPTON	*	*	*	*	*
ONSLOW	DNC	DNC	DNC	DNC	DNC
ORANGE	DNC	DNC	DNC	DNC	DNC
PASQUOTANK	DNC	DNC	DNC	DNC	DNC
PERSON	4	0	0	1.3	C
PITT	4	0	0	1.3	C
RANDOLPH	*	*	*	*	*
ROBESON	DNC	DNC	DNC	DNC	DNC
ROCKINGHAM	3	0	0	1.0	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
GRAHAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GRANVILLE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GUILFORD	10	0	0	3.3	F	13.8	PASS
HAYWOOD	1	0	0	0.3	B	13	PASS
JACKSON	1	0	0	0.3	B	11.9	PASS
JOHNSTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LENOIR	2	0	0	0.7	B	11.3	PASS
LINCOLN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MARTIN	1	0	0	0.3	B	*	INC
MCDOWELL	7	0	0	2.3	D	14.1	PASS
MECKLENBURG	18	0	0	6.0	F	15.3	FAIL
MITCHELL	1	0	0	0.3	B	12.6	PASS
MONTGOMERY	0	0	0	0.0	A	12.2	PASS
NASH	*	*	*	*	*	*	INC
NEW HANOVER	2	0	0	0.7	B	10	PASS
NORTHAMPTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ONSLOW	1	0	0	0.3	B	11.3	PASS
ORANGE	2	0	0	0.7	B	13.2	PASS
PASQUOTANK	*	*	*	*	*	*	INC
PERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PITT	2	0	0	0.7	B	11.9	PASS
RANDOLPH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROBESON	1	0	0	0.3	B	12.8	PASS
ROCKINGHAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ROWAN	135,099	32,884	18,750	2,927	6,615	4,230	1,903	33,407	7,880
SWAIN	13,167	3,185	2,108	283	646	422	204	3,525	824
UNION	162,929	44,740	13,726	3,982	7,653	4,687	1,727	32,041	7,780
WAKE	748,815	192,984	57,026	17,176	36,000	21,918	7,738	145,687	35,641
WATAUGA	42,472	6,128	5,155	545	2,349	1,429	550	9,947	2,377
WAYNE	114,448	30,162	13,954	2,684	5,456	3,458	1,488	26,459	6,286
YANCEY	18,201	3,735	3,410	332	936	621	317	5,409	1,256
TOTALS	**6,461,328**	**1,610,575**	**715,200**	**143,341**	**314,015**	**196,373**	**80,018**	**1,442,891**	**345,261**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of North Carolina
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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ROWAN	21	2	0	8.0	F
SWAIN	0	0	0	0.0	A
UNION	1	1	0	0.8	B
WAKE	12	1	0	4.5	F
WATAUGA	DNC	DNC	DNC	DNC	DNC
WAYNE	DNC	DNC	DNC	DNC	DNC
YANCEY	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ROWAN	*	*	*	*	*	*	INC
SWAIN	1	0	0	0.3	B	12.7	PASS
UNION	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WAKE	11	0	0	3.7	F	13.5	PASS
WATAUGA	3	1	0	1.5	C	12.1	PASS
WAYNE	4	0	0	1.3	C	13.1	PASS
YANCEY	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- New Hanover County's grade improved from a B to an A.
- Avery County's grade improved from a C to an A.
- Jackson County's grade improved from a C to a B.
- Lenoir County's grade improved from a D to a C.
- Buncombe and Yancey Counties each improved their grade from a D to a B.
- Martin, Caldwell, Pitt, Caswell, Rockingham, Durham, Person, Edgecombe, Johnston, Forsyth, Franklin and Guilford Counties each improved their grade from an F to a C.
- Randolph County no longer has sufficient data to grade.
- Chatham, Alexander and Union Counties each improved their grade from an F to a B.
- Haywood County's grade improved from an F to an A.
- Granville, Lincoln and Davie Counties each improved their grade from an F to a D.
- Graham County now has sufficient data to grade.

PM
- Cabarrus County no longer sufficient data to grade.
- Duplin County's grade improved from a B to an A.
- Chatham, Lenoir, Mitchell, New Hanover, Onslow, Orange and Robeson Counties each dropped their grade from an A to a B.
- Martin County now has sufficient data to grade.
- Alamance, Watauga, Wayne and Caswell Counties each dropped their grade from a B to a C.
- McDowell County's grade dropped from an A to a D.
- Catawba County's grade dropped from a B to a D.
- Durham and Davidson Counties each dropped their grade from a C to a D.
- Forsyth and Wake Counties each dropped their grade from a C to an F.
- Guilford and Mecklenburg Counties each dropped their grade from a D to an F.
- Cabarrus County no longer has sufficient data to grade their annual levels.
- Mecklenburg County's grade dropped from passing to failing their annual levels.
- Forsyth County's grade improved from failing to passing their annual levels.
- New Hanover County now has enough data to grade their annual levels.
- Rowan County now has PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

NORTH DAKOTA

AT-RISK GROUPS[1]

				Lung Diseases					
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema	CV Disease	Diabetes
BILLINGS	813	140	108	12	243	29	13	236	57
BURKE	2,032	350	484	31	470	76	44	738	170
BURLEIGH	73,818	15,426	9,527	1,373	26,463	2,400	1,030	18,362	4,369
CASS	131,019	27,353	12,712	2,434	54,323	4,083	1,509	27,799	6,718
DUNN	3,442	740	594	66	935	118	60	1,034	242
MCKENZIE	5,594	1,361	853	121	1,497	184	90	1,573	371
MERCER	8,364	1,768	1,256	157	2,281	287	139	2,440	579
OLIVER	1,813	377	251	34	428	64	31	550	132
TOTALS	**226,895**	**47,515**	**25,785**	**4,229**	**86,641**	**7,241**	**2,916**	**52,732**	**12,637**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of North Dakota
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Bismarck, ND 58502-5004
(701) 223-5613 www.lungusa.org/northdakota

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BILLINGS	0	0	0	0.0	A
BURKE	*	*	*	*	*
BURLEIGH	DNC	DNC	DNC	DNC	DNC
CASS	0	0	0	0.0	A
DUNN	0	0	0	0.0	A
MCKENZIE	0	0	0	0.0	A
MERCER	0	0	0	0.0	A
OLIVER	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BILLINGS	0	0	0	0.0	A	4.7	PASS
BURKE	0	0	0	0.0	A	5.9	PASS
BURLEIGH	0	0	0	0.0	A	6.6	PASS
CASS	0	0	0	0.0	A	7.7	PASS
DUNN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MCKENZIE	0	0	0	0.0	A	5.1	PASS
MERCER	0	0	0	0.0	A	6.1	PASS
OLIVER	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- There were no changes in grades or monitoring.

PM
- There were no changes in grades or monitoring.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

OHIO

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ALLEN	106,234	26,766	15,003	2,382	6,273	3,318	1,524	26,679	6,287
ASHTABULA	103,221	24,653	15,057	2,194	6,199	3,295	1,528	26,727	6,295
ATHENS	62,062	10,189	6,006	907	4,157	1,980	680	12,598	3,044
BUTLER	350,412	85,493	38,096	7,609	21,123	10,723	4,336	78,437	18,804
CLARK	142,376	34,060	21,518	3,031	8,532	4,562	2,152	37,470	8,805
CLERMONT	190,589	49,285	19,697	4,386	11,281	5,766	2,338	42,497	10,223
CLINTON	42,570	10,504	5,163	935	2,547	1,313	559	9,972	2,374
CUYAHOGA	1,335,317	322,877	202,842	28,736	79,719	42,610	20,146	350,325	82,248
DELAWARE	150,268	38,717	11,725	3,446	8,970	4,399	1,563	29,348	7,169
FRANKLIN	1,090,771	275,817	107,098	24,548	65,149	32,591	12,599	230,331	55,498
GEAUGA	95,218	23,719	12,910	2,111	5,659	3,046	1,412	24,950	5,921
GREENE	151,996	33,396	18,649	2,972	9,429	4,860	2,055	36,790	8,775
HAMILTON	806,652	200,874	109,252	17,878	47,911	25,149	11,296	198,891	47,009
JEFFERSON	70,599	14,274	13,067	1,270	4,404	2,423	1,234	21,095	4,907
KNOX	58,398	13,278	8,055	1,182	3,569	1,859	824	14,517	3,430
LAKE	232,466	52,215	33,830	4,647	14,238	7,598	3,521	61,802	14,596
LAWRENCE	63,112	14,472	9,135	1,288	3,840	2,028	928	16,258	3,832

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Ohio
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(614) 279-1700 www.lungusa.org/ohio

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALLEN	6	0	0	2.0	C
ASHTABULA	14	2	0	5.7	F
ATHENS	DNC	DNC	DNC	DNC	DNC
BUTLER	12	3	0	5.5	F
CLARK	8	2	0	3.7	F
CLERMONT	6	1	0	2.5	D
CLINTON	11	0	0	3.7	F
CUYAHOGA	4	2	0	2.3	D
DELAWARE	5	1	0	2.2	D
FRANKLIN	13	2	1	6.0	F
GEAUGA	13	2	0	5.3	F
GREENE	6	0	0	2.0	C
HAMILTON	17	1	0	6.2	F
JEFFERSON	6	1	0	2.5	D
KNOX	4	1	0	1.8	C
LAKE	15	3	0	6.5	F
LAWRENCE	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALLEN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ASHTABULA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ATHENS	3	0	0	1.0	C	12.3	PASS
BUTLER	20	0	0	6.7	F	16.1	FAIL
CLARK	6	0	0	2.0	C	14.7	PASS
CLERMONT	*	*	*	*	*	*	INC
CLINTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CUYAHOGA	61	0	0	20.3	F	18.1	FAIL
DELAWARE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FRANKLIN	29	0	0	9.7	F	16	FAIL
GEAUGA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	5	0	0	1.7	C	*	INC
HAMILTON	31	0	0	10.3	F	17.9	FAIL
JEFFERSON	35	0	0	11.7	F	17.2	FAIL
KNOX	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LAKE	8	0	0	2.7	D	13	PASS
LAWRENCE	5	0	0	1.7	C	15	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
LICKING	154,806	37,694	18,918	3,355	9,304	4,843	2,090	37,329	8,897
LORAIN	296,307	72,765	38,044	6,476	17,722	9,257	4,068	72,167	17,133
LUCAS	448,229	113,717	56,788	10,121	26,519	13,786	6,016	106,694	25,315
MADISON	41,295	9,475	4,781	843	2,534	1,295	535	9,629	2,302
MAHONING	254,274	55,255	42,878	4,918	15,616	8,426	4,112	70,848	16,543
MEDINA	167,010	41,154	18,473	3,663	10,033	5,185	2,163	39,105	9,384
MIAMI	101,619	24,228	13,992	2,156	6,122	3,240	1,471	25,926	6,135
MONTGOMERY	547,435	131,075	78,340	11,666	32,871	17,349	7,938	139,022	32,761
PORTAGE	155,631	33,082	17,965	2,944	9,765	4,961	2,017	36,406	8,715
PREBLE	42,527	9,959	5,850	886	2,577	1,363	617	10,890	2,578
SCIOTO	76,561	17,812	11,594	1,585	4,628	2,446	1,137	19,770	4,639
STARK	380,608	88,946	58,425	7,916	22,968	12,316	5,844	101,680	23,886
SUMMIT	546,604	130,210	76,098	11,589	32,919	17,383	7,895	138,870	32,817
TRUMBULL	219,296	49,536	35,482	4,409	13,343	7,221	3,504	60,683	14,221
WARREN	196,622	50,087	18,505	4,458	11,729	5,868	2,248	41,302	9,982
WASHINGTON	62,210	13,431	9,882	1,195	3,839	2,065	987	17,152	4,027
WOOD	123,929	25,727	14,171	2,290	7,827	3,942	1,576	28,478	6,817
TOTALS	**8,867,224**	**2,134,742**	**1,167,289**	**189,992**	**533,318**	**278,467**	**122,912**	**2,174,637**	**515,371**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
LICKING	6	0	0	2.0	C
LORAIN	7	0	0	2.3	D
LUCAS	12	1	0	4.5	F
MADISON	7	1	0	2.8	D
MAHONING	5	2	0	2.7	D
MEDINA	10	0	0	3.3	F
MIAMI	5	2	0	2.7	D
MONTGOMERY	4	2	0	2.3	D
PORTAGE	12	3	0	5.5	F
PREBLE	3	0	0	1.0	C
SCIOTO	DNC	DNC	DNC	DNC	DNC
STARK	9	3	0	4.5	F
SUMMIT	12	1	0	4.5	F
TRUMBULL	11	2	0	4.7	F
WARREN	17	1	0	6.2	F
WASHINGTON	7	1	1	3.5	F
WOOD	8	0	0	2.7	D

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LICKING	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LORAIN	7	0	0	2.3	D	14.1	PASS
LUCAS	21	0	0	7.0	F	14.7	PASS
MADISON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MAHONING	23	0	0	7.7	F	15.5	FAIL
MEDINA	*	*	*	*	*	*	INC
MIAMI	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	22	0	0	7.3	F	15.9	FAIL
PORTAGE	6	0	0	2.0	C	13.4	PASS
PREBLE	6	0	0	2.0	C	13.9	PASS
SCIOTO	6	0	0	2.0	C	14.6	PASS
STARK	10	0	0	3.3	F	16.7	FAIL
SUMMIT	28	0	0	9.3	F	15.6	FAIL
TRUMBULL	13	0	0	4.3	F	14.7	PASS
WARREN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WOOD	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Preble, Licking, Allen, Greene and Knox Counties each improved their grade from an F to a C.
- Lawrence County's grade improved from an F to a B.
- Jefferson, Clermont, Mahoning, Wood, Lorain, Madison, Montgomery, Delaware, Miami and Cuyahoga Counties each improved their grade from an F to a D.

PM
- Athens and Preble Counties each dropped their grades from an A to a C.
- Clark and Portage Counties each dropped their grades from a B to a C.
- Greene County no has sufficient data to grade.
- Lorain County's grade dropped from an A to a D.
- Lake County's grade dropped from a C to a D.
- Stark County's grade dropped from a C to an F.
- Trumbull County's grade dropped from a D to an F.
- Mahoning County's grade went from passing to failing in annual levels.
- Preble County's now has sufficient data to grade for annual levels.
- Clermont and Medina Counties now have PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

OKLAHOMA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ADAIR	21,988	6,235	2,610	555	1,336	645	277	4,916	1,167
CADDO	30,229	7,823	4,368	696	1,904	933	432	7,524	1,767
CANADIAN	98,701	23,600	10,153	2,100	6,359	3,063	1,230	22,443	5,411
CARTER	47,125	11,372	7,259	1,012	3,040	1,504	714	12,393	2,906
CHEROKEE	44,671	10,601	5,522	943	2,889	1,375	575	10,232	2,429
CLEVELAND	224,898	48,551	20,538	4,321	14,916	6,997	2,581	47,877	11,623
COMANCHE	112,429	31,169	11,892	2,774	6,885	3,250	1,298	23,393	5,590
COTTON	6,589	1,537	1,070	137	430	213	103	1,783	417
CREEK	68,708	16,664	9,627	1,483	4,420	2,184	1,002	17,609	4,161
DEWEY	4,568	907	957	81	312	160	86	1,455	336
GARFIELD	56,958	13,781	9,015	1,227	3,672	1,820	874	15,115	3,536
JEFFERSON	6,461	1,434	1,273	128	429	216	113	1,913	441
JOHNSTON	10,259	2,369	1,632	211	671	333	160	2,771	649
KAY	46,480	11,531	7,804	1,026	2,975	1,491	742	12,742	2,970
LINCOLN	32,311	7,820	4,488	696	2,080	1,026	469	8,249	1,950

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
1010 East 8th Street
Tulsa, OK 74120
(918) 747-3441 www.lungusa.org/oklahoma

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAIR	1	0	0	0.3	B
CADDO	DNC	DNC	DNC	DNC	DNC
CANADIAN	2	0	0	0.7	B
CARTER	*	*	*	*	*
CHEROKEE	1	0	0	0.3	B
CLEVELAND	1	0	0	0.3	B
COMANCHE	3	0	0	1.0	C
COTTON	*	*	*	*	*
CREEK	4	0	0	1.3	C
DEWEY	1	0	0	0.3	B
GARFIELD	DNC	DNC	DNC	DNC	DNC
JEFFERSON	*	*	*	*	*
JOHNSTON	*	*	*	*	*
KAY	1	0	0	0.3	B
LINCOLN	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAIR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CADDO	1	0	0	0.3	B	9.8	PASS
CANADIAN	*	*	*	*	*	*	INC
CARTER	1	0	0	0.3	B	*	INC
CHEROKEE	1	0	0	0.3	B	11.7	PASS
CLEVELAND	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COMANCHE	*	*	*	*	*	*	INC
COTTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CREEK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DEWEY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GARFIELD	0	0	0	0.0	A	*	INC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JOHNSTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KAY	4	0	0	1.3	C	10.6	PASS
LINCOLN	1	0	0	0.3	B	*	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

OKLAHOMA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
LOVE	9,126	2,062	1,460	184	601	299	144	2,494	585
MCCLAIN	30,096	7,060	3,943	628	1,955	957	423	7,495	1,779
MAYES	39,471	9,490	6,016	845	2,548	1,256	591	10,269	2,409
MUSKOGEE	70,607	16,853	10,610	1,500	4,568	2,242	1,044	18,169	4,264
OKLAHOMA	684,543	171,633	83,471	15,275	43,502	20,943	8,907	158,659	37,718
OTTAWA	32,866	7,782	5,482	693	2,134	1,056	515	8,844	2,060
PAWNEE	16,860	3,971	2,510	353	1,095	546	258	4,502	1,061
PAYNE	69,151	11,862	7,454	1,056	4,850	2,206	798	14,563	3,492
PITTSBURG	44,641	9,488	7,583	844	2,991	1,484	722	12,436	2,902
SEMINOLE	24,770	6,208	3,950	553	1,579	784	380	6,553	1,531
SEQUOYAH	40,868	10,096	5,698	899	2,613	1,281	582	10,218	2,411
TULSA	572,059	145,392	68,754	12,940	36,184	17,512	7,476	133,441	31,774
TOTALS	**2,447,433**	**597,291**	**305,139**	**53,159**	**156,938**	**75,775**	**32,496**	**578,056**	**137,338**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
1010 East 8th Street
Tulsa, OK 74120
(918) 747-3441 www.lungusa.org/oklahoma

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
LOVE	*	*	*	*	*
MAYES	*	*	*	*	*
MCCLAIN	2	0	0	0.7	B
MUSKOGEE	DNC	DNC	DNC	DNC	DNC
OKLAHOMA	3	0	0	1.0	C
OTTAWA	1	0	0	0.3	B
PAWNEE	DNC	DNC	DNC	DNC	DNC
PAYNE	DNC	DNC	DNC	DNC	DNC
PITTSBURG	0	0	0	0.0	A
SEMINOLE	DNC	DNC	DNC	DNC	DNC
SEQUOYAH	DNC	DNC	DNC	DNC	DNC
TULSA	15	0	0	5.0	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
LOVE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MAYES	4	0	0	1.3	C	11.8	PASS
MCCLAIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MUSKOGEE	2	0	0	0.7	B	12.1	PASS
OKLAHOMA	1	0	0	0.3	B	10.2	PASS
OTTAWA	1	0	0	0.3	B	11.7	PASS
PAWNEE	*	*	*	*	*	*	INC
PAYNE	*	*	*	*	*	*	INC
PITTSBURG	1	0	0	0.3	B	11.2	PASS
SEMINOLE	*	*	*	*	*	*	INC
SEQUOYAH	*	*	*	*	*	*	INC
TULSA	3	0	0	1.0	C	11.5	PASS

Ozone
- Dewey and Kay Counties each dropped their grade from an A to B.
- Comanche and Oklahoma Counties each dropped their grade from a B to a C.
- Adair County's grade improved from a C to a B.
- Carter County no longer has sufficient data to grade.
- Creek County now has sufficient data to grade.
- Love County now has ozone monitors but not enough data to grade.
- Marshall County no longer has Ozone monitors.

PM
- Canadian and Seminole Counties no longer have enough data to grade.
- Garfield County's grade improved from a B to an A.
- Caddo, Carter, Cherokee, Lincoln, Muskogee, Ottawa and Pittsburg Counties each dropped their grade from an A to a B.
- Tulsa County's grade dropped from an A to a C.
- Mayes and Kay Counties each dropped their grade from a B to a C.
- Sequoyah County now has PM 24-hr and PM Annual monitors, but not enough data grade.
- Custer County no longer has PM 24-hr and PM Annual monitors.
- Canadian, Garfield, Lincoln, Seminole and Carter Counties no longer have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

OREGON

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
CLACKAMAS	368,470	86,977	43,197	7,741	22,387	11,708	5,013	90,196	21,601
COLUMBIA	48,065	11,582	5,434	1,031	2,909	1,511	638	11,511	2,761
DESCHUTES	141,382	31,597	18,571	2,812	9,255	4,540	1,988	35,284	8,379
DOUGLAS	104,202	22,337	19,737	1,988	7,236	3,521	1,818	30,909	7,163
HARNEY	6,898	1,613	1,224	144	436	231	119	2,039	476
JACKSON	195,322	43,395	31,565	3,862	13,151	6,416	3,084	53,379	12,499
JOSEPHINE	80,761	17,034	16,271	1,516	5,683	2,762	1,467	24,774	5,718
KLAMATH	66,192	15,903	10,276	1,415	4,312	2,125	1,016	17,627	4,134
LAKE	7,313	1,545	1,405	138	488	252	132	2,256	524
LANE	335,180	70,393	46,471	6,265	22,738	10,939	4,840	85,480	20,233
LINN	108,914	26,292	16,094	2,340	7,154	3,455	1,606	28,010	6,585
MARION	305,265	80,859	36,169	7,196	19,620	9,114	3,836	68,384	16,256
MULTNOMAH	672,906	152,198	72,256	13,546	43,340	21,116	8,472	153,995	37,027
UMATILLA	73,878	19,602	8,850	1,745	4,622	2,227	954	16,996	4,043
UNION	24,540	5,555	3,717	494	1,618	798	374	6,528	1,536
WASCO	23,593	5,550	4,024	494	1,546	773	387	6,645	1,550
WASHINGTON	499,794	130,479	44,397	11,613	30,718	14,762	5,561	102,800	24,925
TOTALS	**3,062,675**	**722,911**	**379,658**	**64,339**	**197,213**	**96,250**	**41,305**	**736,813**	**175,411**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
CLACKAMAS	0	0	0	0.0	A
COLUMBIA	0	0	0	0.0	A
DESCHUTES	DNC	DNC	DNC	DNC	DNC
DOUGLAS	DNC	DNC	DNC	DNC	DNC
HARNEY	DNC	DNC	DNC	DNC	DNC
JACKSON	0	0	0	0.0	A
JOSEPHINE	DNC	DNC	DNC	DNC	DNC
KLAMATH	DNC	DNC	DNC	DNC	DNC
LAKE	DNC	DNC	DNC	DNC	DNC
LANE	0	0	0	0.0	A
LINN	DNC	DNC	DNC	DNC	DNC
MARION	0	0	0	0.0	A
MULTNOMAH	0	0	0	0.0	A
UMATILLA	DNC	DNC	DNC	DNC	DNC
UNION	DNC	DNC	DNC	DNC	DNC
WASCO	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CLACKAMAS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
COLUMBIA	0	0	0	0.0	A	*	INC
DESCHUTES	*	*	*	*	*	*	INC
DOUGLAS	*	*	*	*	*	*	INC
HARNEY	*	*	*	*	*	*	INC
JACKSON	7	0	0	2.3	D	10.7	PASS
JOSEPHINE	1	0	0	0.3	B	*	INC
KLAMATH	19	0	0	6.3	F	11	PASS
LAKE	*	*	*	*	*	*	INC
LANE	58	3	0	20.8	F	12.4	PASS
LINN	1	0	0	0.3	B	*	INC
MARION	*	*	*	*	*	*	INC
MULTNOMAH	4	0	0	1.3	C	8.9	PASS
UMATILLA	*	*	*	*	*	*	INC
UNION	1	0	0	0.3	B	*	INC
WASCO	1	0	0	0.3	B	*	INC
WASHINGTON	5	0	0	1.7	C	*	INC

Ozone
- Clackamas County's grade improved from a B to an A.
- Multnomah County now has sufficient data to grade.
- Linn County no longer has Ozone monitors.

PM
- Deschutes County no longer has sufficient data to grade.
- Linn and Wasco Counties each dropped their grade from an A to a B.
- Washington County's grade dropped from a B to a C.
- Jackson County's grade improved from an F to a D.
- Columbia, Wasco, Washington and Linn Counties no longer have sufficient data to grade their annual levels.
- Douglas County now has PM 24-hr and PM Annual monitors, but not enough data to grade.
- Bento County no longer has PM 24-hr and PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

PENNSYLVANIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ADAMS	99,749	22,483	13,767	2,001	6,281	3,194	1,421	25,049	5,922
ALLEGHENY	1,235,841	262,526	212,350	23,365	77,181	41,377	20,370	350,589	81,831
ARMSTRONG	70,586	14,682	12,576	1,307	4,406	2,394	1,201	20,606	4,803
BEAVER	177,377	37,667	32,440	3,352	10,970	6,006	3,057	52,255	12,152
BERKS	396,314	93,505	56,060	8,322	24,524	12,568	5,693	99,860	23,549
BLAIR	126,795	27,246	21,861	2,425	7,891	4,232	2,089	35,918	8,379
BUCKS	621,342	147,055	81,729	13,088	38,243	19,907	8,931	158,472	37,664
CAMBRIA	148,073	29,237	28,011	2,602	9,347	5,090	2,596	44,244	10,267
CENTRE	140,561	21,723	15,311	1,933	10,168	4,557	1,632	29,809	7,149
CHESTER	474,027	116,516	56,497	10,370	29,131	14,814	6,367	114,070	27,243
CLEARFIELD	82,783	16,957	14,274	1,509	5,234	2,787	1,364	23,472	5,477
CUMBERLAND	223,089	45,609	33,624	4,059	14,326	7,396	3,393	59,361	13,980
DAUPHIN	253,995	60,560	35,585	5,390	15,555	8,126	3,726	65,544	15,497
DELAWARE	555,648	134,200	80,185	11,944	33,952	17,616	8,121	142,076	33,466
ERIE	280,446	66,060	40,101	5,879	17,324	8,925	4,072	71,358	16,822

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAMS	3	0	0	1.0	C
ALLEGHENY	12	3	0	5.5	F
ARMSTRONG	8	2	0	3.7	F
BEAVER	9	2	0	4.0	F
BERKS	7	1	0	2.8	D
BLAIR	4	0	0	1.3	C
BUCKS	16	2	0	6.3	F
CAMBRIA	3	0	0	1.0	C
CENTRE	3	2	0	2.0	C
CHESTER	16	2	0	6.3	F
CLEARFIELD	8	0	0	2.7	D
CUMBERLAND	DNC	DNC	DNC	DNC	DNC
DAUPHIN	7	1	0	2.8	D
DELAWARE	7	2	0	3.3	F
ERIE	7	1	0	2.8	D

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADAMS	24	0	0	8.0	F	13.6	PASS
ALLEGHENY	143	26	0	60.7	F	20.8	FAIL
ARMSTRONG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BEAVER	12	0	0	4.0	F	16.4	FAIL
BERKS	14	1	0	5.2	F	16.2	FAIL
BLAIR	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BUCKS	11	0	0	3.7	F	13.9	PASS
CAMBRIA	13	0	0	4.3	F	15.6	FAIL
CENTRE	28	0	0	9.3	F	13.4	PASS
CHESTER	7	1	0	2.8	D	15.2	FAIL
CLEARFIELD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CUMBERLAND	43	1	0	14.8	F	15.1	FAIL
DAUPHIN	37	1	0	12.8	F	15.8	FAIL
DELAWARE	13	0	0	4.3	F	15.7	FAIL
ERIE	20	1	0	7.2	F	12.9	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
FRANKLIN	137,409	31,510	22,298	2,804	8,468	4,452	2,139	36,933	8,631
GREENE	39,808	8,035	5,826	715	2,566	1,325	602	10,584	2,500
INDIANA	88,703	16,560	13,441	1,474	5,874	2,966	1,331	23,296	5,481
LACKAWANNA	209,525	43,459	38,161	3,868	13,140	7,059	3,541	60,476	14,047
LANCASTER	490,562	124,822	69,787	11,109	29,521	15,237	7,003	122,404	28,808
LAWRENCE	92,809	20,196	17,165	1,797	5,705	3,115	1,593	27,142	6,299
LEHIGH	330,433	77,424	50,162	6,891	20,313	10,608	4,976	86,608	20,339
LUZERNE	312,861	62,620	57,488	5,573	19,778	10,656	5,353	91,477	21,256
LYCOMING	118,395	25,637	19,070	2,282	7,412	3,911	1,869	32,390	7,589
MERCER	119,598	26,322	21,365	2,343	7,370	3,975	1,996	34,135	7,935
MONTGOMERY	775,883	181,749	114,507	16,176	47,674	24,977	11,640	203,478	47,924
NORTHAMPTON	287,767	63,155	42,444	5,621	18,120	9,371	4,300	75,285	17,738
PERRY	44,728	10,437	5,505	929	2,779	1,433	626	11,196	2,674
PHILADELPHIA	1,463,281	372,618	190,742	33,163	89,226	44,650	19,506	344,174	81,365
TIOGA	41,649	8,891	7,029	791	2,612	1,382	671	11,560	2,698
WASHINGTON	206,406	42,995	35,400	3,827	12,945	6,961	3,426	59,050	13,797
WESTMORELAND	367,635	74,604	66,705	6,640	23,024	12,602	6,372	109,239	25,453
YORK	408,801	94,468	55,568	8,408	25,425	13,107	5,881	103,900	24,617
TOTALS	**10,422,879**	**2,381,528**	**1,567,034**	**211,956**	**646,486**	**336,777**	**156,857**	**2,736,009**	**643,354**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
FRANKLIN	3	0	0	1.0	C
GREENE	7	1	0	2.8	D
INDIANA	*	*	*	*	*
LACKAWANNA	4	0	0	1.3	C
LANCASTER	8	2	0	3.7	F
LAWRENCE	2	1	0	1.2	C
LEHIGH	12	1	0	4.5	F
LUZERNE	4	0	0	1.3	C
LYCOMING	7	0	0	2.3	D
MERCER	9	2	0	4.0	F
MONTGOMERY	12	1	0	4.5	F
NORTHAMPTON	12	3	0	5.5	F
PERRY	4	0	0	1.3	C
PHILADELPHIA	20	0	0	6.7	F
TIOGA	3	0	0	1.0	C
WASHINGTON	10	1	0	3.8	F
WESTMORELAND	8	1	0	3.2	D
YORK	9	1	0	3.5	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
FRANKLIN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
GREENE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
INDIANA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LACKAWANNA	13	0	0	4.3	F	12.2	PASS
LANCASTER	23	1	0	8.2	F	17.5	FAIL
LAWRENCE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEHIGH	29	1	0	10.2	F	14.5	PASS
LUZERNE	15	1	0	5.5	F	12.8	PASS
LYCOMING	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MERCER	20	0	0	6.7	F	13.7	PASS
MONTGOMERY	5	0	0	1.7	C	12.8	PASS
NORTHAMPTON	26	1	0	9.2	F	14.1	PASS
PERRY	4	0	0	1.3	C	12.8	PASS
PHILADELPHIA	29	0	0	9.7	F	15.2	FAIL
TIOGA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	30	0	0	10.0	F	15.1	FAIL
WESTMORELAND	10	0	0	3.3	F	15.7	FAIL
YORK	18	1	0	6.5	F	17.3	FAIL

Ozone
- Cambria and Lawrence Counties each improved their grade from a D to a C.
- Adams, Perry, Tioga, Luzerne, Blair, Lackawanna, Centre and Franklin Counties each improved their grades from an F to a C.
- Lycoming, Greene, Clearfield, Westmoreland, Dauphin, Berks and Erie Counties each improved their grades from an F to a D.
- Indiana County now has ozone monitors but not enough data to grade.

PM
- Chester County's grade dropped from a C to a D.
- Delaware, Mercer, Westmoreland, Bucks and Cambria Counties each dropped their grade from a C to an F.
- Beaver, Luzerne, Erie and Berks Counties each dropped their grade from a D to an F.
- Cumberland and Washington Counties each went from passing to failing their annual levels.
- Centre, Chester, Erie and Montgomery Counties now have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

RHODE ISLAND

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
KENT	171,590	38,002	24,875	3,382	14,125	5,621	2,593	45,550	10,762
PROVIDENCE	639,653	151,439	86,684	13,478	52,465	19,987	8,776	154,516	36,481
WASHINGTON	128,463	27,165	17,143	2,418	10,784	4,206	1,851	32,883	7,813
TOTALS	**939,706**	**216,606**	**128,702**	**19,278**	**77,374**	**29,814**	**13,220**	**232,949**	**55,056**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of Rhode Island
260 West Exchange Street, Suite 102-B
Providence, RI 02903
(401) 421-6487 www.lungusa.org/rhodeisland

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
KENT	7	1	0	2.8	D
PROVIDENCE	10	0	0	3.3	F
WASHINGTON	15	2	0	6.0	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
KENT	2	0	0	0.7	B	*	INC
PROVIDENCE	11	0	0	3.7	F	12.4	PASS
WASHINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Kent County's grade improved from an F to a D.

PM
- Providence County's grade dropped from a D to an F.
- Kent County no longer has sufficient data to grade their annual levels.
- Washington County no longer has PM 24-hr or PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

SOUTH CAROLINA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ABBEVILLE	26,133	6,295	3,818	560	1,318	833	387	6,768	1,594
AIKEN	150,181	36,406	20,583	3,240	7,545	4,745	2,145	37,784	8,935
ANDERSON	175,514	41,948	24,361	3,733	8,851	5,565	2,520	44,326	10,473
BARNWELL	23,345	6,121	2,986	545	1,142	717	319	5,647	1,340
BEAUFORT	137,849	32,882	24,010	2,926	6,927	4,394	2,166	36,906	8,549
BERKELEY	151,673	40,031	14,165	3,563	7,339	4,510	1,754	32,231	7,796
CHARLESTON	330,368	77,727	39,605	6,918	16,625	10,312	4,332	77,563	18,494
CHEROKEE	53,844	13,616	6,668	1,212	2,658	1,659	719	12,799	3,043
CHESTER	33,228	8,486	4,383	755	1,645	1,037	468	8,272	1,961
CHESTERFIELD	43,435	10,917	5,448	972	2,156	1,351	593	10,546	2,508
COLLETON	39,605	10,166	5,221	905	1,955	1,230	553	9,775	2,316
DARLINGTON	67,346	17,017	8,484	1,515	3,343	2,099	928	16,492	3,923
EDGEFIELD	25,528	5,606	2,717	499	1,312	810	324	5,906	1,422
FLORENCE	131,097	32,909	16,165	2,929	6,495	4,058	1,760	31,353	7,461

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Southeast Region
1817 Gadsden Street
Columbia, SC 29201-2392
(803) 779-5864 www.lungusa.org/southcarolina

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ABBEVILLE	3	0	0	1.0	C
AIKEN	0	0	0	0.0	A
ANDERSON	1	0	0	0.3	B
BARNWELL	0	0	0	0.0	A
BEAUFORT	DNC	DNC	DNC	DNC	DNC
BERKELEY	0	0	0	0.0	A
CHARLESTON	1	0	0	0.3	B
CHEROKEE	1	0	0	0.3	B
CHESTER	3	0	0	1.0	C
CHESTERFIELD	2	0	0	0.7	B
COLLETON	0	0	0	0.0	A
DARLINGTON	4	0	0	1.3	C
EDGEFIELD	1	0	0	0.3	B
FLORENCE	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ABBEVILLE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
AIKEN	*	*	*	*	*	*	INC
ANDERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BARNWELL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BEAUFORT	3	0	0	1.0	C	11.5	PASS
BERKELEY	*	*	*	*	*	*	INC
CHARLESTON	10	0	0	3.3	F	12.1	PASS
CHEROKEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHESTER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHESTERFIELD	1	0	0	0.3	B	12.4	PASS
COLLETON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DARLINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
EDGEFIELD	6	0	0	2.0	C	13	PASS
FLORENCE	2	0	0	0.7	B	12.5	PASS

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

SOUTH CAROLINA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
GEORGETOWN	60,983	14,010	10,610	1,247	3,133	2,005	1,003	17,193	4,003
GREENVILLE	407,383	98,574	48,796	8,773	20,377	12,677	5,381	96,303	22,968
GREENWOOD	67,979	16,681	9,457	1,485	3,384	2,120	954	16,729	3,943
HORRY	226,992	47,819	35,988	4,256	11,841	7,464	3,492	60,587	14,194
LEXINGTON	235,272	58,486	26,050	5,205	11,698	7,276	3,035	54,823	13,150
OCONEE	69,577	15,238	11,715	1,356	3,617	2,304	1,126	19,403	4,531
ORANGEBURG	92,167	22,315	12,506	1,986	4,608	2,882	1,282	22,569	5,332
PICKENS	113,575	23,575	14,111	2,098	5,872	3,613	1,483	26,487	6,298
RICHLAND	340,078	80,456	33,025	7,161	16,967	10,368	3,962	72,727	17,562
SPARTANBURG	266,809	64,242	33,733	5,718	13,379	8,350	3,623	64,420	15,309
UNION	28,539	6,666	4,605	593	1,459	930	452	7,823	1,832
WILLIAMSBURG	35,395	9,207	4,713	819	1,742	1,099	499	8,809	2,086
YORK	190,097	46,975	19,896	4,181	9,424	5,820	2,346	42,647	10,257
TOTALS	**3,523,992**	**844,371**	**443,819**	**75,149**	**176,811**	**110,226**	**47,607**	**846,888**	**201,281**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Southeast Region
1817 Gadsden Street
Columbia, SC 29201-2392
(803) 779-5864 www.lungusa.org/southcarolina

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
GEORGETOWN	DNC	DNC	DNC	DNC	DNC
GREENVILLE	DNC	DNC	DNC	DNC	DNC
GREENWOOD	DNC	DNC	DNC	DNC	DNC
HORRY	DNC	DNC	DNC	DNC	DNC
LEXINGTON	DNC	DNC	DNC	DNC	DNC
OCONEE	1	0	0	0.3	B
ORANGEBURG	*	*	*	*	*
PICKENS	1	0	0	0.3	B
RICHLAND	13	0	0	4.3	F
SPARTANBURG	8	0	0	2.7	D
UNION	1	0	0	0.3	B
WILLIAMSBURG	0	0	0	0.0	A
YORK	1	0	0	0.3	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
GEORGETOWN	2	0	0	0.7	B	12.8	PASS
GREENVILLE	17	0	0	5.7	F	15.7	FAIL
GREENWOOD	3	0	0	1.0	C	13.4	PASS
HORRY	1	0	0	0.3	B	11.9	PASS
LEXINGTON	5	0	0	1.7	C	14.2	PASS
OCONEE	2	0	0	0.7	B	10.6	PASS
ORANGEBURG	*	*	*	*	*	*	INC
PICKENS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RICHLAND	15	0	0	5.0	F	14.1	PASS
SPARTANBURG	12	0	0	4.0	F	14	PASS
UNION	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WILLIAMSBURG	DNC	DNC	DNC	DNC	DNC	DNC	DNC
YORK	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Williamsburg County's grade improved from a B to an A.
- Colleton and Barnwell Counties each improved their grade from a C to an A.
- Union and Oconee Counties each improved their grade from a C to B.
- Aiken County's grade improved from a D to an A.
- Edgefield County's grade improved from a D to a B.
- Darlington, Abbeville and Chester Counties each improved their grade from an F to a C.
- Pickens, Cherokee, Chesterfield, York and Anderson Counties each improved their grades from an F to a B.
- Spartanburg County's grade improved from an F to a D.

PM
- Berkeley and Orangeburg Counties no longer have enough data to grade.
- Florence and Georgetown Counties each dropped their grade from an A to a B.
- Beaufort, Edgefield and Greenwood Counties each dropped their grade from an A to a C.
- Lexington County's grade dropped from a B to a C.
- Greenville, Richland, Charleston and Spartanburg each dropped their grade from an B to an F.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

SOUTH DAKOTA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BROOKINGS	28,121	4,862	3,074	433	1,661	900	330	6,019	1,443
BROWN	34,706	7,480	5,899	666	2,015	1,145	556	9,566	2,230
CODINGTON	26,010	6,275	3,830	558	1,456	822	380	6,629	1,558
CUSTER	7,904	1,691	1,335	150	468	270	135	2,345	550
JACKSON	2,858	911	339	81	143	80	35	619	146
MEADE	24,623	6,379	2,636	568	1,341	748	309	5,592	1,343
MINNEHAHA	160,087	39,482	18,451	3,514	8,808	4,893	2,023	36,300	8,664
PENNINGTON	93,580	23,248	11,832	2,069	5,174	2,900	1,263	22,431	5,327
TOTALS	**377,889**	**90,328**	**47,396**	**8,039**	**21,066**	**11,760**	**5,032**	**89,500**	**21,260**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of South Dakota
P.O. Box 1524
Sioux Falls, SD 57101-1524
(605) 336-7222 www.lungusa.org/southdakota

HIGH OZONE DAYS 2003-2005[1]

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	*	*	*	*	*
JACKSON	0	0	0	0.0	A
MEADE	DNC	DNC	DNC	DNC	DNC
MINNEHAHA	0	0	0	0.0	A
PENNINGTON	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BROOKINGS	0	0	0	0.0	A	9.8	PASS
BROWN	0	0	0	0.0	A	8.5	PASS
CODINGTON	1	0	0	0.3	B	10.2	PASS
CUSTER	*	*	*	*	*	*	INC
JACKSON	0	0	0	0.0	A	5.5	PASS
MEADE	*	*	*	*	*	*	INC
MINNEHAHA	0	0	0	0.0	A	10.4	PASS
PENNINGTON	0	0	0	0.0	A	7.4	PASS

Ozone
- Jackson County now has sufficient data to grade.
- Custer County now has ozone monitors but not enough data to grade.

PM
- Meade County no longer has sufficient data to grade their PM 24-hr or PM Annual levels.
- Codington County now has sufficient data to grade their PM 24-hr and PM Annual levels.
- Custer County now has PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

TENNESSEE

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ANDERSON	72,430	15,602	11,859	1,389	4,417	2,413	1,168	20,221	4,738
BLOUNT	115,535	24,632	16,423	2,192	7,011	3,781	1,703	29,994	7,091
COFFEE	50,869	11,897	7,756	1,059	3,003	1,626	760	13,205	3,097
DAVIDSON	575,261	131,569	64,018	11,710	33,826	17,910	7,220	130,520	31,270
DYER	37,829	9,148	5,027	814	2,210	1,189	529	9,342	2,213
HAMILTON	310,935	68,762	43,829	6,120	18,713	10,106	4,573	80,549	19,049
HAYWOOD	19,656	5,072	2,641	451	1,126	607	274	4,830	1,142
HUMPHREYS	18,212	4,045	2,875	360	1,099	598	285	4,954	1,162
JEFFERSON	48,394	10,223	6,881	910	2,927	1,572	699	12,290	2,901
KNOX	404,972	86,801	51,226	7,725	24,393	13,029	5,543	98,927	23,549
LAWRENCE	41,101	10,181	6,184	906	2,380	1,288	602	10,446	2,448
LOUDON	43,387	8,985	7,905	800	2,670	1,465	736	12,578	2,923
MADISON	94,916	23,402	11,478	2,083	5,484	2,929	1,246	22,240	5,296

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ANDERSON	5	0	0	1.7	C
BLOUNT	18	0	0	6.0	F
COFFEE	*	*	*	*	*
DAVIDSON	2	0	0	0.7	B
DYER	DNC	DNC	DNC	DNC	DNC
HAMILTON	6	1	0	2.5	D
HAYWOOD	*	*	*	*	*
HUMPHREYS	*	*	*	*	*
JEFFERSON	6	1	0	2.5	D
KNOX	11	0	0	3.7	F
LAWRENCE	*	*	*	*	*
LOUDON	*	*	*	*	*
MADISON	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ANDERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
BLOUNT	6	0	0	2.0	C	14.1	PASS
COFFEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DAVIDSON	17	0	0	5.7	F	14.2	PASS
DYER	3	0	0	1.0	C	12.2	PASS
HAMILTON	9	0	0	3.0	D	16.1	FAIL
HAYWOOD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HUMPHREYS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KNOX	17	0	0	5.7	F	15.6	FAIL
LAWRENCE	1	0	0	0.3	B	11.5	PASS
LOUDON	3	0	0	1.0	C	*	INC
MADISON	0	0	0	0.0	A	*	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

TENNESSEE

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
MAURY	76,292	18,521	9,048	1,648	4,446	2,379	1,011	18,122	4,327
MCMINN	51,327	11,512	7,508	1,025	3,075	1,663	764	13,373	3,152
MEIGS	11,657	2,682	1,504	239	692	372	163	2,898	689
MONTGOMERY	147,202	41,379	11,987	3,683	7,969	4,144	1,483	27,586	6,699
OBION	32,213	7,177	5,047	639	1,943	1,058	504	8,762	2,058
PUTNAM	66,580	14,107	9,063	1,256	3,992	2,126	912	16,103	3,804
ROANE	52,889	10,802	8,835	961	3,277	1,793	873	15,112	3,541
RUTHERFORD	218,292	54,375	17,008	4,839	12,350	6,407	2,232	41,970	10,251
SEVIER	79,282	17,066	10,945	1,519	4,803	2,588	1,156	20,434	4,842
SHELBY	909,035	245,552	88,918	21,854	50,803	26,919	10,701	195,378	47,100
SULLIVAN	152,716	31,329	25,478	2,788	9,443	5,162	2,509	43,416	10,170
SUMNER	145,009	34,713	16,271	3,089	8,486	4,529	1,884	34,014	8,155
WILLIAMSON	153,595	38,926	13,138	3,464	8,854	4,699	1,820	33,864	8,259
WILSON	100,508	24,177	10,202	2,152	5,869	3,120	1,253	22,894	5,525
TOTALS	**4,030,094**	**962,637**	**473,054**	**85,675**	**235,262**	**125,474**	**52,602**	**944,019**	**225,451**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
MAURY	DNC	DNC	DNC	DNC	DNC
MCMINN	DNC	DNC	DNC	DNC	DNC
MEIGS	2	0	0	0.7	B
MONTGOMERY	*	*	*	*	*
OBION	*	*	*	*	*
PUTNAM	*	*	*	*	*
ROANE	DNC	DNC	DNC	DNC	DNC
RUTHERFORD	3	0	0	1.0	C
SEVIER	8	0	0	2.7	D
SHELBY	12	0	0	4.0	F
SULLIVAN	6	0	0	2.0	C
SUMNER	8	0	0	2.7	D
WILLIAMSON	1	0	0	0.3	B
WILSON	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
MAURY	4	0	0	1.3	C	13	PASS
MCMINN	2	0	0	0.7	B	14.1	PASS
MEIGS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	9	0	0	3.0	D	13.9	PASS
OBION	DNC	DNC	DNC	DNC	DNC	DNC	DNC
PUTNAM	7	0	0	2.3	D	13.4	PASS
ROANE	0	0	0	0.0	A	14.2	PASS
RUTHERFORD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SEVIER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SHELBY	21	0	0	7.0	F	13.8	PASS
SULLIVAN	3	0	0	1.0	C	14	PASS
SUMNER	4	0	0	1.3	C	13.7	PASS
WILLIAMSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WILSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Lawrence County no longer has sufficient data to grade.
- Wilson County's grade increased from a D to a B.
- Rutherford, Sullivan and Anderson Counties each improved their grade from an F to a C.
- Sumner, Hamilton, Jefferson and Sevier Counties each improved their grade from an F to a D.
- Williamson and Meigs Counties each improved their grade from an F to a B.
- Montgomery County now has ozone monitors but not enough data to grade.
- Hamblen County no longer has Ozone monitors.

PM
- Lawrence County's grade dropped from an A to a B.
- Dyer, Maury and Sumner Counties each dropped their grade from an A to a C.
- Blount and Sullivan Counties each dropped their grade from a B to a C.
- Loudon County now has sufficient data to grade.
- Montgomery and Putnam Counties each dropped their grade from an A to a D.
- Hamilton County's grade dropped from a B to a D.
- Davidson and Shelby Counties each dropped their grade from a B to an F.
- Knox County's grade dropped from a C to an F.
- Davidson County now has sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

TEXAS

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BEXAR	1,518,370	423,511	156,233	37,692	74,270	43,988	17,549	317,563	76,094
BOWIE	90,643	21,736	11,970	1,935	4,734	2,840	1,248	22,069	5,226
BRAZORIA	278,484	76,508	24,776	6,809	13,689	8,104	3,089	56,969	13,800
BREWSTER	9,079	1,953	1,313	174	489	293	131	2,299	541
CALDWELL	36,523	9,751	4,159	868	1,823	1,083	448	8,025	1,912
CAMERON	378,311	128,363	40,064	11,424	16,954	10,037	4,150	73,921	17,546
COLLIN	659,457	181,775	39,999	16,178	31,965	18,683	6,190	119,191	29,488
DALLAS	2,305,454	656,796	191,724	58,455	110,979	65,235	23,942	444,178	107,812
DENTON	554,642	149,313	29,438	13,289	26,950	15,647	4,893	95,683	23,831
ECTOR	125,339	37,214	13,774	3,312	6,022	3,593	1,505	26,957	6,428
EL PASO	721,598	226,461	74,006	20,155	33,618	19,927	8,084	145,413	34,726
ELLIS	133,474	36,754	12,058	3,271	6,559	3,885	1,490	27,428	6,637
GALVESTON	277,563	71,380	30,250	6,353	14,123	8,449	3,498	63,195	15,154
GREGG	115,649	30,753	15,423	2,737	5,840	3,507	1,569	27,583	6,510
HARRIS	3,693,050	1,066,672	283,631	94,934	177,117	104,332	37,811	707,758	172,713
HARRISON	63,459	15,967	8,149	1,421	3,276	1,973	872	15,467	3,671
HAYS	124,432	28,484	9,579	2,535	6,377	3,699	1,242	23,459	5,736
HIDALGO	678,275	238,933	62,954	21,265	29,523	17,311	6,711	121,113	28,924
HOOD	47,930	10,532	8,887	937	2,614	1,593	811	13,789	3,194
HUNT	82,543	20,756	10,234	1,847	4,231	2,529	1,085	19,287	4,580
JEFF DAVIS	2,306	491	423	44	128	79	40	689	160

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
8150 Brookriver Drive, Suite 101
Dallas, TX 75247
(214) 631-5864 www.lungusa.org/texas

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BEXAR	18	0	0	6.0	F
BOWIE	DNC	DNC	DNC	DNC	DNC
BRAZORIA	39	5	0	15.5	F
BREWSTER	0	0	0	0.0	A
CALDWELL	DNC	DNC	DNC	DNC	DNC
CAMERON	1	0	0	0.3	B
COLLIN	23	1	0	8.2	F
DALLAS	40	1	1	14.5	F
DENTON	37	2	0	13.3	F
ECTOR	DNC	DNC	DNC	DNC	DNC
EL PASO	5	0	0	1.7	C
ELLIS	10	1	0	3.8	F
GALVESTON	18	3	1	8.2	F
GREGG	9	0	0	3.0	D
HARRIS	87	21	5	42.8	F
HARRISON	5	0	0	1.7	C
HAYS	1	0	0	0.3	B
HIDALGO	2	0	0	0.7	B
HOOD	5	0	0	1.7	C
HUNT	1	0	0	0.3	B
JEFF DAVIS	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BEXAR	*	*	*	*	*	*	INC
BOWIE	1	0	0	0.3	B	12.8	PASS
BRAZORIA	*	*	*	*	*	*	INC
BREWSTER	0	0	0	0.0	A	*	INC
CALDWELL	*	*	*	*	*	*	INC
CAMERON	3	0	0	1.0	C	*	INC
COLLIN	*	*	*	*	*	*	INC
DALLAS	7	0	0	2.3	D	13.5	PASS
DENTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ECTOR	0	0	0	0.0	A	7.7	PASS
EL PASO	19	1	0	6.8	F	*	INC
ELLIS	1	0	0	0.3	B	*	INC
GALVESTON	0	0	0	0.0	A	*	INC
GREGG	0	0	0	0.0	A	*	INC
HARRIS	5	0	0	1.7	C	15	PASS
HARRISON	0	0	0	0.0	A	11.8	PASS
HAYS	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HIDALGO	5	0	0	1.7	C	11.2	PASS
HOOD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HUNT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFF DAVIS	0	0	0	0.0	A	*	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

TEXAS

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
JEFFERSON	247,571	62,284	32,896	5,543	12,734	7,639	3,384	59,654	14,102
JOHNSON	146,376	38,606	14,355	3,436	7,325	4,349	1,711	31,258	7,533
KAUFMAN	89,129	23,712	8,646	2,110	4,440	2,631	1,028	18,793	4,530
KLEBERG	30,757	8,070	3,526	718	1,536	907	369	6,598	1,569
LUBBOCK	252,284	63,317	28,388	5,635	12,776	7,539	3,024	54,299	12,944
MCLENNAN	224,668	58,439	27,723	5,201	11,313	6,720	2,841	50,375	11,931
MONTGOMERY	378,033	101,954	33,659	9,074	18,749	11,123	4,261	78,672	19,075
NUECES	319,704	87,486	36,339	7,786	15,899	9,505	4,006	71,757	17,119
ORANGE	84,983	21,633	11,279	1,925	4,379	2,642	1,188	20,974	4,966
PARKER	102,801	25,170	10,880	2,240	5,309	3,171	1,290	23,431	5,635
POTTER	119,852	34,459	14,009	3,067	5,806	3,445	1,445	25,672	6,087
ROCKWALL	62,944	16,738	5,319	1,490	3,128	1,849	690	12,826	3,119
SMITH	190,594	49,425	26,943	4,399	9,721	5,841	2,664	46,502	10,931
TARRANT	1,620,479	454,241	135,975	40,427	78,750	46,443	17,246	319,922	77,698
TRAVIS	888,185	218,202	61,329	19,420	44,614	25,935	8,590	163,914	40,312
VICTORIA	85,648	23,810	10,909	2,119	4,265	2,568	1,146	20,233	4,791
WEBB	224,695	83,309	17,290	7,415	9,468	5,534	2,022	37,252	8,997
TOTALS	**16,965,284**	**4,804,958**	**1,508,509**	**427,641**	**821,489**	**484,627**	**183,267**	**3,374,167**	**816,025**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of the Central States
8150 Brookriver Drive, Suite 101
Dallas, TX 75247
(214) 631-5864 www.lungusa.org/texas

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
JEFFERSON	19	2	0	7.3	F
JOHNSON	17	0	0	5.7	F
KAUFMAN	3	0	0	1.0	C
KLEBERG	DNC	DNC	DNC	DNC	DNC
LUBBOCK	DNC	DNC	DNC	DNC	DNC
MCLENNAN	DNC	DNC	DNC	DNC	DNC
MONTGOMERY	8	3	0	4.2	F
NUECES	3	0	0	1.0	C
ORANGE	7	0	0	2.3	D
PARKER	14	1	0	5.2	F
POTTER	DNC	DNC	DNC	DNC	DNC
ROCKWALL	5	0	0	1.7	C
SMITH	3	0	0	1.0	C
TARRANT	57	8	0	23.0	F
TRAVIS	9	0	0	3.0	D
VICTORIA	3	0	0	1.0	C
WEBB	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
JEFFERSON	4	0	0	1.3	C	11.6	PASS
JOHNSON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
KAUFMAN	0	0	0	0.0	A	*	INC
KLEBERG	0	0	0	0.0	A	*	INC
LUBBOCK	0	0	0	0.0	A	*	INC
MCLENNAN	*	*	*	*	*	*	INC
MONTGOMERY	1	0	0	0.3	B	*	INC
NUECES	0	0	0	0.0	A	10.1	PASS
ORANGE	2	0	0	0.7	B	11.7	PASS
PARKER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
POTTER	0	0	0	0.0	A	*	INC
ROCKWALL	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SMITH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TARRANT	7	0	0	2.3	D	12.8	PASS
TRAVIS	*	*	*	*	*	*	INC
VICTORIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WEBB	*	*	*	*	*	*	INC

Ozone
- Kaufman County's grade dropped from a B to a C.
- Hidalgo County's grade improved from a C to a B.
- El Paso and Rockwall Counties each improved their grade from a D to a C.
- Orange and Travis Counties each improved their grade from an F to a D.
- Harrison County's grade improved from an F to a C.
- Hays and Hunt Counties now have sufficient data to grade.

PM
- Harrison, Galveston and Gregg Counties each improved their grades from a B to an A.
- Kleberg County now has sufficient data to grade.
- Bowie, Ellis and Montgomery Counties each dropped their grade from an A to a B.
- Cameron and Hidalgo Counties each dropped their grade from a B to a C.
- Dallas and Tarrant Counties each dropped their grade from a C to a D.
- Brewster, Cameron, Galveston, Montgomery and Gregg Counties no longer have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

UTAH

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BOX ELDER	46,440	14,582	5,087	1,298	2,510	1,283	532	9,492	2,255
CACHE	98,055	29,139	7,425	2,593	5,380	2,607	861	16,098	3,906
DAVIS	268,187	84,811	20,917	7,548	14,496	7,190	2,583	48,019	11,658
SALT LAKE	948,172	272,437	78,767	24,247	53,466	26,605	9,686	179,611	43,562
SAN JUAN	14,104	4,756	1,331	423	740	376	150	2,714	650
TOOELE	51,311	16,520	3,556	1,470	2,737	1,335	447	8,420	2,054
UTAH	443,738	147,343	28,906	13,114	23,158	11,139	3,527	66,843	16,323
WASHINGTON	118,885	33,378	20,238	2,971	6,606	3,489	1,697	28,593	6,563
WEBER	210,749	61,433	21,370	5,468	11,773	5,950	2,346	42,406	10,146
TOTALS	**2,199,641**	**664,399**	**187,597**	**59,132**	**120,865**	**59,973**	**21,829**	**402,196**	**97,118**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BOX ELDER	4	0	0	1.3	C
CACHE	0	0	0	0.0	A
DAVIS	7	1	0	2.8	D
SALT LAKE	11	0	0	3.7	F
SAN JUAN	0	0	0	0.0	A
TOOELE	*	*	*	*	*
UTAH	4	1	0	1.8	C
WASHINGTON	*	*	*	*	*
WEBER	6	0	0	2.0	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BOX ELDER	6	1	0	2.5	D	8.3	PASS
CACHE	57	24	0	31.0	F	12.1	PASS
DAVIS	13	1	0	4.8	F	*	INC
SALT LAKE	74	6	0	27.7	F	14.7	PASS
SAN JUAN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TOOELE	*	*	*	*	*	*	INC
UTAH	28	7	0	12.8	F	10.5	PASS
WASHINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WEBER	10	2	0	4.3	F	11.5	PASS

Ozone
- Davis County's grade dropped from a C to a D.
- Tooele County now has ozone monitors but not enough data to grade.

PM
- Salt Lake County's grade improved from failing to passing in their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

VERMONT

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
ADDISON	36,965	7,996	4,225	712	2,822	1,194	498	9,003	2,162
BENNINGTON	36,999	7,656	6,564	681	2,765	1,262	634	10,896	2,543
CHITTENDEN	149,613	31,833	15,275	2,833	11,622	4,762	1,866	34,203	8,261
RUTLAND	63,743	12,950	9,777	1,153	4,838	2,156	1,016	17,788	4,197
TOTALS	**287,320**	**60,435**	**35,841**	**5,379**	**22,047**	**9,375**	**4,014**	**71,889**	**17,162**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ADDISON	DNC	DNC	DNC	DNC	DNC
BENNINGTON	2	0	0	0.7	B
CHITTENDEN	0	0	0	0.0	A
RUTLAND	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ADDISON	2	0	0	0.7	B	*	INC
BENNINGTON	4	0	0	1.3	C	9	PASS
CHITTENDEN	5	0	0	1.7	C	10	PASS
RUTLAND	6	0	0	2.0	C	*	INC

Ozone
- Chittenden County's grade improved from a C to an A.
- Bennington County's grade improved from a C to a B.

PM
- Addison County now has sufficient data to grade.
- Rutland, Chittenden and Bennington Counties each dropped their grade from a B to a C.
- Bennington County now has sufficient data to grade their annual levels.
- Washington County no longer has PM 24-hr or PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

VIRGINIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ALEXANDRIA CITY	135,337	26,576	14,143	2,365	9,468	4,347	1,673	30,634	7,386
ARLINGTON	195,965	34,852	18,285	3,102	14,055	6,387	2,336	43,471	10,571
BRISTOL CITY	17,335	3,435	3,769	306	1,187	596	321	5,352	1,225
CAROLINE	25,563	6,029	3,100	537	1,688	801	340	6,083	1,450
CHARLES CITY	7,119	1,369	1,052	122	492	244	113	1,999	474
CHESAPEAKE CITY	218,968	58,412	20,578	5,199	13,913	6,515	2,558	46,962	11,357
CHESTERFIELD	288,876	75,030	21,785	6,678	18,503	8,705	3,244	61,131	15,005
FAIRFAX	1,006,529	255,693	88,554	22,757	64,729	30,964	12,200	226,333	55,137
FAUQUIER	64,997	15,936	6,833	1,418	4,230	2,026	835	15,198	3,662
FREDERICK	69,123	16,982	7,518	1,511	4,513	2,126	869	15,727	3,774
HAMPTON CITY	145,579	34,747	16,208	3,092	9,627	4,467	1,804	32,543	7,787
HANOVER	97,426	24,047	11,033	2,140	6,317	3,046	1,293	23,320	5,592
HENRICO	280,581	69,303	33,841	6,168	18,243	8,690	3,714	66,361	15,814
LOUDOUN	255,518	74,190	13,422	6,603	15,928	7,000	2,198	42,907	10,676
LYNCHBURG CITY	66,973	14,355	11,337	1,278	4,547	2,165	1,025	17,553	4,075
MADISON	13,398	2,960	2,138	263	892	444	214	3,720	873
NEWPORT NEWS CITY	179,899	52,516	18,766	4,674	11,059	5,143	2,087	37,632	9,002

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ALEXANDRIA CITY	6	2	0	3.0	D
ARLINGTON	11	2	0	4.7	F
BRISTOL CITY	DNC	DNC	DNC	DNC	DNC
CAROLINE	5	1	0	2.2	D
CHARLES CITY	6	0	0	2.0	C
CHESAPEAKE CITY	DNC	DNC	DNC	DNC	DNC
CHESTERFIELD	3	1	0	1.5	C
FAIRFAX	20	4	0	8.7	F
FAUQUIER	3	0	0	1.0	C
FREDERICK	2	0	0	0.7	B
HAMPTON CITY	2	1	0	1.2	C
HANOVER	6	0	0	2.0	C
HENRICO	6	0	0	2.0	C
LOUDOUN	3	2	0	2.0	C
LYNCHBURG CITY	DNC	DNC	DNC	DNC	DNC
MADISON	6	1	0	2.5	D
NEWPORT NEWS CITY	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ALEXANDRIA CITY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ARLINGTON	8	0	0	2.7	D	14.6	PASS
BRISTOL CITY	3	0	0	1.0	C	14	PASS
CAROLINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CHARLES CITY	5	0	0	1.7	C	12.5	PASS
CHESAPEAKE CITY	*	*	*	*	*	*	INC
CHESTERFIELD	5	0	0	1.7	C	13.6	PASS
FAIRFAX	21	0	0	7.0	F	14.1	PASS
FAUQUIER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FREDERICK	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HAMPTON CITY	1	0	0	0.3	B	12.4	PASS
HANOVER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HENRICO	6	0	0	2.0	C	13.8	PASS
LOUDOUN	8	0	0	2.7	D	13.9	PASS
LYNCHBURG CITY	4	0	0	1.3	C	*	INC
MADISON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
NEWPORT NEWS CITY	*	*	*	*	*	*	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
NORFOLK CITY	231,954	59,676	23,524	5,311	15,074	6,769	2,573	46,732	11,198
PAGE	23,831	5,221	3,805	465	1,595	786	375	6,512	1,527
PRINCE WILLIAM	348,588	103,453	19,457	9,207	21,463	9,576	3,128	60,569	15,027
RICHMOND CITY	193,777	44,421	26,991	3,953	12,937	6,088	2,675	46,943	11,058
ROANOKE CITY	92,631	22,146	15,476	1,971	6,042	2,978	1,460	25,075	5,842
ROANOKE	88,172	19,051	13,652	1,696	5,904	2,948	1,408	24,583	5,792
ROCKBRIDGE	21,242	4,390	3,604	391	1,440	718	352	6,083	1,423
SALEM CITY	24,654	4,847	4,131	431	1,701	832	398	6,879	1,609
STAFFORD	117,874	33,500	6,741	2,982	7,375	3,315	1,097	21,222	5,265
SUFFOLK CITY	78,994	20,831	8,224	1,854	5,046	2,352	945	17,131	4,112
VIRGINIA BEACH CITY	438,415	117,172	42,131	10,428	27,923	12,905	5,021	91,857	22,150
WYTHE	28,421	6,028	4,630	536	1,919	946	454	7,869	1,844
TOTALS	**4,757,739**	**1,207,168**	**464,728**	**107,438**	**307,810**	**143,879**	**56,713**	**1,038,380**	**250,707**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
NORFOLK CITY	DNC	DNC	DNC	DNC	DNC
PAGE	3	0	0	1.0	C
PRINCE WILLIAM	4	1	0	1.8	C
RICHMOND CITY	DNC	DNC	DNC	DNC	DNC
ROANOKE CITY	DNC	DNC	DNC	DNC	DNC
ROANOKE	1	0	0	0.3	B
ROCKBRIDGE	0	0	0	0.0	A
SALEM CITY	DNC	DNC	DNC	DNC	DNC
STAFFORD	5	1	0	2.2	D
SUFFOLK CITY	5	1	0	2.2	D
VIRGINIA BEACH CITY	DNC	DNC	DNC	DNC	DNC
WYTHE	2	0	0	0.7	B

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
NORFOLK CITY	1	0	0	0.3	B	13	PASS
PAGE	3	0	0	1.0	C	12.8	PASS
PRINCE WILLIAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
RICHMOND CITY	*	*	*	*	*	*	INC
ROANOKE CITY	4	0	0	1.3	C	14.1	PASS
ROANOKE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROCKBRIDGE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SALEM CITY	5	0	0	1.7	C	14.7	PASS
STAFFORD	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SUFFOLK CITY	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VIRGINIA BEACH CITY	4	0	0	1.3	C	12.6	PASS
WYTHE	DNC	DNC	DNC	DNC	DNC	DNC	DNC

Ozone
- Roanoke County's grade improved from a C to a B.
- Wythe County's grade improved from a D to a B.
- Frederick County's grade improved from an F to a B.
- Chesterfield, Prince William, Henrico, Hampton City, Charles City, Hanover and Loudoun Counties each improved their grade from an F to a C.
- Madison, Alexandria, Stafford and Suffolk Counties each improved their grade from an F to a D.

PM
- Richmond City County no longer has sufficient data to grade.
- Lynchburg City County's grade dropped from an A to a C.
- Charles City, Chesterfield, Henrico, Bristol City, Roanoke City, Page and Salem Counties each dropped their grade from a B to a C.
- Loudoun and Arlington Counties each dropped their grade from a C to a D.
- Fairfax County's grade dropped from a D to an F.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

WASHINGTON

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
BENTON	157,950	41,559	16,821	3,699	10,630	4,762	1,958	35,445	8,507
CHELAN	69,791	17,572	10,015	1,564	4,765	2,185	1,011	17,671	4,160
CLALLAM	69,689	13,321	15,332	1,186	5,136	2,446	1,332	22,291	5,114
CLARK	403,766	104,825	39,827	9,329	27,322	12,103	4,788	87,459	21,087
GRANT	81,229	24,185	9,340	2,152	5,217	2,315	979	17,403	4,131
GRAYS HARBOR	70,900	15,836	10,484	1,409	5,024	2,304	1,064	18,612	4,385
KING	1,793,583	382,714	189,172	34,062	128,885	57,397	22,914	418,417	100,901
KITSAP	240,661	57,825	27,646	5,146	16,689	7,533	3,170	57,087	13,669
KLICKITAT	19,839	4,638	2,941	413	1,384	648	307	5,370	1,267
LEWIS	72,449	16,990	11,299	1,512	5,059	2,336	1,112	19,296	4,524
MASON	54,359	11,334	9,242	1,009	3,925	1,816	883	15,209	3,550
OKANOGAN	39,782	9,576	6,103	852	2,752	1,284	616	10,718	2,519
PIERCE	753,787	190,275	78,100	16,934	51,520	22,775	9,088	165,175	39,701
SKAGIT	113,171	26,622	16,393	2,369	7,902	3,599	1,647	28,800	6,780
SKAMANIA	10,664	2,404	1,181	214	752	346	146	2,658	640
SNOHOMISH	655,944	164,512	62,145	14,642	44,901	19,911	7,772	142,904	34,585
SPOKANE	440,706	103,438	54,905	9,206	30,813	13,829	5,915	105,416	25,077
THURSTON	228,867	51,219	26,952	4,558	16,221	7,297	3,062	55,094	13,183
WHATCOM	183,471	39,448	22,463	3,511	13,170	5,841	2,428	43,464	10,357
YAKIMA	231,586	70,011	25,836	6,231	14,770	6,582	2,775	49,536	11,789
TOTALS	**5,692,194**	**1,348,304**	**636,197**	**119,999**	**396,840**	**177,309**	**72,967**	**1,318,028**	**315,926**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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

HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BENTON	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
GRANT	DNC	DNC	DNC	DNC	DNC
GRAYS HARBOR	DNC	DNC	DNC	DNC	DNC
KING	3	0	0	1.0	C
KITSAP	DNC	DNC	DNC	DNC	DNC
KLICKITAT	0	0	0	0.0	A
LEWIS	0	0	0	0.0	A
MASON	*	*	*	*	*
OKANOGAN	DNC	DNC	DNC	DNC	DNC
PIERCE	1	0	0	0.3	B
SKAGIT	0	0	0	0.0	A
SKAMANIA	DNC	DNC	DNC	DNC	DNC
SNOHOMISH	DNC	DNC	DNC	DNC	DNC
SPOKANE	0	0	0	0.0	A
THURSTON	0	0	0	0.0	A
WHATCOM	0	0	0	0.0	A
YAKIMA	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BENTON	1	0	0	0.3	B	*	INC
CHELAN	*	*	*	*	*	*	INC
CLALLAM	DNC	DNC	DNC	DNC	DNC	DNC	DNC
CLARK	8	0	0	2.7	D	9.9	PASS
GRANT	*	*	*	*	*	*	INC
GRAYS HARBOR	*	*	*	*	*	*	INC
KING	3	0	0	1.0	C	11.2	PASS
KITSAP	*	*	*	*	*	*	INC
KLICKITAT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LEWIS	*	*	*	*	*	*	INC
MASON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OKANOGAN	*	*	*	*	*	*	INC
PIERCE	14	0	0	4.7	F	10.8	PASS
SKAGIT	DNC	DNC	DNC	DNC	DNC	DNC	DNC
SKAMANIA	*	*	*	*	*	*	INC
SNOHOMISH	8	0	0	2.7	D	10.4	PASS
SPOKANE	4	0	0	1.3	C	10.2	PASS
THURSTON	*	*	*	*	*	*	INC
WHATCOM	*	*	*	*	*	*	INC
YAKIMA	*	*	*	*	*	*	INC

Ozone
- Mason County no longer has sufficient data to grade.

PM
- Grays Harbor, Whatcom, Thurston and Yakima Counties no longer have sufficient data to grade.
- Clark County's grade dropped from a C to a D.
- Spokane County's grade improved from a D to a C.
- Yakima County no longer has sufficient data to grade their annual levels.
- Adams, Cowlitz, Mason, Skagit, Stevens, Walla Walla and Whitman Counties no longer have PM 24 hr or PM Annual monitors.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

WEST VIRGINIA

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
BERKELEY	93,394	22,888	9,978	2,037	6,456	2,868	1,163	21,091	5,066
BROOKE	24,515	4,651	4,602	414	1,810	855	435	7,440	1,731
CABELL	94,031	18,905	15,209	1,683	6,870	3,137	1,475	25,581	5,991
GREENBRIER	35,027	7,099	6,366	632	2,545	1,201	608	10,420	2,428
HANCOCK	31,350	6,268	5,917	558	2,284	1,086	559	9,551	2,221
HARRISON	68,369	14,965	10,857	1,332	4,872	2,263	1,083	18,816	4,417
KANAWHA	193,559	40,618	31,816	3,615	13,939	6,532	3,179	55,131	12,935
MARION	56,509	11,248	9,468	1,001	4,133	1,910	919	15,890	3,718
MARSHALL	34,337	7,173	5,708	638	2,474	1,165	572	9,905	2,324
MERCER	61,589	12,660	10,823	1,127	4,463	2,087	1,036	17,804	4,153
MONONGALIA	84,386	14,383	8,962	1,280	6,444	2,738	1,012	18,540	4,462
OHIO	45,112	9,065	8,451	807	3,286	1,549	791	13,508	3,138
RALEIGH	79,167	15,978	12,160	1,422	5,767	2,664	1,245	21,787	5,135
SUMMERS	13,740	2,318	2,574	206	1,042	487	243	4,165	970
WOOD	87,047	19,072	13,842	1,697	6,197	2,893	1,392	24,203	5,685
TOTALS	**1,002,132**	**207,291**	**156,733**	**18,449**	**72,583**	**33,435**	**15,713**	**273,832**	**64,373**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association of West Virginia
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Charleston, WV 25339-3980
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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
BERKELEY	4	0	0	1.3	C
BROOKE	DNC	DNC	DNC	DNC	DNC
CABELL	3	1	0	1.5	C
GREENBRIER	1	0	0	0.3	B
HANCOCK	2	0	0	0.7	B
HARRISON	DNC	DNC	DNC	DNC	DNC
KANAWHA	6	0	0	2.0	C
MARION	DNC	DNC	DNC	DNC	DNC
MARSHALL	DNC	DNC	DNC	DNC	DNC
MERCER	DNC	DNC	DNC	DNC	DNC
MONONGALIA	3	0	0	1.0	C
OHIO	8	1	0	3.2	D
RALEIGH	DNC	DNC	DNC	DNC	DNC
SUMMERS	DNC	DNC	DNC	DNC	DNC
WOOD	3	2	0	2.0	C

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
BERKELEY	10	0	0	3.3	F	16.2	FAIL
BROOKE	13	0	0	4.3	F	16.8	FAIL
CABELL	9	0	0	3.0	D	16.3	FAIL
GREENBRIER	DNC	DNC	DNC	DNC	DNC	DNC	DNC
HANCOCK	25	0	0	8.3	F	16.6	FAIL
HARRISON	5	0	0	1.7	C	13.9	PASS
KANAWHA	16	0	0	5.3	F	16.6	FAIL
MARION	6	0	0	2.0	C	15	PASS
MARSHALL	5	0	0	1.7	C	15.3	FAIL
MERCER	3	0	0	1.0	C	*	INC
MONONGALIA	8	0	0	2.7	D	14.5	PASS
OHIO	6	0	0	2.0	C	*	INC
RALEIGH	1	0	0	0.3	B	12.9	PASS
SUMMERS	2	0	0	0.7	B	*	INC
WOOD	6	0	0	2.0	C	15.4	FAIL

Ozone
- Greenbrier County's grade improved from a C to a B.
- Monongalia and Berkeley Counties each improved their grade from a D to a C.
- Kanawha, Wood and Cabell Counties each improved their grade from an F to a C.
- Ohio County's grade improved from an F to a D.
- Hancock County's grade improved from an F to a B.

PM
- Mercer County's grade dropped from a B to a C.
- Cabell County's grade dropped from a C to a D.
- Kanawha and Berkeley Counties each dropped their grade from a C to an F.
- Brooke County's grade dropped from a D to an F.
- Summers, Mercer and Ohio Counties no longer have sufficient data to grade their annual levels.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

WISCONSIN

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases				CV Disease	Diabetes
				Pediatric Asthma	Adult Asthma	Chronic Bronchitis	Emphysema		
ASHLAND	16,627	3,825	2,577	340	1,155	535	251	4,363	1,023
BROWN	238,987	58,798	25,917	5,233	16,511	7,310	2,966	53,669	12,871
COLUMBIA	55,364	12,368	7,949	1,101	3,888	1,795	818	14,370	3,393
DANE	458,106	98,104	43,350	8,731	33,264	14,323	5,357	98,984	23,984
DODGE	88,103	19,041	12,191	1,695	6,273	2,851	1,262	22,271	5,268
DOOR	28,349	5,382	5,725	479	2,033	1,001	529	8,982	2,080
DOUGLAS	44,208	9,539	6,292	849	3,139	1,443	651	11,460	2,708
FLORENCE	4,974	950	941	85	358	174	90	1,532	357
FOND DU LAC	99,337	22,405	14,259	1,994	6,961	3,205	1,459	25,604	6,041
FOREST	9,961	2,241	2,055	199	686	332	178	2,976	683
GRANT	49,671	10,325	7,917	919	3,561	1,630	758	13,133	3,073
GREEN	35,165	8,252	5,080	734	2,429	1,129	521	9,136	2,155
JEFFERSON	79,328	17,823	9,761	1,586	5,610	2,519	1,068	19,091	4,550
KENOSHA	160,544	41,392	17,652	3,684	10,903	4,848	1,993	35,935	8,602
KEWAUNEE	20,840	4,743	3,117	422	1,453	674	313	5,467	1,286
LA CROSSE	108,958	23,278	13,806	2,072	7,841	3,471	1,456	25,942	6,164
MANITOWOC	81,949	18,308	12,878	1,629	5,719	2,693	1,285	22,332	5,243
MARATHON	128,941	31,000	17,126	2,759	8,871	4,080	1,822	32,230	7,642
MILWAUKEE	921,654	240,727	110,827	21,425	62,148	27,806	11,828	210,695	50,088
ONEIDA	36,994	7,072	7,403	629	2,655	1,297	681	11,548	2,674
OUTAGAMIE	171,006	42,823	19,404	3,811	11,718	5,227	2,169	39,009	9,325
OZAUKEE	86,072	19,938	11,775	1,774	5,951	2,808	1,290	22,831	5,422

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
ASHLAND	*	*	*	*	*
BROWN	3	1	0	1.5	C
COLUMBIA	1	0	0	0.3	B
DANE	1	0	0	0.3	B
DODGE	2	0	0	0.7	B
DOOR	14	3	0	6.2	F
DOUGLAS	DNC	DNC	DNC	DNC	DNC
FLORENCE	0	0	0	0.0	A
FOND DU LAC	1	0	0	0.3	B
FOREST	*	*	*	*	*
GRANT	DNC	DNC	DNC	DNC	DNC
GREEN	*	*	*	*	*
JEFFERSON	1	0	0	0.3	B
KENOSHA	22	0	0	7.3	F
KEWAUNEE	11	1	0	4.2	F
LA CROSSE	DNC	DNC	DNC	DNC	DNC
MANITOWOC	12	3	0	5.5	F
MARATHON	1	0	0	0.3	B
MILWAUKEE	22	1	0	7.8	F
ONEIDA	0	0	0	0.0	A
OUTAGAMIE	1	0	0	0.3	B
OZAUKEE	17	3	0	7.2	F

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
ASHLAND	0	0	0	0.0	A	6	PASS
BROWN	7	0	0	2.3	D	11	PASS
COLUMBIA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DANE	9	0	0	3.0	D	12	PASS
DODGE	16	0	0	5.3	F	10.8	PASS
DOOR	*	*	*	*	*	*	INC
DOUGLAS	*	*	*	*	*	*	INC
FLORENCE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FOND DU LAC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
FOREST	*	*	*	*	*	*	INC
GRANT	8	0	0	2.7	D	11.5	PASS
GREEN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
JEFFERSON	*	*	*	*	*	*	INC
KENOSHA	6	0	0	2.0	C	11.3	PASS
KEWAUNEE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
LA CROSSE	*	*	*	*	*	*	INC
MANITOWOC	4	0	0	1.3	C	9.7	PASS
MARATHON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
MILWAUKEE	16	0	0	5.3	F	13.2	PASS
ONEIDA	DNC	DNC	DNC	DNC	DNC	DNC	DNC
OUTAGAMIE	7	0	0	2.3	D	10.5	PASS
OZAUKEE	4	0	0	1.3	C	*	INC

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
RACINE	195,708	49,074	23,673	4,368	13,337	6,056	2,608	46,586	11,102
ROCK	157,538	38,901	20,264	3,462	10,776	4,906	2,154	38,188	9,061
ST CROIX	77,144	19,058	7,074	1,696	5,346	2,340	896	16,542	4,011
SAUK	57,746	13,527	8,450	1,204	3,993	1,850	855	14,958	3,523
SHEBOYGAN	114,610	26,384	15,856	2,348	7,989	3,673	1,653	29,134	6,891
TAYLOR	19,766	4,636	3,082	413	1,362	637	303	5,254	1,232
VERNON	29,055	7,247	4,774	645	1,951	930	460	7,924	1,850
VILAS	22,330	4,018	5,376	358	1,610	804	456	7,554	1,724
WALWORTH	99,844	21,933	12,805	1,952	7,112	3,178	1,354	24,082	5,719
WASHINGTON	126,158	29,900	15,015	2,661	8,759	3,977	1,696	30,430	7,272
WAUKESHA	378,971	88,944	48,812	7,916	26,211	12,191	5,439	96,833	23,062
WAUPACA	52,563	12,013	8,546	1,069	3,642	1,714	829	14,321	3,350
WINNEBAGO	159,482	34,260	20,068	3,049	11,437	5,107	2,158	38,507	9,164
WOOD	75,234	17,040	12,467	1,517	5,218	2,469	1,206	20,797	4,861
TOTALS	**4,491,287**	**1,065,269**	**564,264**	**94,809**	**311,869**	**140,982**	**60,812**	**1,082,670**	**257,453**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
RACINE	9	0	0	3.0	D
ROCK	1	0	0	0.3	B
ST CROIX	1	0	0	0.3	B
SAUK	0	0	0	0.0	A
SHEBOYGAN	13	3	0	5.8	F
TAYLOR	DNC	DNC	DNC	DNC	DNC
VERNON	1	0	0	0.3	B
VILAS	0	0	0	0.0	A
WALWORTH	5	0	0	1.7	C
WASHINGTON	1	0	0	0.3	B
WAUKESHA	2	0	0	0.7	B
WAUPACA	DNC	DNC	DNC	DNC	DNC
WINNEBAGO	*	*	*	*	*
WOOD	DNC	DNC	DNC	DNC	DNC

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
RACINE	DNC	DNC	DNC	DNC	DNC	DNC	DNC
ROCK	*	*	*	*	*	*	INC
ST CROIX	1	0	0	0.3	B	*	INC
SAUK	3	0	0	1.0	C	*	INC
SHEBOYGAN	DNC	DNC	DNC	DNC	DNC	DNC	DNC
TAYLOR	0	0	0	0.0	A	*	INC
VERNON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
VILAS	0	0	0	0.0	A	6.9	PASS
WALWORTH	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WASHINGTON	DNC	DNC	DNC	DNC	DNC	DNC	DNC
WAUKESHA	11	0	0	3.7	F	13.5	PASS
WAUPACA	*	*	*	*	*	*	INC
WINNEBAGO	*	*	*	*	*	*	INC
WOOD	*	*	*	*	*	*	INC

Ozone
- Marathon, St. Croix and Vernon Counties each dropped their grade from an A to a B.
- Green County no longer has sufficient data to grade.
- Jefferson, Dodge, Rock, Waukesha and Washington Counties each improved their grade from a C to a B.
- Racine County's grade improved from an F to a D.

PM
- Taylor, St. Croix and Sauk Counties now have sufficient data to grade.
- Manitowoc and Ozaukee Counties each dropped their grade from an A to a C.
- Kenosha County's grade dropped from a B to a C.
- Grant County's grade dropped from an A to a D.
- Outagamie, Brown and Dane Counties each dropped their grade from a B to a D.
- Waukesha County's grade dropped from a B to an F.
- Dodge and Milwaukee Counties each dropped their grade from a C to an F.
- Ashland County now has sufficient data to grade their annual levels.
- La Crosse and Waupaca Counties now have PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

WYOMING

AT-RISK GROUPS[1]

County	Total Population	Under 18	65 & Over	Lung Diseases: Pediatric Asthma	Lung Diseases: Adult Asthma	Lung Diseases: Chronic Bronchitis	Lung Diseases: Emphysema	CV Disease	Diabetes
CAMPBELL	37,405	9,549	2,087	850	2,186	1,121	384	7,463	1,860
CONVERSE	12,766	2,858	1,560	254	769	418	183	3,292	788
FREMONT	36,491	8,636	5,190	769	2,156	1,177	545	9,582	2,265
LARAMIE	85,163	20,085	10,242	1,788	5,059	2,678	1,139	20,408	4,871
SHERIDAN	27,389	5,686	4,216	506	1,677	929	443	7,757	1,831
SUBLETTE	6,926	1,484	759	132	423	228	96	1,743	421
TETON	19,032	3,464	1,509	308	1,218	631	231	4,367	1,074
TOTALS	**225,172**	**51,762**	**25,563**	**4,607**	**13,488**	**7,181**	**3,021**	**54,611**	**13,110**

(1) Adding across rows does not produce valid estimates, i.e. summing pediatric and adult asthma and/or emphysema and chronic bronchitis.

American Lung Association the Northern Rockies
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HIGH OZONE DAYS 2003-2005[1]

County	Orange	Red	Purple	Wgt. Avg	Grade
CAMPBELL	1	0	0	0.3	B
CONVERSE	DNC	DNC	DNC	DNC	DNC
FREMONT	DNC	DNC	DNC	DNC	DNC
LARAMIE	DNC	DNC	DNC	DNC	DNC
SHERIDAN	DNC	DNC	DNC	DNC	DNC
SUBLETTE	*	*	*	*	*
TETON	0	0	0	0.0	A

PARTICLE POLLUTION DAYS 2003-2005[2]

	24-Hour					Annual	
County	Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/ Fail
CAMPBELL	0	0	0	0.0	A	6.3	PASS
CONVERSE	0	0	0	0.0	A	3.6	PASS
FREMONT	6	0	0	2.0	C	8.5	PASS
LARAMIE	0	0	0	0.0	A	4.7	PASS
SHERIDAN	6	0	0	2.0	C	9.8	PASS
SUBLETTE	*	*	*	*	*	*	INC
TETON	1	0	0	0.3	B	*	INC

Ozone
- Campbell County now has sufficient data to grade.
- Sublette County now has ozone monitors but not enough data to grade.

PM
- Teton County's grade dropped from an A to a B.
- Sheridan and Fremont Counties each dropped their grade from a B to a C.
- Sublette County now has PM 24-hr and PM Annual monitors, but not enough data to grade.

Notes:
(1) The weighted average was derived by adding the three years of individual level data (2003-2005), multiplying the sums of each level by the assigned standard weights (i.e., 1=orange, 1.5=red, 2.0=purple) and calculating the average. (2) Asterisk (*) indicates incomplete monitoring data for all three years. Therefore, those counties are excluded from the grade analysis or received an Incomplete. (3) DNC indicates that data on that particular pollutant are not collected in that county. (4) Grades are as follows: A=0.0, B=0.3–0.9, C=1.0–2.0, D=2.1–3.2, F=3.3+.

Appendix: Description of Methodology

Statistical Methodology: The Air Quality Data

Data Sources

The data on air quality throughout the United States were obtained from the U.S. Environmental Protection Agency's Air Quality System (AQS), formerly called Aerometric Information Retrieval System (AIRS) database. The American Lung Association contracted with Dr. Allen S. Lefohn, A.S.L. & Associates, Helena, Montana, to characterize the hourly averaged ozone concentration information and the 24-hour averaged $PM_{2.5}$ concentration information for the three-year period for 2003-2005 for each monitoring site.

Design values for the annual $PM_{2.5}$ concentrations by county were collected from data previously summarized by EPA and were used as received from EPA on October 30, 2006 in personal correspondence from Mr. Mark Schmidt, EPA.

Ozone Data Analysis

The 2003, 2004, and 2005 AQS hourly ozone data were used to calculate the daily eight-hour maximum concentration for each ozone-monitoring site. The data were considered for a three-year period for the same reason that EPA uses three years of data to determine compliance with the ozone standard to prevent a situation in any single year where anomalies of weather or other factors can create air pollution levels that inaccurately reflect the normal conditions. The highest eight-hour daily maximum concentration in each county for 2003, 2004, and 2005, based on the EPA-defined ozone season, was identified.

Using these results, A.S.L. & Associates prepared a table by county that summarized, for each of the three years, the number of days the ozone level was within the ranges identified by EPA based on the EPA Air Quality Index:

0.000 – 0.064 ppm	Good (Green)
0.065 – 0.084 ppm	Moderate (Yellow)
0.085 – 0.104 ppm	Unhealthy for Sensitive Groups (Orange)
0.105 – 0.124 ppm	Unhealthy (Red)
0.125 – 0.374 ppm	Very Unhealthy (Purple)

No data capture criteria were used to eliminate monitoring sites. All data within the ozone season were used in the analysis because the goal was to identify the number of days that eight-hour daily maximum concentrations occurred within the defined ranges.

Following receipt of the above information, the American Lung Association identified the number of days that each county, with at least one ozone monitor, experienced air quality designated as orange, red, or purple.

Short-term Particle Pollution Data Analysis

A.S.L. & Associates identified the maximum daily 24-hour AQS $PM_{2.5}$ concentration for each county in 2003, 2004, and 2005 with monitoring information. Using these results, A.S.L. & Associates prepared a table by county that summarized, for each of the three years, the number of days the maximum of the ***daily*** $PM_{2.5}$ concentration was within the ranges identified by EPA based on the EPA Air Quality Index, adjusted by the American Lung Association as discussed below:

from 0.0 µg/m³ to 15.4 µg/m³	Good (Green)
from 15.5 µg/m³ to 35.0 µg/m³	Moderate (Yellow)
from 35.1 µg/m³ to 65.4 µg/m³	Unhealthy for Sensitive Groups (Orange)
from 65.5 µg/m³ to 150.4 µg/m³	Unhealthy (Red)
from 150.5 µg/m³ to 250.4 µg/m³	Very Unhealthy (Purple)
greater than or equal to 250.5 µg/m³	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 from 65 µg/m³ to 35 µg/m³. The EPA has not yet announced changes to the Air Quality Index based on the new standard. However, 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.

No data capture criteria were used to eliminate monitoring sites. All data were used in the analysis because the goal was to identify the number of days that the maximum in each county of the ***daily*** AIRS $PM_{2.5}$ concentration occurred within the defined ranges. 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 AQS 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 that each county, with at least one $PM_{2.5}$ monitor, experienced air quality designated as orange, red, purple or maroon.

Description of County Grading System.

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

The grades for ozone and short-term particle pollution (24-hour $PM_{2.5}$) were based on a weighted average for each county calculated using the Air Quality Index (adjusted to accommodate the 2006 changes in the National Ambient Air Quality Standard for $PM_{2.5}$) as noted above. The number of unhealthful days

experienced by each county was assigned a factor for weighting purposes: each orange day, a factor of 1; each red day, 1.5; each purple day, 2; and each maroon day, 2.5. By multiplying the total number of days within each category by its assigned factor, a total was determined. Because the monitoring data were collected over a three-year period, the total was divided by three to determine the weighted average. Each county's grade was determined using the weighted average.

Counties were ranked by weighted average. Metropolitan areas were ranked by the highest weighted average among the counties in the Census Bureau-defined Metropolitan Statistical Area. In 2003 and again in 2005, the U.S. Census Bureau published revised definitions for the nation's Metropolitan Statistical Areas. Therefore, comparisons between MSAs of the State of the Air reports from 2000 to 2003 and the State of the Air reports in 2004 and later should be made with caution.

All counties with a weighted average of zero were given a grade of "A." Counties with a weighted average of 0.3 to 0.9 (corresponding to 1 to 2 orange days) received a "B." Counties receiving a "C" had only 3 to 6 days over the standard, including at most one red day, and scored a weighted average of 1.0 to 2.0. Counties received a "D" if they had a weighted average of 2.1 to 3.2, which meant they had 7 to 9 days over the standard. Counties with weighted averages of 3.3 or higher (corresponding to approximately the eight-hour standard) received an "F." These counties generally had at least 10 orange days or 9 days over the standard with at least one or more days in the red or purple category. The number of days for an "F" grade was set to roughly correlate with the number of days that would place a county in nonattainment for the ozone standard. For short-term particle pollution, the number of days required for an "F" would roughly approximate a 99th percentile form of the $PM_{2.5}$, a form the American Lung Association supports.

Grading System

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

Weighted averages allow comparisons to be drawn based on severity of air pollution. For example, if one county had nine orange days and 0 red days, it would earn a weighted average of 3.0 and a D grade. However, another county that had only eight orange days but also had two red days, which signify days with more serious air pollution, would receive an F. That second county would have a weighted average of 3.7.

Note that this system differs significantly from the methodology that the 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 fourth maximum daily eight-hour ozone reading each year averaged over three years. Multiple days of unhealthy air beyond the highest four in each year are not considered. In 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 1997 ozone standard or the one-hour ozone standard set in 1979.

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 $\mu g/m^3$, as reported October 30, 2006 in personal correspondence from Mark Schmidt, EPA. 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." Counties were ranked by design value. Metropolitan areas were ranked by the design value among the counties in the defined Metropolitan Statistical Area as of 2005. The Design Value is the calculated concentration of a pollutant based on the form of the national ambient air quality standard, and is used by EPA to determine whether the air quality in a county meets the standard.

The Lung Association received critical assistance from members of the National Association of Clean Air Agencies, 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 A.S.L. & 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. (The primary exception to this is asthma, as state-specific estimates for adult asthma are available through one national survey discussed below.) In order to assess the magnitude of lung disease and other chronic conditions at the state and county levels, we have employed a synthetic estimation technique originally developed

by the U.S. Bureau of the Census. This method uses age-specific national estimates of self-reported lung disease and other conditions to project the prevalence of disease by county.

Population Estimates

The U.S. Census Bureau estimated data on the total population of each county in the United States for 2005. The Census Bureau also estimated the age-specific breakdown of the population by county.

Prevalence Estimates

Chronic Bronchitis, Emphysema, Pediatric Asthma and Cardiovascular Disease. In 2005, the National Health Interview Survey (NHIS) estimated the nationwide annual prevalence of diagnosed chronic bronchitis at 8.91 million; the nationwide lifetime prevalence of emphysema was estimated at 3.79 million. The NHIS estimates the prevalence of diagnosed pediatric asthma to be over 6.5 million under age 18. The NHIS estimates the prevalence of cardiovascular disease (CV) at 68 million among adults aged 18 years and over, which includes coronary heart disease, hypertension, stroke, angina pectoris or heart attack.

Due to the revision of the Health Interview Survey 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 2007. Furthermore, estimates for chronic bronchitis and emphysema cannot be summed since 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 in the National Health Interview Survey.

Local area prevalence of chronic bronchitis, emphysema, pediatric asthma and CV disease is estimated by applying age-specific national prevalence rates from the 2005 NHIS to age-specific county-level resident populations obtained from the U.S. Census Bureau website. Prevalence estimates for chronic bronchitis, emphysema and CV disease are calculated for those aged 18-44, 45 to 64 and 65+. The prevalence estimate for pediatric asthma is calculated for those under age 18.

Adult Asthma. In 2005, the Behavioral Risk Factor Surveillance System (BRFSS) survey indicated that approximately 8.0 percent 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 National Health Interview Survey.

The prevalence estimate for adult asthma is calculated for those aged 18 to 44, 45 to 64 and 65+. Local area prevalence of adult asthma is estimated by applying age-specific state prevalence rates from the 2005 BRFSS to age-specific county-level resident populations obtained from the U.S. Census Bureau website.

Diabetes Estimates. In 2005, the National Health Interview Survey estimated the nationwide lifetime prevalence of diabetes at 16.2 million. Local area prevalence of diabetes is estimated by applying age-specific national prevalence rates from the 2005 NHIS to age-specific county-level resident populations obtained from the U.S. Census Bureau website. Prevalence estimates for diabetes are calculated for those aged 18-44, 45 to 64 and 65+.

Limitations of Estimates. Since the statistics presented by the NHIS and the BRFSS 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 surveys.

Additionally, a major limitation of both surveys is that the information collected represents self-reports of medically diagnosed conditions, which may underestimate disease prevalence since not all individuals with these conditions have been properly diagnosed. However, the NHIS is the best available source that depicts the magnitude of chronic disease on the national level, and the BRFSS is the best available source for state-specific adult asthma information. The conditions covered in the surveys 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 from the NHIS or state estimates derived from the BRFSS.

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Beginning our second century, the American Lung Association works to prevent lung disease and promote lung health. Asthma is the leading serious chronic childhood illness. Lung diseases and breathing problems are the primary causes of infant deaths in the United States today. Smoking remains the nation's number one preventable cause of chronic illness. Lung disease death rates continue to increase while other major causes of death have declined.

The American Lung Association has long funded vital research to discover the causes and seek improved treatments for those suffering with lung disease. We are the foremost defender of the Clean Air Act and laws that protect citizens from secondhand smoke. The Lung Association teaches children the dangers of tobacco use and helps teenage and adult smokers overcome addiction. We help children and adults living with lung disease to improve their quality of life. With your generous support, the American Lung Association is "Improving life, one breath at a time."

For more information about the American Lung Association
or to support the work we do, call
1-800-LUNG-USA (1-800-586-4872)
or log on to ***www.lungusa.org****.*

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