

## Cleanest U.S. Cities for Short-term Particle Pollution (24-hour PM<sub>2.5</sub>)<sup>1</sup>

Metropolitan Statistical Area	Population
Alexandria, LA	149,837
Amarillo, TX	242,240
Austin-Round Rock, TX	1,598,161
Bismarck, ND	103,242
Brownsville-Harlingen-Raymondville, TX	407,723
Cheyenne, WY	86,353
Colorado Springs, CO	609,096
Corpus Christi-Kingsville, TX	414,376
Fargo-Wahpeton, ND-MN	215,333
Farmington, NM	122,427
Fort Collins-Loveland, CO	287,574
Grand Junction, CO	139,082
Longview-Marshall, TX	267,115
Midland-Odessa, TX	255,978
Oklahoma City-Shawnee, OK	1,262,027
Portland-Lewiston-South Portland, ME	619,917
Pueblo, CO	154,538
Redding, CA	179,427
Salinas, CA	407,637
San Luis Obispo-Paso Robles, CA	262,436
Santa Barbara-Santa Maria-Goleta, CA	404,197
Santa Fe-Espanola, NM	183,782
Sioux Falls, SD	227,171
Tucson, AZ	967,089

### Notes:

(1) This list represents cities with the lowest levels of short term PM<sub>2.5</sub> air pollution. Monitors in these cities reported no days with unhealthy PM<sub>2.5</sub> levels.

## Top 25 Cleanest U.S. Cities for Long-term Particle Pollution (Annual PM<sub>2.5</sub>)<sup>1</sup>

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

### Notes:

(1) This list represents cities with the lowest levels of annual PM<sub>2.5</sub> air pollution.

(2) Cities are ranked by using the highest design value for any county within that metropolitan area.

(3) The **Design Value** is the calculated concentration of a pollutant based on the form of the National Ambient Air Quality Standard, and is used by the EPA to determine whether the air quality in a county meets the standard. The source for the Design Values is the EPA, Office of Air Quality Planning & Standards, available at <http://www.epa.gov/air/airtrends/values.html>, downloaded September 12, 2008.

## Cleanest U.S. Cities for Ozone Air Pollution<sup>1</sup>

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

### Notes:

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

## People at Risk In 25 Most Ozone-Polluted Cities

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

### Notes:

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

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

(3) Those **18 & under** and **65 & over** are vulnerable to PM<sub>2.5</sub> and are, therefore, included. They should not be used as population denominators for disease estimates.

(4) **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2007 based on national rates (NHIS) applied to county population estimates (U.S. Census).

(5) **Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2007 based on state rates (BRFSS) applied to county population estimates (U.S. Census).

(6) **Chronic bronchitis** estimates are for adults 18 and over who had been diagnosed in 2007, based on national rates (NHIS) applied to county population estimates (U.S. Census).

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

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

## American Lung Association in Colorado

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## AT-RISK GROUPS

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

### HIGH OZONE DAYS/2005-2007

County	Orange	Red	Purple	Wgt. Avg	Grade
ADAMS	4	0	0	1.3	C
ARAPAHOE	23	0	0	7.7	F
ARCHULETA	DNC	DNC	DNC	DNC	DNC
BOULDER	21	0	0	7.0	F
DELTA	DNC	DNC	DNC	DNC	DNC
DENVER	6	0	0	2.0	C
DOUGLAS	44	0	0	14.7	F
EL PASO	12	0	0	4.0	F
ELBERT	DNC	DNC	DNC	DNC	DNC
GUNNISON	DNC	DNC	DNC	DNC	DNC
JEFFERSON	48	2	0	17.0	F
LA PLATA	2	0	0	0.7	B
LARIMER	39	1	0	13.5	F
MESA	*	*	*	*	*
MONTEZUMA	6	0	0	2.0	C
PUEBLO	DNC	DNC	DNC	DNC	DNC
ROUTT	DNC	DNC	DNC	DNC	DNC
SAN MIGUEL	DNC	DNC	DNC	DNC	DNC
WELD	18	0	0	6.0	F

### PARTICLE POLLUTION DAYS/2005-2007

24-Hour					Annual	
Orange	Red	Purple	Wgt. Avg	Grade	Design Value	Pass/Fail
4	0	0	1.3	C	10.2	PASS
3	0	0	1.0	C	8.0	PASS
*	*	*	*	*	DNC	INC
0	0	0	0.0	A	8.3	PASS
*	*	*	*	*	DNC	INC
13	0	0	4.3	F	9.8	PASS
1	0	0	0.3	B	DNC	INC
0	0	0	0.0	A	7.7	PASS
0	0	0	0.0	A	4.5	PASS
*	*	*	*	*	DNC	INC
DNC	DNC	DNC	DNC	DNC	DNC	DNC
DNC	DNC	DNC	DNC	DNC	DNC	DNC
0	0	0	0.0	A	7.4	PASS
0	0	0	0.0	A	9.2	PASS
DNC	DNC	DNC	DNC	DNC	DNC	DNC
0	0	0	0.0	A	7.7	PASS
*	*	*	*	*	DNC	INC
*	*	*	*	*	DNC	INC
3	0	0	1.0	C	9.3	PASS

Notes:

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