

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

2008 Rank ¹	Metropolitan Statistical Areas	Total Population ²	Under 18 ³	65 and Over ³	Pediatric Asthma ^{4,10}	Adult Asthma ^{5,10}	Chronic Bronchitis ^{6,10}	Emphysema ^{7,10}	CV Disease ^{8,10}	Diabetes ^{9,10}
1	Pittsburgh-New Castle, PA	2,462,571	518,671	422,233	48,133	167,378	88,115	42,618	748,125	170,918
2	Los Angeles-Long Beach-Riverside, CA	17,775,984	4,835,924	1,813,198	448,774	971,597	536,717	215,729	4,058,081	932,010
3	Fresno-Madera, CA	1,038,101	309,610	100,674	28,732	54,251	29,871	11,830	223,864	51,375
4	Bakersfield, CA	780,117	231,876	68,328	21,518	40,509	22,115	8,401	161,673	37,147
5	Birmingham-Hoover-Cullman, AL	1,180,206	286,314	151,406	26,570	78,466	38,808	17,023	309,601	71,022
6	Logan, UT-ID	111,156	36,010	9,036	3,342	6,384	2,934	1,064	20,881	4,786
7	Salt Lake City-Ogden-Clearfield, UT	1,632,814	492,982	139,302	45,749	94,968	46,416	17,738	340,497	78,352
8	Sacramento-Arden-Arcade-Yuba City, CA-NV	2,373,596	589,107	278,436	54,669	135,208	75,438	31,687	585,909	134,394
9	Detroit-Warren-Flint, MI	5,410,014	1,364,806	634,415	126,654	383,598	174,927	75,046	1,376,296	316,339
10	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,211,213	2,002,876	855,777	185,867	545,154	263,298	107,719	2,011,954	463,297
11	Eugene-Springfield, OR	337,870	69,407	47,140	6,441	26,191	11,694	5,190	93,986	21,543
12	Provo-Orem, UT	474,180	166,065	31,414	15,411	26,046	11,716	3,956	80,039	18,370
13	Chicago-Naperville-Michigan City, IL-IN-WI	9,725,317	2,531,912	1,055,954	234,961	598,142	304,377	126,077	2,343,679	538,608
13	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,976,224	5,273,371	2,797,470	489,369	1,380,661	720,038	313,120	5,713,550	1,310,234
15	Cleveland-Akron-Elyria, OH	2,917,801	699,991	411,924	64,959	213,283	98,171	44,766	802,561	183,909
16	San Jose-San Francisco-Oakland, CA	7,228,948	1,683,595	846,025	156,238	424,768	237,271	100,193	1,848,665	424,827
17	Fairbanks, AK	86,754	24,238	4,871	2,249	5,879	2,463	829	16,788	3,890
18	Hanford-Corcoran, CA	146,153	40,276	10,847	3,738	7,621	4,083	1,406	28,207	6,483
19	Indianapolis-Anderson-Columbus, IN	1,984,644	516,762	221,718	47,956	123,413	62,496	26,211	484,900	111,411
19	Visalia-Porterville, CA	419,909	134,299	38,836	12,463	21,210	11,657	4,577	86,913	19,945
21	Harrisburg-Carlisle-Lebanon, PA	652,263	144,517	95,425	13,411	44,117	22,427	10,242	183,517	42,028
22	Louisville-Jefferson County-Elizabethtown-Scottsboro, KY-IN	1,356,798	330,418	166,556	30,663	84,560	44,549	19,331	353,001	81,082
22	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,382,714	1,547,208	830,364	143,581	413,222	210,028	92,485	1,679,649	385,159
24	Modesto, CA	512,138	147,599	51,201	13,697	27,284	15,060	6,033	113,645	26,088
25	State College, PA	140,953	23,577	15,625	2,188	10,620	4,628	1,742	33,654	7,699

Notes:

- (1) Cities are ranked using the highest weighted average for any county within that Metropolitan Statistical Area.
- (2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.
- (3) Those **18 & under** and **65 & over** are vulnerable to PM_{2.5} and are, therefore, included. They should not be used as population denominators for disease estimates.
- (4) **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2006 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 2006 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 2006, 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 2006, 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})

2008 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	17,775,984	4,835,924	1,813,198	448,774	971,597	536,717	215,729	4,058,081	932,010
2	Pittsburgh-New Castle, PA	2,462,571	518,671	422,233	48,133	167,378	88,115	42,618	748,125	170,918
3	Bakersfield, CA	780,117	231,876	68,328	21,518	40,509	22,115	8,401	161,673	37,147
4	Birmingham-Hoover-Cullman, AL	1,180,206	286,314	151,406	26,570	78,466	38,808	17,023	309,601	71,022
5	Visalia-Porterville, CA	419,909	134,299	38,836	12,463	21,210	11,657	4,577	86,913	19,945
6	Atlanta-Sandy Springs-Gainesville, GA-AL	5,478,667	1,460,802	448,912	135,562	320,442	165,438	62,787	1,208,473	279,015
7	Cincinnati-Middletown-Wilmington, OH-KY-IN	2,147,617	542,837	252,603	50,375	150,251	68,882	29,389	540,124	124,045
8	Fresno-Madera, CA	1,038,101	309,610	100,674	28,732	54,251	29,871	11,830	223,864	51,375
8	Hanford-Corcoran, CA	146,153	40,276	10,847	3,738	7,621	4,083	1,406	28,207	6,483
8	Detroit-Warren-Flint, MI	5,410,014	1,364,806	634,415	126,654	383,598	174,927	75,046	1,376,296	316,339
8	Cleveland-Akron-Elyria, OH	2,917,801	699,991	411,924	64,959	213,283	98,171	44,766	802,561	183,909
12	Macon-Warner Robins-Fort Valley, GA	381,641	100,009	43,991	9,281	22,375	12,064	5,129	94,386	21,677
13	St. Louis-St. Charles-Farmington, MO-IL	2,858,549	699,809	364,870	64,942	184,375	93,790	41,144	748,278	171,677
14	Weirton-Steubenville, WV-OH	125,168	25,168	23,386	2,336	9,074	4,609	2,300	39,941	9,116
14	Charleston, WV	305,526	67,146	46,708	6,231	20,358	10,733	5,025	89,231	20,445
16	Lancaster, PA	494,486	124,995	70,706	11,600	32,198	16,215	7,405	132,700	30,353
16	York-Hanover-Gettysburg, PA	517,427	117,359	70,088	10,891	34,886	17,482	7,775	140,678	32,257
18	Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN	1,356,798	330,418	166,556	30,663	84,560	44,549	19,331	353,001	81,082
19	Rome, GA	95,322	23,599	13,394	2,190	5,686	3,102	1,392	25,105	5,739
19	Huntington-Ashland, WV-KY-OH	285,475	61,696	44,337	5,725	19,430	9,906	4,596	81,889	18,725
21	Augusta-Richmond County, GA-SC	523,249	135,886	61,491	12,610	30,346	16,731	7,192	131,795	30,279
22	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	8,211,213	2,002,876	855,777	185,867	545,154	263,298	107,719	2,011,954	463,297
22	Canton-Massillon, OH	409,764	94,894	62,548	8,806	30,139	14,101	6,601	117,218	26,831
22	Greenville-Spartanburg-Anderson, SC	1,203,795	285,061	157,937	26,454	69,966	39,885	17,561	318,944	73,131
25	Columbus-Auburn-Opelika, GA-AL	437,222	110,229	47,630	10,229	27,250	13,608	5,539	103,680	23,793
25	Hagerstown-Martinsburg, MD-WV	257,619	59,104	32,516	5,485	17,135	8,455	3,619	66,436	15,228

Notes:

- (1) Cities are ranked using the highest design value for any county within that Metropolitan Statistical Area.
- (2) **Total Population** represents the at-risk populations for all counties within the respective Combined Statistical Area or Metropolitan Statistical Area.
- (3) Those **18 & under** and **65 & over** are vulnerable to PM_{2.5} and are, therefore, included. They should not be used as population denominators for disease estimates.
- (4) **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2006 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 2006 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 2006, 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 2006, 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

2008 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	17,775,984	4,835,924	1,813,198	448,774	971,597	536,717	215,729
2	Bakersfield, CA	780,117	231,876	68,328	21,518	40,509	22,115	8,401
3	Visalia-Porterville, CA	419,909	134,299	38,836	12,463	21,210	11,657	4,577
4	Houston-Baytown-Huntsville, TX	5,641,077	1,583,322	453,950	146,932	292,570	166,956	63,328
5	Fresno-Madera, CA	1,038,101	309,610	100,674	28,732	54,251	29,871	11,830
6	Sacramento--Arden-Arcade--Yuba City, CA-NV	2,373,596	589,107	278,436	54,669	135,208	75,438	31,687
7	Dallas-Fort Worth, TX	6,359,758	1,747,838	540,269	162,199	332,845	188,814	71,913
8	New York-Newark-Bridgeport, NY-NJ-CT-PA	21,976,224	5,273,371	2,797,470	489,369	1,380,661	720,038	313,120
9	Washington-Baltimore--Northern Virginia, DC-MD-VA-WV	8,211,213	2,002,876	855,777	185,867	545,154	263,298	107,719
10	Baton Rouge-Pierre Part, LA	789,986	199,274	80,926	18,493	34,841	24,710	9,962
11	Philadelphia-Camden-Vineland, PA-NJ-DE-MD	6,382,714	1,547,208	830,364	143,581	413,222	210,028	92,485
12	Charlotte-Gastonia-Salisbury, NC-SC	2,191,604	553,784	230,924	51,391	112,281	69,215	28,368
12	San Diego-Carlsbad-San Marcos, CA	2,941,454	745,182	327,369	69,153	164,778	91,371	37,390
12	Atlanta-Sandy Springs-Gainesville, GA-AL	5,478,667	1,460,802	448,912	135,562	320,442	165,438	62,787
15	St. Louis--St. Charles--Farmington, MO-IL	2,858,549	699,809	364,870	64,942	184,375	93,790	41,144
15	Beaumont-Port Arthur, TX	379,640	94,593	50,633	8,778	21,028	12,389	5,506
17	Merced, CA	245,658	77,953	22,559	7,234	12,393	6,797	2,643
18	El Centro, CA	160,301	47,295	16,478	4,389	8,365	4,614	1,844
19	Phoenix-Mesa-Scottsdale, AZ	4,039,182	1,095,184	455,447	101,633	256,998	123,144	51,121
20	Kansas City-Overland Park-Kansas City, MO-KS	2,034,796	522,422	230,076	48,481	128,461	64,737	27,328
21	Modesto, CA	512,138	147,599	51,201	13,697	27,284	15,060	6,033
22	Birmingham-Hoover-Cullman, AL	1,180,206	286,314	151,406	26,570	78,466	38,808	17,023
23	Las Vegas-Paradise-Pahrump, NV	1,820,232	470,100	193,905	43,625	102,090	56,636	23,149
24	Chicago-Naperville-Michigan City, IL-IN-WI	9,725,317	2,531,912	1,055,954	234,961	598,142	304,377	126,077
24	Hanford-Corcoran, CA	146,153	40,276	10,847	3,738	7,621	4,083	1,406
24	Milwaukee-Racine-Waukesha, WI	1,706,077	432,931	209,494	40,176	111,371	55,367	24,147

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 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 2006 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 2006 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 2006, 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.