

# Environments and Contaminants

## Criteria Air Pollutants

**Table E1: Percentage of children ages 0 to 17 years living in counties with pollutant concentrations above the levels of the current air quality standards, 1999-2009\***

1999-2004						
Pollutant	1999	2000	2001	2002	2003	2004
Any standard	74.9	76.1	76.3	75.9	77.4	73.8
Ozone (8-hour)	65.2	64.9	66.3	66.1	67.8	61.6
PM <sub>2.5</sub> (24-hour)	55.0	62.5	60.8	60.9	56.8	56.0
Sulfur dioxide (1-hour)	31.1	28.8	26.6	25.6	21.6	20.5
PM <sub>2.5</sub> (annual)	24.2	29.6	24.7	20.9	19.1	16.4
Nitrogen dioxide (1-hour)	23.2	19.4	17.4	18.9	17.5	16.3
PM <sub>10</sub> (24-hour)	7.9	6.3	6.0	4.8	7.8	5.2
Carbon monoxide (8-hour)	5.7	4.4	0.7	4.1	<0.1	0.1
Lead (3-month)	2.3	1.6	2.2	1.2	1.6	1.2
2005-2009						
Pollutant	2005	2006	2007	2008	2009	
Any standard	75.9	72.9	74.4	69.2	58.6	
Ozone (8-hour)	66.2	65.3	64.1	59.2	48.9	
PM <sub>2.5</sub> (24-hour)	60.2	45.7	53.6	37.1	32.2	
Sulfur dioxide (1-hour)	20.9	16.6	15.5	16.7	11.4	
PM <sub>2.5</sub> (annual)	24.3	12.5	16.1	7.3	2.1	
Nitrogen dioxide (1-hour)	13.9	12.5	10.9	12.6	8.7	
PM <sub>10</sub> (24-hour)	5.0	5.1	12.5	4.0	2.8	
Carbon monoxide (8-hour)	0.2	0.3	0.1	0.2	0.0	
Lead (3-month)	1.6	1.2	5.0	5.0	4.2	

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

\* EPA periodically reviews air quality standards and may change them based on updated scientific findings. Measuring concentrations above the level of a standard is not equivalent to violating the standard. The level of a standard may be exceeded on multiple days before the exceedance is considered a violation of the standard. See the indicator text for additional discussion. The indicator is calculated with reference to the current levels of the air quality standards for all years shown. Note that EPA promulgated a revised annual PM<sub>2.5</sub> standard in December 2012, which has not been incorporated into this analysis.

**Table E1a: Percentage of children ages 0 to 17 years living in counties with pollutant concentrations above the levels of the current air quality standards, by race/ethnicity, 2009\***

Pollutant	All Races/ Ethnicities	White non- Hispanic	Black non- Hispanic	American Indian/Alaska Native non-Hispanic	Asian or Pacific Islander non- Hispanic	Hispanic
<b>Any standard</b>	58.6	51.9	62.7	38.1	70.0	71.4
<b>Ozone (8-hour)</b>	48.9	40.9	52.2	29.5	60.7	65.2
<b>PM<sub>2.5</sub> (24-hour)</b>	32.2	24.0	34.0	19.8	47.7	48.8
<b>Sulfur dioxide (1-hour)</b>	11.4	9.9	17.4	5.2	10.2	11.5
<b>PM<sub>2.5</sub> (annual)</b>	2.1	1.1	0.8	1.7	2.7	5.3
<b>Nitrogen dioxide (1-hour)</b>	8.7	4.0	9.8	2.8	12.8	19.4
<b>PM<sub>10</sub> (24-hour)</b>	2.8	2.5	0.9	5.8	1.8	4.8
<b>Carbon monoxide (8-hour)</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>Lead (3-month)</b>	4.2	2.0	2.6	1.2	8.2	10.0

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

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**Table E1b: Percentage of children ages 0 to 17 years living in counties with pollutant concentrations above the levels of the current air quality standards, by family income, 2009\***

Pollutant	All Incomes	< Poverty Level	≥ Poverty Level	≥ Poverty (Detail)	
				100-200% of Poverty Level	≥ 200% of Poverty Level
<b>Any standard</b>	58.6	59.0	58.6	56.3	59.3
<b>Ozone (8-hour)</b>	48.9	49.9	48.7	47.2	49.3
<b>PM<sub>2.5</sub> (24-hour)</b>	32.2	36.5	31.3	32.9	30.8
<b>Sulfur dioxide (1-hour)</b>	11.4	12.5	11.1	11.2	11.1
<b>PM<sub>2.5</sub> (annual)</b>	2.1	3.1	1.9	2.6	1.6
<b>Nitrogen dioxide (1-hour)</b>	8.7	12.2	8.1	10.1	7.4
<b>PM<sub>10</sub> (24-hour)</b>	2.8	2.6	2.8	3.1	2.7
<b>Carbon monoxide (8-hour)</b>	0.0	0.0	0.0	0.0	0.0
<b>Lead (3-month)</b>	4.2	5.7	3.9	4.9	3.6

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

\* EPA periodically reviews air quality standards and may change them based on updated scientific findings. Measuring concentrations above the level of a standard is not equivalent to violating the standard. The level of a standard may be exceeded on multiple days before the exceedance is considered a violation of the standard. See the indicator text for additional discussion. The indicator is calculated with reference to the current levels of the air quality standards for all years shown. Note that EPA promulgated a revised annual PM<sub>2.5</sub> standard in December 2012, which has not been incorporated into this analysis.

**Table E2: Percentage of children ages 0 to 17 years living in counties with 8-hour ozone and 24-hour PM<sub>2.5</sub> concentrations above the levels of air quality standards, by frequency of occurrence, 2009\***

Ozone (8-hour)							
1999-2005	1999	2000	2001	2002	2003	2004	2005
No days with concentrations above the standard	2.9	4.4	4.2	4.6	3.7	9.4	5.1
1-3 days	4.6	9.6	6.9	6.7	8.7	22.8	9.3
4-10 days	10.8	22.9	16.2	9.6	28.5	21.0	17.7
11-25 days	26.7	16.2	29.5	21.5	18.1	10.0	28.1
26 or more days	23.2	16.2	13.7	28.4	12.5	7.8	11.2
No monitoring data	31.8	30.7	29.6	29.2	28.4	29.0	28.7
2006-2009	2006	2007	2008	2009			
No days with concentrations above the standard	6.4	8.0	13.6	24.3			
1-3 days	10.6	11.2	18.6	27.7			
4-10 days	24.8	19.8	23.9	11.8			
11-25 days	19.6	25.9	8.5	3.0			
26 or more days	10.4	7.2	8.2	6.4			
No monitoring data	28.3	28.0	27.2	26.8			
PM <sub>2.5</sub> (24-hour)							
1999-2005	1999	2000	2001	2002	2003	2004	2005
No days with concentrations above the standard	13.4	10.6	12.5	12.9	16.4	14.6	11.1
1-7 days	36.3	41.5	39.1	37.5	37.4	40.0	41.9
8-10 days	3.3	2.5	1.7	4.3	3.8	5.3	4.7
11-25 days	9.2	11.2	12.6	11.1	9.8	8.3	10.7
26 or more days	6.2	7.2	7.4	7.8	5.4	2.2	2.4
No monitoring data	31.6	27.0	26.8	26.5	27.2	29.6	29.1
2006-2009	2006	2007	2008	2009			
No days with concentrations above the standard	25.4	17.5	33.9	38.4			
1-7 days	34.9	38.4	29.3	28.4			
8-10 days	6.5	1.8	4.8	0.8			
11-25 days	1.0	10.2	1.3	1.9			
26 or more days	1.8	1.9	1.0	0.9			
No monitoring data	30.4	30.2	29.7	29.6			

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

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**Table E3: Percentage of days with good, moderate, or unhealthy air quality for children ages 0 to 17 years, 1999-2009**

Pollution Level							
1999-2005	1999	2000	2001	2002	2003	2004	2005
Good	41.2	43.2	44.0	45.5	47.1	49.4	47.7
Moderate	22.1	23.3	23.3	21.6	21.5	20.4	21.2
Unhealthy	8.8	7.2	7.0	7.6	6.0	4.8	5.7
No monitoring data	27.9	26.3	25.7	25.3	25.4	25.4	25.4
2006-2009	2006	2007	2008	2009			
Good	48.9	48.6	51.9	56.6			
Moderate	20.5	20.5	18.3	15.5			
Unhealthy	5.0	4.9	3.7	2.8			
No monitoring data	25.7	26.0	26.0	25.1			

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

NOTE: Good, moderate, and unhealthy air quality are defined using EPA's Air Quality Index (AQI). The health information that supports EPA's periodic reviews of the air quality standards informs decisions on the AQI breakpoints and may change based on updated scientific findings. See text for additional discussion.

**Table E3a: Percentage of days with good, moderate, or unhealthy air quality for children ages 0 to 17 years, by race/ethnicity, 2009**

Pollution Level	All Races/ Ethnicities	White non- Hispanic	Black non- Hispanic	American Indian/ Alaska Native	Asian or Pacific Islander	Hispanic
Good	56.6	54.5	60.8	50.3	65.4	57.3
Moderate	15.5	12.1	16.0	11.6	20.1	23.2
Unhealthy	2.8	1.6	1.9	1.7	4.5	6.0
No monitoring data	25.1	31.8	21.3	36.5	10.0	13.5

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

NOTE: Good, moderate, and unhealthy air quality are defined using EPA's Air Quality Index (AQI). The health information that supports EPA's periodic reviews of the air quality standards informs decisions on the AQI breakpoints and may change based on updated scientific findings. See text for additional discussion.

**Table E3b: Percentage of days with good, moderate, or unhealthy air quality for children ages 0 to 17 years, by family income, 2009**

Pollution Level	All Incomes	< Poverty Level	≥ Poverty Level	≥ Poverty (Detail)	
				100-200% of Poverty Level	≥ 200% of Poverty Level
Good	56.6	53.6	57.2	52.8	58.7
Moderate	15.5	16.9	15.3	15.9	15.1
Unhealthy	2.8	3.6	2.6	3.2	2.4
No monitoring data	25.1	26.0	24.9	28.1	23.8

DATA: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality System

NOTE: Good, moderate, and unhealthy air quality are defined using EPA's Air Quality Index (AQI). The health information that supports EPA's periodic reviews of the air quality standards informs decisions on the AQI breakpoints and may change based on updated scientific findings. See text for additional discussion.