

## **PM<sub>2.5</sub> Air Quality Data Update 2007-2009 Design Values**

The following is a brief summary of EPA's air quality update for PM<sub>2.5</sub> based on ambient monitoring data for the three-year period, 2007-2009. During this three-year period:

- Four of the original 39 areas designated nonattainment for the PM<sub>2.5</sub> NAAQS in April, 2005 (using 2001-2003 data) failed to meet the annual PM<sub>2.5</sub> NAAQS in 2007-2009. Twenty-nine of the original 39 nonattainment areas met the annual NAAQS in 2007-2009. Six areas have insufficient data to allow a determination of compliance with respect to the annual PM<sub>2.5</sub> NAAQS in 2007-2009; in each of these six areas, one or more sites for which compliance cannot be determined for 2007-2009 clearly violated the NAAQS in a previous period (e.g., for 2006-2008). (Table 1a).
- Eighteen of the 31 areas originally designated nonattainment for the 24-hour PM<sub>2.5</sub> NAAQS failed to meet the NAAQS with 2007-2009 data. Nine of the original 31 nonattainment areas met the 24-hour PM<sub>2.5</sub> NAAQS in 2007-2009. The other four areas are shown to have incomplete data with respect to the 24-hour PM<sub>2.5</sub> NAAQS; in each of these four areas, one or more sites for which compliance cannot be determined for 2007-2009 clearly violated the NAAQS in a previous period (e.g., for 2006-2008). (Table 1b).
- No counties, outside of existing nonattainment areas, did not meet the PM<sub>2.5</sub> annual NAAQS in 2007-2009. (Table 2a).
- Five counties, outside of existing nonattainment areas, did not meet the PM<sub>2.5</sub> 24-hour NAAQS for 2007-2009.

In 1997, EPA established the PM<sub>2.5</sub> NAAQS for the protection of public health. The annual standard was set at a level of 15.0 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and the 24-hour standard was set at a level of 65  $\mu\text{g}/\text{m}^3$ . In October 2006, the 24-hour PM<sub>2.5</sub> NAAQS was strengthened to 35  $\mu\text{g}/\text{m}^3$ .

Air quality data from EPA's Air Quality System (AQS) were used to calculate PM<sub>2.5</sub> design values. The specific calculations are explained in footnotes to the tables. Most of the data used for these calculations were obtained from AQS on January 29, 2011. Detailed 2007-2009 information (including design values for previous 3-year periods from 1999-2001) for all PM<sub>2.5</sub> FRM/FEM sites are available in the downloadable spreadsheet file.

For information concerning these data and/or calculations, contact:

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Table 1a. Areas Previously Designated Nonattainment for the PM<sub>2.5</sub> 1997 Annual NAAQS  
 AQS Data Query: 01/29/2011; Last updated: 2/15/2011

Designated Area	States	EPA Regions	Designation Status <sup>1</sup>	Classification	2007-2009	Met NAAQS?	Clean Data Determination Date
					Annual Design Value (µg/m <sup>3</sup> ) <sup>2,3</sup>		
Atlanta	GA	4	nonattainment	not applicable	13.5 <sup>4</sup>	see footnote <sup>4</sup>	
Baltimore	MD	3	nonattainment	not applicable	12.9	yes	
Birmingham	AL	4	nonattainment	not applicable	15.1	no	
Canton-Massillon	OH	5	nonattainment	not applicable	incomplete	incomplete	
Charleston	WV	3	nonattainment	not applicable	14.4	yes	
Chattanooga	TN-GA-AL	4	nonattainment	not applicable	12.7 <sup>4</sup>	see footnote <sup>4</sup>	
Chicago-Gary-Lake County	IL-IN	5	nonattainment	not applicable	13.5	yes	11/27/09
Cincinnati-Hamilton	OH-KY-IN	4, 5	nonattainment	not applicable	15.0	yes	
Cleveland-Akron-Lorain	OH	5	nonattainment	not applicable	14.4	yes	
Columbus	OH	5	nonattainment	not applicable	13.0	yes	
Dayton-Springfield	OH	5	nonattainment	not applicable	13.8	yes	
Detroit-Ann Arbor	MI	5	nonattainment	not applicable	14.1	yes	
Evansville	IN	5	nonattainment	not applicable	13.1	yes	11/27/09
Floyd County	GA	4	nonattainment	not applicable	13.3	yes	
Greensboro-Winston-Salem-High Point	NC	4	nonattainment	not applicable	13.0	yes	01/04/10
Harrisburg-Lebanon-Carlisle	PA	3	nonattainment	not applicable	13.2	yes	08/25/09
Hickory-Morgantown-Lenoir	NC	4	nonattainment	not applicable	12.5	yes	01/05/10
Huntington-Ashland	WV-KY-OH	3, 4, 5	nonattainment	not applicable	14.3 <sup>4</sup>	see footnote <sup>4</sup>	
Indianapolis	IN	5	nonattainment	not applicable	14.3	yes	
Johnstown	PA	3	nonattainment	not applicable	13.4	yes	09/25/09
Knoxville	TN	4	nonattainment	not applicable	13.7 <sup>4</sup>	see footnote <sup>4</sup>	
Lancaster	PA	3	nonattainment	not applicable	13.8	yes	09/25/09
Libby	MT	8	nonattainment	not applicable	12.2	yes	
Liberty-Clairton	PA	3	nonattainment	not applicable	17.0	no	
Los Angeles-South Coast Air Basin	CA	9	nonattainment	not applicable	18.8	no	
Louisville	KY-IN	4, 5	nonattainment	not applicable	14.7	yes	
Macon	GA	4	nonattainment	not applicable	13.5	yes	
Martinsburg, WV-Hagerstown	MD	3	nonattainment	not applicable	14.0	yes	11/20/09
New York-N. New Jersey-Long Island	NY-NJ-CT	1, 2	nonattainment	not applicable	13.9	yes	12/15/10
Parkersburg-Marietta	WV-OH	3, 5	nonattainment	not applicable	13.7	yes	11/20/09
Philadelphia-Wilmington	PA-NJ-DE	2, 3	nonattainment	not applicable	13.7 <sup>4</sup>	see footnote <sup>4</sup>	
Pittsburgh-Beaver Valley	PA	3	nonattainment	not applicable	14.3	yes	
Reading	PA	3	nonattainment	not applicable	12.6	yes	09/25/09
San Joaquin Valley	CA	9	nonattainment	not applicable	22.6	no	
St. Louis	MO-IL	5, 7	nonattainment	not applicable	14.1	yes	
Steubenville-Weirton	OH-WV	3, 5	nonattainment	not applicable	14.4	yes	
Washington DC	DC-MD-VA	3	nonattainment	not applicable	12.4	yes	01/12/09
Wheeling	WV-OH	3, 5	nonattainment	not applicable	13.4	yes	11/20/09
York	PA	3	nonattainment	not applicable	13.7	yes	09/25/09

Notes:

1. Area designation status as of January 25, 2011.
2. The level of the 1997 annual NAAQS for PM<sub>2.5</sub> is 15.0 micrograms per cubic meter (µg/m<sup>3</sup>). The design value for the annual PM<sub>2.5</sub> NAAQS is the 3-year average annual mean concentration.
3. The design values shown here are computed for the latest design value period using Federal Reference Method or equivalent data reported by States, Tribes, and local agencies to EPA's Air Quality System (AQS) as of 1/29/2011. Concentrations flagged by States, Tribes, and local agencies as exceptional events (e.g., high winds, wildfires, volcanic eruptions, construction) and concurred by the associated EPA Regional Office are not included in the calculation of these design values.
4. One or more sites in this area has violated the NAAQS prior to 2007-2009 and does not have a valid 2007-2009 design value(s). Although a 2007-2009 area-level design value is shown, the design value shown may not represent the worst 2007-2009 air quality in the area. Consequently, we have not used it to indicate "yes" or "no" in the Met NAAQS column.

Table 1b. Areas Previously Designated Nonattainment for the PM<sub>2.5</sub> 2006 24-hour NAAQS  
 AQS Data Query: 01/29/2011; Last updated: 2/15/2011

Designated Area	States	EPA Regions	Designation Status <sup>1</sup>	Classification	2007-2009 24-	Met NAAQS?
					hour Design Value (µg/m <sup>3</sup> ) <sup>2,3</sup>	
Allentown	PA	3	Nonattainment	not applicable	34	yes
Birmingham	AL	4	Nonattainment	not applicable	34	yes
Canton-Massillon	OH	5	Nonattainment	not applicable	incomplete	incomplete
Charleston	WV	3	Nonattainment	not applicable	32	yes
Chico	CA	9	Nonattainment	not applicable	59	no
Cleveland-Akron-Lorain	OH	5	Nonattainment	not applicable	36	no
Detroit-Ann Arbor	MI	5	Nonattainment	not applicable	35	yes
Fairbanks	AK	10	Nonattainment	not applicable	57	no
Harrisburg-Lebanon-Carlisle	PA	3	Nonattainment	not applicable	34	yes
Imperial County	CA	9	Nonattainment	not applicable	21 <sup>4</sup>	see footnote <sup>4</sup>
Johnstown	PA	3	Nonattainment	not applicable	32	yes
Klamath Falls	OR	10	Nonattainment	not applicable	47	no
Knoxville-Sevierville-La Follette	TN	4	Nonattainment	not applicable	29	yes
Lancaster	PA	3	Nonattainment	not applicable	35	yes
Liberty-Clairton	PA	3	Nonattainment	not applicable	50	no
Logan	UT-ID	8, 10	Nonattainment	not applicable	40	no
Los Angeles-South Coast Air Basin	CA	9	Nonattainment	not applicable	50	no
Milwaukee-Racine	WI	5	Nonattainment	not applicable	37	no
New York-N. New Jersey-Long Island	NY-NJ-CT	1, 2	Nonattainment	not applicable	33 <sup>4</sup>	see footnote <sup>4</sup>
Nogales	AZ	9	Nonattainment	not applicable	31	yes
Oakridge	OR	10	Nonattainment	not applicable	41	no
Philadelphia-Wilmington	PA-NJ-DE	2, 3	Nonattainment	not applicable	32 <sup>4</sup>	see footnote <sup>4</sup>
Pittsburgh-Beaver Valley	PA	3	Nonattainment	not applicable	37	no
Provo	UT	8	Nonattainment	not applicable	50	no
Sacramento	CA	9	Nonattainment	not applicable	49	no
Salt Lake City	UT	8	Nonattainment	not applicable	48	no
San Francisco Bay Area	CA	9	Nonattainment	not applicable	36	no
San Joaquin Valley	CA	9	Nonattainment	not applicable	70	no
Seattle-Tacoma	WA	10	Nonattainment	not applicable	46	no
Steubenville-Weirton	OH-WV	3, 5	Nonattainment	not applicable	37	no
Yuba City-Marysville	CA	9	Nonattainment	not applicable	42	no

Notes:

1. Area designation status as of January 25, 2011 .

2. The level of the 2006 24-hour NAAQS for PM<sub>2.5</sub> is 35 micrograms per cubic meter (µg/m<sup>3</sup>). The design value for the 24-hour PM<sub>2.5</sub> NAAQS is the 3-year average 98th percentile concentration.

3. The design values shown here are computed for the latest design value period using Federal Reference Method or equivalent data reported by States, Tribes, and local agencies to EPA's Air Quality System (AQS) as of 1/29/2011 Concentrations flagged by States, Tribes, and local agencies as exceptional events (e.g., high winds, wildfires, volcanic eruptions, construction) and concurred by the associated EPA Regional Office are not included in the calculation of these design values.

4. One or more sites in this area has violated the NAAQS prior to 2007-2009 and does not have a valid 2007-2009 design value(s). Although a 2007-2009 area-level design value is shown, the design value shown may not represent the worst 2007-2009 air quality in the area. Consequently, we have not used it to indicate "yes" or "no" in the Met NAAQS column.

Table 2a. Violating Sites in Areas not Previously Designated Nonattainment for the PM<sub>2.5</sub> 1997 Annual NAAQS  
 AQS Data Query: 01/29/2011; Last updated: 2/15/2011

State	County	EPA Region	2007-2009 Annual Design Value (µg/m <sup>3</sup> ) <sup>1,2</sup>	Site ID	POC	CBSA
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*For 2007-2009, there were no violations of the PM2.5 annual standard outside of previously designed nonattainment areas*

Notes:

1. The level of the 1997 annual NAAQS for PM<sub>2.5</sub> is 15.0 micrograms per cubic meter (µg/m<sup>3</sup>). The design value for the annual PM<sub>2.5</sub> NAAQS is the 3-year average annual mean concentration.
2. The design values shown here are computed for the latest design value period using Federal Reference Method or equivalent data reported by States, Tribes, and local agencies to EPA's Air Quality System (AQS) as of 1/29/2011. Concentrations flagged by States, Tribes, and local agencies as exceptional events (e.g., high winds, wildfires, volcanic eruptions, construction) and concurred by the associated EPA Regional Office are not included in the calculation of these design values.

Table 2b. Violating Sites in Areas Not Previously Designated Nonattainment for the PM<sub>2.5</sub> 2006 24-hour NAAQS  
 AQS Data Query: 01/29/2011; Last updated: 2/15/2011

State	County	2007-2009 24-hour		Site ID	POC	CBSA
		EPA Region	Design Value (µg/m <sup>3</sup> ) <sup>1,2</sup>			
Arizona	Pinal	9	40	040213013	NA	Phoenix-Mesa-Scottsdale, AZ
Iowa	Muscatine	7	38	191390015	NA	Muscatine, IA
Nevada	Washoe	9	39	320310016	NA	Reno-Sparks, NV
Oregon	Lake	10	41	410370001	NA	
Washington	Yakima	10	37	530770009	NA	Yakima, WA

Notes:

1. The level of the 2006 24-hour NAAQS for PM<sub>2.5</sub> is 35 micrograms per cubic meter (µg/m<sup>3</sup>). The design value for the 24-hour PM<sub>2.5</sub> NAAQS is the year average 98th percentile concentration.
2. The design values shown here are computed for the latest design value period using Federal Reference Method or equivalent data reported by States, Tribes, and local agencies to EPA's Air Quality System (AQS) as of 1/29/2011. Concentrations flagged by States, Tribes, and local agencies as exceptional events (e.g., high winds, wildfires, volcanic eruptions, construction) and concurred by the associated EPA Regional Office are not included in the calculation of these design values.