

PM₁₀ Air Quality Data Update 2005-2007 Estimated Exceedance Counts

The following is a brief summary of EPA's air quality update for PM₁₀ based on ambient monitoring data for the three-year period, 2005-2007. During this three-year period:

- Eighteen of the original 87* areas designated nonattainment for the PM₁₀ NAAQS, including one area that was subsequently redesignated to attainment (Spokane, Washington), failed to meet the (24-hour) PM₁₀ NAAQS in 2005-2007. (Table 1).
- Forty-three of the original 87* areas designated nonattainment for the PM₁₀ NAAQS met the (24-hour) PM₁₀ NAAQS in 2005-2007. (Table 1).
 - Twenty-four of these 43 areas are still designated nonattainment and 19 have been redesignated to attainment.
- Twenty-six of the original 87* areas designated nonattainment for PM₁₀ had incomplete or no data for 2005-2007.
 - Eleven of these 26 areas are still designated nonattainment and 15 have been redesignated to attainment.
- Thirty additional areas (counties), outside of the original 87* designated nonattainment areas, also failed to meet the (24-hour) PM₁₀ NAAQS in 2005-2007 (Table 2).

* Previously, the count of original, designated nonattainment areas was listed as 86. In March 2007, the Hayden/Miami PM₁₀ nonattainment area was split into two separate PM₁₀ nonattainment areas (Hayden and Miami).

Two primary PM₁₀ standards were established by the EPA in 1987 for the protection of public health. The 1987 PM₁₀ NAAQS consisted of both a short-term (24-hour) standard and a long-term (annual) standard. The EPA set the 24-hour PM₁₀ standard at 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and the annual PM₁₀ standard at 50 $\mu\text{g}/\text{m}^3$. After the latest review of the PM NAAQS, the EPA revoked the annual PM₁₀ standard effective December 2007. Compliance with the 24-hour standard is judged on the basis of the most recent three years of ambient air quality monitoring data. The 24-hour PM₁₀ standard is not met at a monitoring site if the average number of estimated exceedances of the level of the standard is greater than 1.0 (1.05 rounds up).

Air quality data from EPA's Air Quality System (AQS) were used to calculate PM₁₀ estimated exceedances. The specific calculations are explained in footnotes to the tables. The data used for these calculations were obtained from AQS on July 8, 2008. As of August 26, 2008, no regulatory decisions on attainment status have been made for any area based on these specific calculations. For information concerning these data and/or calculations, contact:

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Table 1. Areas previously designated nonattainment for the PM₁₀ NAAQS, 2005-2007.

<u>State</u>	<u>Designated Nonattainment Area</u>	<u>EPA Region</u>	<u>Designation Status</u> ¹	<u>Area Classification</u>	<u>2005-2007 Expected Number of Exceedances</u> ² <small>3,4,5,6</small>	<u>Met NAAQS 2005-2007?</u>	<u>Comment</u> ⁵
AK	Eagle River	10	Nonattainment	Moderate	2.0	no	
AK	Juneau	10	Nonattainment	Moderate	0.0	yes	
AZ	Ajo	9	Nonattainment	Moderate	<u>0.0</u>	incomplete	
AZ	Bullhead City	9	Maintenance	Moderate	<u>0.0</u>	incomplete	
AZ	Hayden ⁷	9	Nonattainment	Moderate	3.3	no	
AZ	Miami ⁷	9	Nonattainment	Moderate	0.0	yes	
AZ	Nogales	9	Nonattainment	Moderate	30.5	no	
AZ	Paul Spur / Douglas	9	Nonattainment	Moderate	0.0	yes	
AZ	Payson	9	Maintenance	Moderate	<u>0.0</u>	incomplete	
AZ	Phoenix	9	Nonattainment	Serious	12.6	no	
AZ	Rillito	9	Nonattainment	Moderate	3.7	no	
AZ	Yuma	9	Nonattainment	Moderate	6.0	no	
CA	Coachella Valley	9	Nonattainment	Serious	15.6	no	
CA	Coso Junction ⁸	9	Nonattainment	Moderate	<u>1.5</u>	incomplete	Test EE = 1.0
CA	Imperial Valley	9	Nonattainment	Moderate	9.9	no	
CA	Indian Wells Valley ⁸	9	Maintenance	Moderate	<u>0.0</u>	incomplete	
CA	Mammoth Lakes	9	Nonattainment	Moderate	<u>0.0</u>	incomplete	
CA	Mono Basin	9	Nonattainment	Moderate	23.1	no	
CA	Owens Valley	9	Nonattainment	Serious	12.7	no	
CA	Sacramento County	9	Nonattainment	Moderate	0.3	yes	
CA	San Bernardino county (part)	9	Nonattainment	Moderate	2.3	no	
CA	San Joaquin Valley	9	Nonattainment	Serious	0.0	yes	
CA	South Coast Air Basin	9	Nonattainment	Serious	6.0	no	
CA	Trona ⁸	9	Nonattainment	Moderate	0.7	yes	
CO	Aspen	8	Maintenance	Moderate	<u>0.0</u>	incomplete	

CO	Canon City	8	Maintenance	Moderate	0.0	yes
CO	Denver	8	Maintenance	Moderate	0.0	yes
CO	Lamar	8	Maintenance	Moderate	0.0	yes
CO	Pagosa Springs	8	Maintenance	Moderate	<u>0.0</u>	incomplete
CO	Steamboat Springs	8	Maintenance	Moderate	0.0	yes
CO	Telluride	8	Maintenance	Moderate	<u>0.0</u>	incomplete
CT	New Haven	1	Maintenance	Moderate	<u>0.0</u>	incomplete
ID	Boise	10	Maintenance	Moderate	<u>0.0</u>	incomplete
ID	Fort Hall	10	Nonattainment	Moderate	1.1	no
ID	Pinehurst	10	Nonattainment	Moderate	0.0	yes
ID	Portneuf Valley	10	Maintenance	Moderate	<u>0.0</u>	incomplete
ID	Sandpoint	10	Nonattainment	Moderate	<u>0.0</u>	incomplete
ID	Shoshone County	10	Nonattainment	Moderate	0.0	yes
IL	Granite City	5	Maintenance	Moderate	0.0	yes
IL	Lyons Township	5	Maintenance	Moderate	0.0	yes
IL	Oglesby	5	Maintenance	Moderate	0.0	yes
IL	Southeast Chicago	5	Maintenance	Moderate	0.0	yes
IN	East Chicago, Hammon	5	Maintenance	Moderate	0.7	yes
IN	Vermillion	5	Maintenance	Moderate	<u>ND</u>	<u>ND</u>
ME	Presque Isle	1	Maintenance	Moderate	0.0	yes
MI	Detroit	5	Maintenance	Moderate	0.3	yes
MN	Rochester	5	Maintenance	Moderate	<u>ND</u>	<u>ND</u>
MN	Saint Paul	5	Maintenance	Moderate	0.0	yes
MT	Butte	8	Nonattainment	Moderate	0.0	yes
MT	Columbia Falls	8	Nonattainment	Moderate	0.0	yes
MT	Kalispell	8	Nonattainment	Moderate	0.0	yes
MT	Lame Deer	8	Nonattainment	Moderate	<u>0.0</u>	incomplete
MT	Libby	8	Nonattainment	Moderate	0.0	yes
MT	Missoula	8	Nonattainment	Moderate	0.0	incomplete
MT	Polson	8	Nonattainment	Moderate	0.0	incomplete
MT	Ronan	8	Nonattainment	Moderate	0.0	incomplete
MT	Thompson Falls	8	Nonattainment	Moderate	0.0	incomplete
MT	Whitefish	8	Nonattainment	Moderate	0.3	yes

NM	Anthony	6	Nonattainment	Moderate	5.2	no	
NV	Las Vegas	9	Nonattainment	Serious	0.4	yes	
NV	Reno	9	Nonattainment	Serious	0.3	yes	multiple monitors combined per RO
NY	New York	2	Nonattainment	Moderate	<u>ND</u>	<u>ND</u>	
OH	Cuyahoga County	5	Maintenance	Moderate	0.0	yes	
OH	Mingo Junction	5	Maintenance	Moderate	0.0	yes	
OR	Eugene/Springfield	10	Nonattainment	Moderate	0.0	yes	
OR	Grants Pass	10	Maintenance	Moderate	0.0	yes	
OR	Klamath Falls	10	Maintenance	Moderate	0.0	yes	
OR	La Grande	10	Maintenance	Moderate	<u>0.0</u>	incomplete	
OR	Lakeview	10	Maintenance	Moderate	<u>0.0</u>	incomplete	
OR	Medford	10	Maintenance	Moderate	0.0	yes	
OR	Oakridge	10	Nonattainment	Moderate	0.0	yes	
PA	Clairton	3	Maintenance	Moderate	0.3	yes	
PR	Guaynabo	2	Nonattainment	Moderate	0.4	yes	
TX	El Paso	6	Nonattainment	Moderate	8.3	no	
UT	Ogden	8	Nonattainment	Moderate	0.0	yes	
UT	Salt Lake County	8	Nonattainment	Moderate	2.2	no	
UT	Utah County	8	Nonattainment	Moderate	0.0	yes	
WA	Kent	10	Maintenance	Moderate	0.0	yes	
WA	Olympia	10	Maintenance	Moderate	<u>0.0</u>	incomplete	
WA	Seattle	10	Maintenance	Moderate	0.0	yes	
WA	Spokane	10	Maintenance	Moderate	6.1	no	Test EE = 2
WA	Tacoma	10	Maintenance	Moderate	<u>0.0</u>	incomplete	
WA	Wallula	10	Maintenance	Serious	0.4	yes	
WA	Yakima	10	Maintenance	Moderate	0.0	yes	
WV	Follansbee	3	Maintenance	Moderate	0.0	yes	
WV	Weirton	3	Maintenance	Moderate	0.0	yes	
WY	Sheridan	8	Nonattainment	Moderate	<u>1.2</u>	incomplete	Test EE = 0.8

1. Area designation status as of July 18, 2008.

2. The PM₁₀ NAAQS is an exceedance-based standard with a 24-hour averaging time and 150 micrograms per cubic meter (µg/m³) level; the NAAQS level is not to be exceeded more than once per year on average over three years. If exceedances are detected at monitors that do not operate on a daily sampling schedule, the exceedance count may be inflated to what would be expected if the monitor were operating on a daily sampling schedule; exceptions are granted for a monitor's first exceedance occurrence if monitoring is subsequently increased to a daily schedule. The values shown in the '2005-2007 Expected Number of Exceedances' column are the 3-year averages of the annual expected exceedance counts; values in this column greater than 1.0 (i.e., 1.1 and above) generally indicate a violation of the NAAQS. The computation procedures for calculating estimated expected exceedances follow 40 CFR Part 50, Appendix K (2006). The 3-year average exceedance counts are commonly called PM₁₀ exceedance-based design values.

3. The updated exceedance-based design values shown here are computed for the 2005-2007 period using federal reference or equivalent PM₁₀ data reported by the Tribes and the State and local governments to EPA's Air Quality System (AQS) as of July 8, 2008. Concentrations flagged by States and Tribes as exceptional events (e.g. high winds, wildfires, volcanic eruptions, construction) and concurred by the EPA Regional Office are not included in the calculation of these design values. No regulatory decisions on attainment status have been made for areas based upon this data. In some cases the data are still under review.

4. Underlined values are based on incomplete data and are generally not valid for regulatory usage. Either there are no other sites in the area with complete data for this three-year period or a complete site(s) is located in the area but has an expected estimated exceedance value of zero and an incomplete site in the area registered the non-zero value shown.

5. In some cases, a conclusion that an area has an expected number of exceedances greater than 1.0 and accordingly has not met the PM₁₀ NAAQS in 2005-2007 is based on site data that did not meet the minimum 75 percent data capture requirement per quarter (for all 12 quarters). Expected exceedance values greater than 1.0 based on incomplete data are considered valid for regulatory usage per 40 CFR Part 50 Appendix K 2.3(c) if substitution of zeros for the incomplete (e.g., unmonitored) periods results in a 3-year exceedance "test" metric that still exceeds 1.0. These cases are identified in the table by an entry in the "Comment" column that provides a value for "Test EE". If the "Test EE" value is greater than 1.0 then the entry in the "Met NAAQS 2005-2007?" column will be "no" and the "2005-2007 Expected Number of Exceedances" entry will not be underlined. If the "Test EE" value is not greater than 1.0 then the entry in the "Met NAAQS 2005-2007?" column will be "incomplete" and the "2005-2007 Expected Number of Exceedances" entry will be underlined

6. ND = No Data

7. On March 28, 2007, EPA approved State of Arizona's boundary redesignation of the Hayden/Miami PM₁₀ nonattainment area into two separate PM₁₀ nonattainment areas: Hayden and Miami. EPA also made the determination that the Miami PM₁₀ nonattainment area is attaining the PM₁₀ national ambient air quality standard. Source: <http://www.epa.gov/oar/oaqps/greenbk/7214422.html>

8. On August 6, 2002, EPA finalized certain actions affecting the Searles Valley, California, PM₁₀ nonattainment area, which is located in the rural high desert and includes portions of Inyo, Kern, and San Bernardino Counties. The action splits the Searles Valley nonattainment area into three separate areas: Coso Junction, Indian Wells Valley and Trona. EPA's action also determines that the Trona area attained the PM₁₀ standards by December 31, 1994. On May 7, 2003, EPA finalized approval of the Indian Wells Moderate Area and Maintenance Plan and redesignated the area from nonattainment to attainment for particulate matter (PM₁₀). Source: <http://www.epa.gov/region9/air/searlespm/index.html>.

Table 2. Additional areas (counties) failing to meet the PM₁₀ NAAQS in 2005-2007.

<u>State</u>	<u>County</u>	<u>EPA Region</u>	<u>State FIPS</u>	<u>County FIPS</u>	<u>CBSA</u>	<u>2005-2007 Expected Number of Exceedances</u> ^{1,2}	<u>2005-2007 Design Value Site</u>	<u>Comment</u> ³
Alabama	Jefferson	4	01	073	Birmingham-Hoover, AL	1.7	010736003	
Alaska	Matanuska Susitna	10	02	170	Anchorage, AK	4.3	021700008	
Arizona	Maricopa ⁴	9	04	013	Phoenix-Mesa-Scottsdale, AZ	2.3	040134011	
Arizona	Pinal ⁴	9	04	021	Phoenix-Mesa-Scottsdale, AZ	222.2	040213013	Test EE = 148.1
California	Los Angeles	9	06	037	Los Angeles-Long Beach-Santa Ana, CA	2.2	060379033	
California	San Diego	9	06	073	San Diego-Carlsbad-San Marcos, CA	5.1	060732007	
California	Santa Barbara	9	06	083	Santa Barbara-Santa Maria-Goleta, CA	2.2	060831025	
California	Siskiyou	9	06	093		2.8	060932001	
California	Trinity	9	06	105		1.3	061050002	
California	Ventura	9	06	111	Oxnard-Thousand Oaks-Ventura, CA	2.0	061113001	
Colorado	Alamosa	8	08	003		1.8	080030003	
Colorado	Mesa	8	08	077	Grand Junction, CO	1.3	080770017	
Georgia	Dougherty	4	13	095	Albany, GA	4.3	130950007	
Missouri	Jasper	7	29	097	Joplin, MO	1.3	290970003	
Missouri	St. Louis City	7	29	510	St. Louis, MO-IL	15.4	295100092	Test EE = 10.3
Montana	Big Horn	8	30	003		3.9	300030011	
Montana	Missoula	8	30	063	Missoula, MT	7.1	300630034	Test EE = 2.4
Nevada	Nye	9	32	023	Pahrump, NV	3.0	320230014	
New Mexico	Dona Ana ⁴	6	35	013	Las Cruces, NM	5.4	350130017	
New Mexico	Sandoval	6	35	043	Albuquerque, NM	3.7	350439004	
Ohio	Tulsa	6	40	143	Tulsa, OK	2.2	401430110	
Ohio	Wyandot	5	39	175		1.4	391750008	
Pennsylvania	Philadelphia	3	42	101	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	49.4	421010649	Test EE = 32.9
Texas	Harris	6	48	201	Houston-Sugar Land-Baytown, TX	6.2	482011035	
Texas	Webb	6	48	479	Laredo, TX	1.4	484790016	

Virgin Island	St Croix	2	78	010		2.5	780100012	
Virgin Island	St Thomas	2	78	030		7.6	780300007	
Wyoming	Campbell	8	56	005	Gillette, WY	3.1	560050915	Test EE = 2.0
Wyoming	Platte	8	56	031		4.1	560310805	Test EE = 2.7
Wyoming	Sweetwater	8	56	037	Rock Springs, WY	2.8	560370847	

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2. The updated exceedance-based design values shown here are computed for the 2005-2007 period using federal reference or equivalent PM₁₀ data reported by the Tribes and the State and local governments to EPA's Air Quality System (AQS) as of July 8, 2008. Concentrations flagged by States and Tribes as exceptional events (e.g. high winds, wildfires, volcanic eruptions, construction) and concurred by the EPA Regional Office are not included in the calculation of these design values. No regulatory decisions on attainment status have been made for areas based upon this data. In some cases the data are still under review.
3. In some cases, a conclusion that an area has an expected number of exceedances greater than 1.0 and accordingly has not met the PM₁₀ NAAQS in 2005-2007 is based on site data that did not meet the minimum 75 percent data capture requirement per quarter (for all 12 quarters). Expected exceedance values greater than 1.0 based on incomplete data are considered valid for regulatory usage per 40 CFR Part 50 Appendix K 2.3(c) if substitution of zeros for the incomplete (e.g., unmonitored) periods results in a 3-year exceedance "test" metric that still exceeds 1.0. These cases are identified in the table by an entry in the "Comment" column that provides a value for "Test EE". If the "Test EE" value is greater than 1.0 then the area appears on this list. If the "Test EE" value is not greater than 1.0 then it is not possible to conclude whether the area has attained the NAAQS and the area does not appear on this list at all.
4. These counties are near or, in some cases, overlap or totally contain previously designated PM₁₀ nonattainment areas. However, the monitoring sites from which these design values are derived are located outside the boundaries of the nonattainment area. Therefore, these counties are listed here as "additional areas".