

2.0. Design Values for 24-Hour PM_{2.5} NAAQS, 2006-2008

This chapter presents relevant design values used in evaluating areas for the 24-hour PM_{2.5} NAAQS. A design value is a statistic that describes the air quality status of a given area relative to the level of the National Ambient Air Quality Standards (NAAQS). Table 1 contains the PM_{2.5} county-level design value summary (2006-2008), Table 2 contains the 24-hour PM_{2.5} design values for areas designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS by Administrator Lisa Jackson in 2009, and Table 3 contains the 24-hour standard design value history for areas designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS in 2009.

Table 1. PM_{2.5} county-level design value summary, 2006-2008

<u>State</u>	<u>County</u>	<u>State FIPS</u>	<u>County FIPS</u>	<u>Annual Design Value, 2006-2008</u> _{1,3}	<u>24-hour Design Value, 2006-2008</u> ² ₃
AL	Baldwin	01	003	10.5	23
AL	Clay	01	027	12.3	27
AL	Colbert	01	033	12.4	28
AL	DeKalb	01	049	13.1	29
AL	Escambia	01	053	incomplete	incomplete
AL	Etowah	01	055	14.2	incomplete
AL	Houston	01	069	12.3	25
AL	Jefferson	01	073	17.6	39
AL	Madison	01	089	13.2	29
AL	Mobile	01	097	11.4	24
AL	Montgomery	01	101	13.5	28
AL	Morgan	01	103	13.0	29
AL	Russell	01	113	14.8	29
AL	Shelby	01	117	13.5	29
AL	Sumter	01	119	incomplete	incomplete
AL	Talladega	01	121	incomplete	incomplete
AL	Tuscaloosa	01	125	12.9	27
AL	Walker	01	127	13.5	30
AK	Anchorage	02	020	5.6	20
AK	Fairbanks North Star	02	090	11.2	41
AK	Juneau	02	110	7.4	34
AK	Matanuska Susitna	02	170	incomplete	30
AZ	Cochise	04	003	6.8	15
AZ	Coconino	04	005	6.8	18
AZ	Gila	04	007	incomplete	incomplete
AZ	Maricopa	04	013	12.0	27
AZ	Pima	04	019	5.8	12
AZ	Pinal	04	021	21.6	48
AZ	Santa Cruz	04	023	13.7	40
AZ	Yavapai	04	025	incomplete	incomplete
AZ	Yuma	04	027	incomplete	incomplete
AR	Arkansas	05	001	11.8	27
AR	Ashley	05	003	12.1	26
AR	Crittenden	05	035	12.5	31
AR	Faulkner	05	045	11.7	25
AR	Garland	05	051	11.6	25

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AR	Jackson	05	067	11.4	27
AR	Phillips	05	107	11.5	27
AR	Polk	05	113	11.4	25
AR	Pope	05	115	12.1	26
AR	Pulaski	05	119	12.6	30
AR	Sebastian	05	131	11.5	25
AR	Union	05	139	11.8	24
AR	Washington	05	143	incomplete	incomplete
AR	White	05	145	11.2	27
CA	Alameda	06	001	9.6	36
CA	Butte	06	007	13.4	69
CA	Calaveras	06	009	8.4	32
CA	Colusa	06	011	incomplete	incomplete
CA	Contra Costa	06	013	9.0	35
CA	Fresno	06	019	17.7	58
CA	Humboldt	06	023	7.5	23
CA	Imperial	06	025	12.0	36
CA	Inyo	06	027	6.4	incomplete
CA	Kern	06	029	21.5	70
CA	Kings	06	031	17.0	52
CA	Lake	06	033	5.3	30
CA	Los Angeles	06	037	15.6	43
CA	Mendocino	06	045	6.5	21
CA	Merced	06	047	incomplete	50
CA	Monterey	06	053	7.1	14
CA	Nevada	06	057	7.2	35
CA	Orange	06	059	incomplete	37
CA	Placer	06	061	9.6	30
CA	Plumas	06	063	12.6	49
CA	Riverside	06	065	19.7	53
CA	Sacramento	06	067	incomplete	56
CA	San Benito	06	069	incomplete	incomplete
CA	San Bernardino	06	071	17.3	51
CA	San Diego	06	073	13.2	32
CA	San Francisco	06	075	9.4	26
CA	San Joaquin	06	077	13.5	51
CA	San Luis Obispo	06	079	8.1	22
CA	San Mateo	06	081	9.0	29
CA	Santa Barbara	06	083	10.0	21
CA	Santa Clara	06	085	11.0	36
CA	Santa Cruz	06	087	6.7	14
CA	Shasta	06	089	9.6	48
CA	Siskiyou	06	093	incomplete	incomplete
CA	Solano	06	095	9.8	36
CA	Sonoma	06	097	8.4	30
CA	Stanislaus	06	099	15.3	54
CA	Sutter	06	101	10.1	47
CA	Tulare	06	107	19.7	57
CA	Ventura	06	111	10.9	28
CA	Yolo	06	113	incomplete	incomplete

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CO	Adams	08	001	10.0	30
CO	Arapahoe	08	005	7.6	19
CO	Archuleta	08	007	incomplete	incomplete
CO	Boulder	08	013	8.2	24
CO	Delta	08	029	incomplete	incomplete
CO	Denver	08	031	9.1	25
CO	Douglas	08	035	6.3	16
CO	Elbert	08	039	4.4	14
CO	El Paso	08	041	incomplete	incomplete
CO	Gunnison	08	051	incomplete	incomplete
CO	Larimer	08	069	7.3	19
CO	Mesa	08	077	9.4	25
CO	Montezuma	08	083	incomplete	incomplete
CO	Pueblo	08	101	7.7	16
CO	San Miguel	08	113	incomplete	incomplete
CO	Weld	08	123	9.3	26
CT	Fairfield	09	001	12.4	33
CT	Hartford	09	003	10.1	28
CT	Litchfield	09	005	7.3	26
CT	New Haven	09	009	12.2	34
CT	New London	09	011	10.1	27
DE	Kent	10	001	11.8	30
DE	New Castle	10	003	14.2	36
DE	Sussex	10	005	12.7	31
DC	District of Columbia	11	001	13.1	32
FL	Alachua	12	001	9.0	24
FL	Bay	12	005	10.9	25
FL	Brevard	12	009	7.9	22
FL	Broward	12	011	8.1	21
FL	Citrus	12	017	8.4	20
FL	Duval	12	031	9.9	24
FL	Escambia	12	033	10.6	24
FL	Hillsborough	12	057	9.6	21
FL	Lee	12	071	7.8	17
FL	Leon	12	073	11.7	29
FL	Manatee	12	081	incomplete	incomplete
FL	Marion	12	083	incomplete	incomplete
FL	Miami-Dade	12	086	8.8	20
FL	Orange	12	095	8.6	19
FL	Palm Beach	12	099	7.2	18
FL	Pinellas	12	103	9.1	21
FL	Polk	12	105	8.9	18
FL	St. Lucie	12	111	8.0	19
FL	Sarasota	12	115	7.9	19
FL	Seminole	12	117	8.8	21
FL	Volusia	12	127	incomplete	incomplete
GA	Bibb	13	021	15.3	incomplete
GA	Chatham	13	051	12.8	26
GA	Clarke	13	059	incomplete	incomplete
GA	Clayton	13	063	15.3	30

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GA	Cobb	13	067	15.3	33
GA	DeKalb	13	089	14.4	31
GA	Dougherty	13	095	incomplete	incomplete
GA	Floyd	13	115	see footnote ⁴	incomplete
GA	Fulton	13	121	incomplete	incomplete
GA	Glynn	13	127	11.2	incomplete
GA	Gwinnett	13	135	14.5	29
GA	Hall	13	139	13.2	29
GA	Houston	13	153	incomplete	30
GA	Lowndes	13	185	incomplete	incomplete
GA	Muscogee	13	215	14.6	30
GA	Paulding	13	223	13.5	31
GA	Richmond	13	245	14.8	30
GA	Walker	13	295	see footnote ⁴	incomplete
GA	Washington	13	303	14.2	29
GA	Wilkinson	13	319	incomplete	incomplete
HI	Honolulu	15	003	5.2	12
HI	Maui	15	009	4.9	11
ID	Ada	16	001	incomplete	incomplete
ID	Bannock	16	005	incomplete	incomplete
ID	Benewah	16	009	9.6	28
ID	Canyon	16	027	incomplete	incomplete
ID	Franklin	16	041	incomplete	incomplete
ID	Gem	16	045	incomplete	incomplete
ID	Idaho	16	049	incomplete	incomplete
ID	Lemhi	16	059	incomplete	incomplete
ID	Shoshone	16	079	11.7	34
IL	Adams	17	001	incomplete	incomplete
IL	Champaign	17	019	11.7	29
IL	Cook	17	031	see footnote ⁴	35
IL	DuPage	17	043	12.6	32
IL	Hamilton	17	065	12.3	27
IL	Jersey	17	083	11.6	27
IL	Kane	17	089	12.5	33
IL	Lake	17	097	10.6	27
IL	La Salle	17	099	incomplete	26
IL	McHenry	17	111	11.2	28
IL	McLean	17	113	11.5	27
IL	Macon	17	115	12.7	29
IL	Madison	17	119	15.6	36
IL	Peoria	17	143	12.1	30
IL	Randolph	17	157	12.0	26
IL	Rock Island	17	161	11.2	26
IL	Saint Clair	17	163	14.2	29
IL	Sangamon	17	167	11.9	29
IL	Will	17	197	12.8	32
IL	Winnebago	17	201	11.8	29
IN	Allen	18	003	12.3	30
IN	Clark	18	019	15.3	35

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IN	Delaware	18	035	12.3	28
IN	Dubois	18	037	13.7	31
IN	Elkhart	18	039	incomplete	incomplete
IN	Floyd	18	043	13.6	30
IN	Gibson	18	051	incomplete	incomplete
IN	Henry	18	065	incomplete	incomplete
IN	Howard	18	067	12.4	30
IN	Knox	18	083	12.9	30
IN	Lake	18	089	13.3	33
IN	LaPorte	18	091	11.6	29
IN	Madison	18	095	12.6	29
IN	Marion	18	097	14.7	35
IN	Porter	18	127	12.2	29
IN	St. Joseph	18	141	12.1	29
IN	Spencer	18	147	13.0	27
IN	Tippecanoe	18	157	12.3	29
IN	Vanderburgh	18	163	13.7	30
IN	Vigo	18	167	13.2	30
IA	Black Hawk	19	013	10.9	28
IA	Bremer	19	017	incomplete	incomplete
IA	Clinton	19	045	11.7	34
IA	Delaware	19	055	incomplete	incomplete
IA	Johnson	19	103	11.3	29
IA	Lee	19	111	incomplete	incomplete
IA	Linn	19	113	10.4	25
IA	Montgomery	19	137	9.5	23
IA	Muscatine	19	139	12.9	35
IA	Palo Alto	19	147	9.0	24
IA	Polk	19	153	10.0	25
IA	Pottawattamie	19	155	10.8	25
IA	Scott	19	163	13.9	34
IA	Van Buren	19	177	10.0	26
IA	Woodbury	19	193	10.3	28
IA	Wright	19	197	9.8	incomplete
KS	Johnson	20	091	9.7	21
KS	Linn	20	107	10.1	21
KS	Sedgwick	20	173	9.5	22
KS	Shawnee	20	177	incomplete	incomplete
KS	Sumner	20	191	9.0	21
KS	Wyandotte	20	209	11.2	23
KY	Bell	21	013	14.3	27
KY	Boyd	21	019	13.4	30
KY	Bullitt	21	029	14.1	31
KY	Campbell	21	037	incomplete	incomplete
KY	Carter	21	043	11.5	26
KY	Christian	21	047	12.8	31
KY	Daviess	21	059	13.1	30
KY	Edmonson	21	061	incomplete	incomplete
KY	Fayette	21	067	13.5	29
KY	Franklin	21	073	12.5	29

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KY	Hardin	21	093	13.3	32
KY	Henderson	21	101	13.2	28
KY	Jefferson	21	111	14.5	33
KY	Kenton	21	117	13.2	30
KY	Laurel	21	125	incomplete	incomplete
KY	McCracken	21	145	13.2	32
KY	Madison	21	151	12.0	28
KY	Ohio	21	183	13.0	29
KY	Perry	21	193	incomplete	incomplete
KY	Pike	21	195	12.8	28
KY	Warren	21	227	incomplete	incomplete
LA	Caddo	22	017	12.6	28
LA	Calcasieu	22	019	10.0	23
LA	Concordia	22	029	incomplete	incomplete
LA	East Baton Rouge	22	033	12.5	27
LA	Iberville	22	047	12.2	27
LA	Jefferson	22	051	11.5	24
LA	Lafayette	22	055	10.1	24
LA	Orleans	22	071	incomplete	incomplete
LA	Ouachita	22	073	10.9	26
LA	Rapides	22	079	10.1	23
LA	St. Bernard	22	087	incomplete	incomplete
LA	St. Tammany	22	103	incomplete	incomplete
LA	Tangipahoa	22	105	11.3	25
LA	Terrebonne	22	109	10.0	23
LA	West Baton Rouge	22	121	12.9	27
ME	Androscoggin	23	001	8.8	24
ME	Aroostook	23	003	7.5	20
ME	Cumberland	23	005	9.9	21
ME	Hancock	23	009	5.1	19
ME	Kennebec	23	011	8.7	20
ME	Oxford	23	017	9.4	22
ME	Penobscot	23	019	8.3	22
ME	Piscataquis	23	021	incomplete	incomplete
MD	Anne Arundel	24	003	13.3	34
MD	Baltimore	24	005	13.6	33
MD	Cecil	24	015	12.1	30
MD	Harford	24	025	11.7	29
MD	Montgomery	24	031	11.3	28
MD	Prince George's	24	033	11.9	31
MD	Washington	24	043	12.2	30
MD	Baltimore (City)	24	510	14.0	35
MA	Berkshire	25	003	9.7	27
MA	Bristol	25	005	8.8	25
MA	Essex	25	009	9.1	27
MA	Hampden	25	013	11.4	31
MA	Middlesex	25	017	8.7	22
MA	Plymouth	25	023	9.3	28
MA	Suffolk	25	025	11.4	29
MA	Worcester	25	027	10.7	29

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MI	Allegan	26	005	10.9	30
MI	Bay	26	017	9.7	26
MI	Berrien	26	021	10.8	29
MI	Dickinson	26	043	incomplete	incomplete
MI	Genesee	26	049	10.6	26
MI	Ingham	26	065	10.9	27
MI	Iron	26	071	incomplete	incomplete
MI	Kalamazoo	26	077	12.0	28
MI	Kent	26	081	11.8	29
MI	Lenawee	26	091	incomplete	incomplete
MI	Macomb	26	099	11.3	31
MI	Manistee	26	101	incomplete	incomplete
MI	Missaukee	26	113	7.4	22
MI	Monroe	26	115	12.4	31
MI	Muskegon	26	121	10.5	28
MI	Oakland	26	125	12.1	33
MI	Ottawa	26	139	11.5	28
MI	St. Clair	26	147	11.9	35
MI	Washtenaw	26	161	12.2	31
MI	Wayne	26	163	15.4	37
MN	Cass	27	021	incomplete	incomplete
MN	Dakota	27	037	9.3	23
MN	Hennepin	27	053	9.9	25
MN	Mille Lacs	27	095	incomplete	incomplete
MN	Olmsted	27	109	incomplete	incomplete
MN	Ramsey	27	123	11.0	29
MN	Saint Louis	27	137	7.6	23
MN	Scott	27	139	9.1	23
MN	Stearns	27	145	8.4	20
MN	Washington	27	163	incomplete	incomplete
MS	Adams	28	001	10.7	24
MS	Bolivar	28	011	11.9	26
MS	DeSoto	28	033	11.9	26
MS	Forrest	28	035	13.7	29
MS	Grenada	28	043	incomplete	incomplete
MS	Hancock	28	045	incomplete	incomplete
MS	Harrison	28	047	11.0	25
MS	Hinds	28	049	12.3	25
MS	Jackson	28	059	11.0	24
MS	Jones	28	067	14.0	29
MS	Lauderdale	28	075	12.5	27
MS	Lee	28	081	12.4	29
MS	Lowndes	28	087	12.5	27
MO	Boone	29	019	incomplete	incomplete
MO	Buchanan	29	021	12.0	26
MO	Cass	29	037	10.3	22
MO	Cedar	29	039	incomplete	incomplete
MO	Clay	29	047	10.6	24
MO	Greene	29	077	11.1	25
MO	Jackson	29	095	11.9	26

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MO	Jefferson	29	099	incomplete	incomplete
MO	Monroe	29	137	incomplete	incomplete
MO	Saint Charles	29	183	incomplete	incomplete
MO	Sainte Genevieve	29	186	12.2	28
MO	Saint Louis	29	189	12.3	28
MO	St. Louis City	29	510	13.6	31
MT	Cascade	30	013	6.0	17
MT	Flathead	30	029	9.8	24
MT	Gallatin	30	031	9.1	25
MT	Lewis and Clark	30	049	incomplete	incomplete
MT	Lincoln	30	053	13.7	34
MT	Missoula	30	063	9.7	29
MT	Ravalli	30	081	8.9	incomplete
MT	Sanders	30	089	7.3	22
MT	Silver Bow	30	093	11.2	32
MT	Yellowstone	30	111	8.0	19
NE	Douglas	31	055	9.3	23
NE	Hall	31	079	7.8	18
NE	Lancaster	31	109	8.1	18
NE	Sarpy	31	153	9.4	24
NE	Scotts Bluff	31	157	6.5	19
NE	Washington	31	177	8.6	21
NV	Clark	32	003	9.5	23
NV	Washoe	32	031	8.6	35
NH	Belknap	33	001	6.8	18
NH	Cheshire	33	005	11.0	29
NH	Coos	33	007	incomplete	incomplete
NH	Grafton	33	009	7.8	19
NH	Hillsborough	33	011	9.6	27
NH	Merrimack	33	013	9.3	24
NH	Rockingham	33	015	8.6	24
NH	Sullivan	33	019	8.9	21
NJ	Atlantic	34	001	11.1	incomplete
NJ	Bergen	34	003	12.2	35
NJ	Camden	34	007	12.7	35
NJ	Essex	34	013	incomplete	incomplete
NJ	Gloucester	34	015	incomplete	incomplete
NJ	Hudson	34	017	14.1	38
NJ	Mercer	34	021	11.9	33
NJ	Middlesex	34	023	11.3	31
NJ	Morris	34	027	10.3	29
NJ	Ocean	34	029	10.2	29
NJ	Passaic	34	031	12.3	33
NJ	Union	34	039	13.6	36
NJ	Warren	34	041	11.8	incomplete
NM	Bernalillo	35	001	6.7	17
NM	Chaves	35	005	6.4	16
NM	Dona Ana	35	013	10.5	32
NM	Grant	35	017	incomplete	incomplete
NM	Lea	35	025	incomplete	incomplete

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NM	Sandoval	35	043	4.8	10
NM	San Juan	35	045	incomplete	incomplete
NM	Santa Fe	35	049	4.8	9
NY	Albany	36	001	incomplete	incomplete
NY	Bronx	36	005	14.3	36
NY	Chautauqua	36	013	8.7	26
NY	Erie	36	029	11.1	30
NY	Essex	36	031	5.1	17
NY	Kings	36	047	12.9	34
NY	Monroe	36	055	9.5	27
NY	Nassau	36	059	10.9	30
NY	New York	36	061	see footnote ⁴	37
NY	Niagara	36	063	10.3	27
NY	Onondaga	36	067	8.7	24
NY	Orange	36	071	10.0	28
NY	Queens	36	081	11.3	32
NY	Richmond	36	085	12.4	30
NY	St. Lawrence	36	089	6.0	18
NY	Steuben	36	101	8.1	25
NY	Suffolk	36	103	10.5	29
NY	Westchester	36	119	11.2	32
NC	Alamance	37	001	12.9	28
NC	Buncombe	37	021	11.2	27
NC	Caswell	37	033	12.3	27
NC	Catawba	37	035	14.2	30
NC	Chatham	37	037	11.8	incomplete
NC	Cumberland	37	051	13.0	28
NC	Davidson	37	057	14.5	29
NC	Duplin	37	061	10.5	24
NC	Durham	37	063	incomplete	incomplete
NC	Edgecombe	37	065	11.8	25
NC	Forsyth	37	067	13.3	29
NC	Gaston	37	071	13.3	27
NC	Guilford	37	081	incomplete	incomplete
NC	Haywood	37	087	incomplete	incomplete
NC	Jackson	37	099	11.5	incomplete
NC	Lenoir	37	107	10.4	23
NC	McDowell	37	111	13.0	29
NC	Martin	37	117	10.6	23
NC	Mecklenburg	37	119	13.9	29
NC	Mitchell	37	121	11.9	27
NC	Montgomery	37	123	11.8	26
NC	New Hanover	37	129	incomplete	31
NC	Onslow	37	133	incomplete	incomplete
NC	Orange	37	135	incomplete	incomplete
NC	Pitt	37	147	11.3	24
NC	Robeson	37	155	12.3	27
NC	Rowan	37	159	13.6	28
NC	Swain	37	173	12.1	27

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NC	Wake	37	183	12.8	30
NC	Watauga	37	189	10.7	25
NC	Wayne	37	191	12.3	29
ND	Billings	38	007	4.8	14
ND	Burleigh	38	015	6.9	16
ND	Cass	38	017	8.0	19
ND	McKenzie	38	053	incomplete	incomplete
ND	Mercer	38	057	6.5	15
OH	Athens	39	009	11.8	32
OH	Butler	39	017	14.4	34
OH	Clark	39	023	13.5	32
OH	Clermont	39	025	12.8	30
OH	Cuyahoga	39	035	15.1	38
OH	Franklin	39	049	13.7	32
OH	Greene	39	057	12.3	29
OH	Hamilton	39	061	15.7	35
OH	Jefferson	39	081	14.8	37
OH	Lake	39	085	12.3	32
OH	Lawrence	39	087	incomplete	incomplete
OH	Lorain	39	093	11.9	31
OH	Lucas	39	095	13.1	31
OH	Mahoning	39	099	13.6	32
OH	Medina	39	103	12.1	29
OH	Montgomery	39	113	14.2	32
OH	Portage	39	133	12.6	30
OH	Preble	39	135	12.7	29
OH	Scioto	39	145	13.5	31
OH	Stark	39	151	see footnote ⁴	see footnote ⁴
OH	Summit	39	153	14.0	34
OH	Trumbull	39	155	13.3	31
OH	Warren	39	165	incomplete	incomplete
OK	Adair	40	001	incomplete	incomplete
OK	Caddo	40	015	8.5	26
OK	Cherokee	40	021	incomplete	incomplete
OK	Kay	40	071	incomplete	incomplete
OK	Lincoln	40	081	incomplete	incomplete
OK	Mayes	40	097	11.5	25
OK	Muskogee	40	101	11.6	26
OK	Oklahoma	40	109	10.1	24
OK	Ottawa	40	115	11.2	24
OK	Pittsburg	40	121	11.1	24
OK	Sequoyah	40	135	11.9	26
OK	Tulsa	40	143	11.3	26
OR	Deschutes	41	017	incomplete	incomplete
OR	Douglas	41	019	incomplete	incomplete
OR	Harney	41	025	incomplete	incomplete
OR	Jackson	41	029	10.0	18
OR	Josephine	41	033	incomplete	incomplete
OR	Klamath	41	035	11.6	46

Table 1. PM_{2.5} county-level design value summary, 2006-2008

OR	Lake	41	037	incomplete	incomplete
OR	Lane	41	039	11.0	40
OR	Linn	41	043	incomplete	incomplete
OR	Multnomah	41	051	8.8	31
OR	Umatilla	41	059	incomplete	incomplete
OR	Union	41	061	7.5	21
OR	Washington	41	067	incomplete	incomplete
PA	Adams	42	001	11.9	32
PA	Allegheny	42	003	18.3	53
PA	Beaver	42	007	14.9	36
PA	Berks	42	011	13.6	34
PA	Bucks	42	017	12.6	33
PA	Cambria	42	021	14.4	see footnote ⁴
PA	Centre	42	027	11.4	32
PA	Chester	42	029	incomplete	36
PA	Cumberland	42	041	13.2	34
PA	Dauphin	42	043	13.8	36
PA	Delaware	42	045	14.1	33
PA	Erie	42	049	11.4	31
PA	Lackawanna	42	069	10.7	29
PA	Lancaster	42	071	14.5	37
PA	Mercer	42	085	12.2	incomplete
PA	Montgomery	42	091	12.3	30
PA	Northampton	42	095	12.8	36
PA	Philadelphia	42	101	see footnote ⁴	36
PA	Washington	42	125	14.4	36
PA	Westmoreland	42	129	14.1	34
PA	York	42	133	14.6	35
RI	Kent	44	003	7.7	22
RI	Providence	44	007	11.4	29
SC	Aiken	45	003	incomplete	incomplete
SC	Beaufort	45	013	incomplete	incomplete
SC	Charleston	45	019	11.0	24
SC	Chesterfield	45	025	12.1	25
SC	Edgefield	45	037	12.6	26
SC	Florence	45	041	12.1	25
SC	Georgetown	45	043	incomplete	incomplete
SC	Greenville	45	045	14.2	29
SC	Greenwood	45	047	incomplete	incomplete
SC	Horry	45	051	incomplete	incomplete
SC	Lexington	45	063	13.7	28
SC	Oconee	45	073	10.5	25
SC	Richland	45	079	13.3	28
SC	Spartanburg	45	083	13.3	29
SD	Brookings	46	011	8.5	21
SD	Brown	46	013	7.9	16
SD	Codington	46	029	9.5	24
SD	Custer	46	033	5.5	14
SD	Jackson	46	071	5.4	13

Table 1. PM_{2.5} county-level design value summary, 2006-2008

SD	Minnehaha	46	099	9.6	26
SD	Pennington	46	103	8.4	18
TN	Blount	47	009	14.1	31
TN	Davidson	47	037	13.2	29
TN	Dyer	47	045	11.4	29
TN	Hamilton	47	065	14.5	32
TN	Knox	47	093	see footnote ⁴	see footnote ⁴
TN	Lawrence	47	099	11.3	30
TN	Loudon	47	105	14.9	31
TN	McMinn	47	107	14.1	32
TN	Madison	47	113	11.8	30
TN	Maury	47	119	12.3	28
TN	Montgomery	47	125	12.7	32
TN	Putnam	47	141	incomplete	incomplete
TN	Roane	47	145	14.0	29
TN	Shelby	47	157	12.6	29
TN	Sullivan	47	163	13.3	30
TN	Sumner	47	165	12.7	29
TX	Bexar	48	029	incomplete	incomplete
TX	Bowie	48	037	12.3	28
TX	Brewster	48	043	incomplete	incomplete
TX	Cameron	48	061	incomplete	incomplete
TX	Dallas	48	113	10.9	23
TX	Ector	48	135	8.3	17
TX	Ellis	48	139	incomplete	incomplete
TX	El Paso	48	141	11.9	29
TX	Harris	48	201	15.2	30
TX	Harrison	48	203	11.0	23
TX	Hidalgo	48	215	10.9	25
TX	Jefferson	48	245	incomplete	incomplete
TX	Lubbock	48	303	incomplete	incomplete
TX	Nueces	48	355	10.8	28
TX	Orange	48	361	incomplete	incomplete
TX	Potter	48	375	6.3	15
TX	Tarrant	48	439	11.2	25
TX	Travis	48	453	incomplete	incomplete
UT	Box Elder	49	003	8.2	35
UT	Cache	49	005	9.2	36
UT	Davis	49	011	10.1	35
UT	Salt Lake	49	035	11.1	48
UT	Tooele	49	045	6.7	22
UT	Utah	49	049	10.4	44
UT	Weber	49	057	10.5	40
VT	Addison	50	001	incomplete	incomplete
VT	Bennington	50	003	7.5	23
VT	Chittenden	50	007	8.3	26
VT	Rutland	50	021	10.6	28
VA	Albemarle	51	003	incomplete	incomplete
VA	Arlington	51	013	12.9	30

Table 1. PM_{2.5} county-level design value summary, 2006-2008

VA	Charles	51	036	11.5	29
VA	Chesterfield	51	041	12.4	28
VA	Fairfax	51	059	12.7	31
VA	Frederick	51	069	incomplete	incomplete
VA	Henrico	51	087	12.1	29
VA	Loudoun	51	107	12.2	29
VA	Madison	51	113	incomplete	incomplete
VA	Page	51	139	11.7	28
VA	Rockingham	51	165	incomplete	incomplete
VA	Bristol City	51	520	12.7	28
VA	Hampton City	51	650	11.4	29
VA	Lynchburg City	51	680	11.9	28
VA	Norfolk City	51	710	11.8	30
VA	Roanoke City	51	770	13.4	30
VA	Salem City	51	775	incomplete	incomplete
VA	Virginia Beach City	51	810	11.9	33
WA	Asotin	53	003	incomplete	incomplete
WA	Chelan	53	007	incomplete	incomplete
WA	Clark	53	011	incomplete	incomplete
WA	King	53	033	incomplete	incomplete
WA	Kittitas	53	037	incomplete	incomplete
WA	Pierce	53	053	9.7	44
WA	Snohomish	53	061	8.8	32
WA	Spokane	53	063	9.3	30
WA	Yakima	53	077	incomplete	incomplete
WV	Berkeley	54	003	14.9	31
WV	Brooke	54	009	15.4	41
WV	Cabell	54	011	15.2	32
WV	Hancock	54	029	14.3	38
WV	Harrison	54	033	13.4	31
WV	Kanawha	54	039	15.4	36
WV	Marion	54	049	14.5	32
WV	Marshall	54	051	14.2	34
WV	Monongalia	54	061	13.6	34
WV	Ohio	54	069	13.7	31
WV	Raleigh	54	081	11.9	28
WV	Wood	54	107	14.6	34
WI	Ashland	55	003	6.3	19
WI	Brown	55	009	11.9	35
WI	Dane	55	025	12.6	34
WI	Dodge	55	027	11.1	27
WI	Forest	55	041	7.1	21
WI	Grant	55	043	12.3	34
WI	Kenosha	55	059	12.7	31
WI	La Crosse	55	063	12.1	32
WI	Manitowoc	55	071	10.7	28
WI	Milwaukee	55	079	14.5	37
WI	Outagamie	55	087	11.4	32
WI	Ozaukee	55	089	11.9	30
WI	St. Croix	55	109	10.3	25

Table 1. PM_{2.5} county-level design value summary, 2006-2008

WI	Sauk	55	111	10.5	26
WI	Taylor	55	119	9.0	29
WI	Vilas	55	125	6.9	29
WI	Waukesha	55	133	13.9	31
WI	Waupaca	55	135	incomplete	incomplete
WY	Campbell	56	005	incomplete	incomplete
WY	Converse	56	009	incomplete	incomplete
WY	Fremont	56	013	7.7	24
WY	Laramie	56	021	4.4	11
WY	Park	56	029	incomplete	incomplete
WY	Sheridan	56	033	9.1	25
WY	Sublette	56	035	incomplete	incomplete
WY	Sweetwater	56	037	incomplete	incomplete
WY	Teton	56	039	incomplete	incomplete
PR	Adjuntas	72	001	6.0	12
PR	Bayamon	72	021	incomplete	incomplete
PR	Fajardo	72	053	incomplete	incomplete
PR	Guayama	72	057	6.1	15
PR	Guayanilla	72	059	6.0	13
PR	Guaynabo	72	061	incomplete	incomplete
PR	Humacao	72	069	incomplete	incomplete
PR	Mayaguez	72	097	incomplete	incomplete
PR	Ponce	72	113	incomplete	incomplete
PR	San Juan	72	127	incomplete	incomplete
VI	St Croix	78	010	incomplete	incomplete
VI	St Thomas	78	030	incomplete	incomplete

1. The annual standard design values shown here are calculated in accordance with 40 CFR Part 50, Appendix N (2006). The annual standard design value (i.e., 3-year average annual mean concentration) is computed at each site by averaging the daily FRM samples taken each quarter, averaging these quarterly averages to obtain an annual average, and then averaging the three annual averages. (Note that special rules apply if an area has been approved for spatial averaging.) The NAAQS level for the annual standard is 15.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). In general, EPA regulations require at least 75% data capture in each quarter of a consecutive 3-year period in order for a design value to be valid. However, if an annual mean (or 3-year annual design value) is over the level of the standard, less data (i.e., 11 samples per quarter for the corresponding 4 quarters) are sufficient to deem that mean valid. Further, EPA regulations and guidance permit data substitution under certain circumstances in order to consider design values as valid that otherwise would be considered incomplete. The information presented in this update is based on data after applying the substitution protocols.

2. The 24-hour standard design values shown here are calculated in accordance with 40 CFR Part 50, Appendix N (2006, amended 2007). The 24-hour (or 'daily') standard design value (i.e., the 3-year average 98th percentile) is computed at each site by determining the 98th percentile of the daily FRM samples taken in a given year for each of the three years, and then averaging these three numbers. The NAAQS level for the 24-hour standard is 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). In general, EPA regulations require at least 75% data capture in each quarter of a consecutive 3-year period in order for a design value to be valid. However, if an annual 98th percentile (or 3-year 24-hour design value) is over the level of the standard, less data (i.e., only 1 sample in that year) is sufficient to make that 98th percentile valid. Further, EPA regulations and guidance permit data substitution under certain circumstances in order to consider design values as valid that otherwise would be considered incomplete. The information presented in this update is based on data after applying the substitution protocols.

Table 1. PM_{2.5} county-level design value summary, 2006-2008

3. Data that have been flagged for exceptional events, for which documentation has been submitted and approved by the EPA (AQS concurrence field set to 'Y'), if any, were excluded from the design value calculations. In several situations, submitted documentation is still under review and as such, revisions to design values are possible. The EPA has approved exclusion of certain flagged exceptional event data for the 24-hour NAAQS (based on reviews of supporting documentation submitted by the applicable monitoring agencies), but the EPA has not made a final determination on the exclusion of such data with regards to the annual standard. In this report, these data have been excluded from the annual standard design values (and associated statistical components); hence, the stated annual standard design values (and related statistics) may actually be understated and may later be revised upwards.

4. One or more previously violating sites (i.e., for 2005-2007) in this county do not have valid 2006-2008 design values (i.e., those meeting NAAQS completeness criteria). As such, a 2006-2008 county-level design value is not shown, even in situations where there are additional sites in the county with valid/complete ones, because the highest of those might not represent actual maximum population exposure in the county. The 2006-2008 site listing included in the Excel version of this file shows 2006-2008 design values for each site.

Data Source: U.S. EPA's Air Quality System (AQS) as of July 7, 2009.

Table 2. 2006-2008 PM_{2.5} 24-hour standard design values for areas designated nonattainment for the 2006 NAAQS in October 2009

<u>Designated Nonattainment Area</u> ¹	<u>State</u>	<u>EPA Region</u>	<u>Designation Status</u> ¹	<u>2006-2008 24-hr Design Value</u> ^{2,3}	<u>Met 24-hour NAAQS (2006 CFR) in 2006-2008?</u> ^{2,3}
Allentown	PA	3	Nonattainment	36	no
Birmingham	AL	4	Nonattainment	39	no
Canton-Massillon	OH	5	Nonattainment	see footnote ⁴	see footnote ⁴
Charleston	WV	3	Nonattainment	36	no
Chico	CA	9	Nonattainment	69	no
Cleveland-Akron-Lorain	OH	5	Nonattainment	38	no
Detroit-Ann Arbor	MI	5	Nonattainment	37	no
Fairbanks	AK	10	Nonattainment	41	no
Harrisburg-Lebanon-Carlisle-York	PA	3	Nonattainment	36	no
Imperial County	CA	9	Nonattainment	36	no
Johnstown	PA	3	Nonattainment	see footnote ⁴	see footnote ⁴
Klamath Falls	OR	10	Nonattainment	46	no
Knoxville-Sevierville-La Follette	TN	4	Nonattainment	see footnote ⁴	see footnote ⁴
Lancaster	PA	3	Nonattainment	37	no
Liberty-Clairton	PA	3	Nonattainment	53	no
Logan	UT-ID	8, 10	Nonattainment	36	no
Los Angeles-South Coast Air Basin	CA	9	Nonattainment	53	no
Milwaukee-Racine	WI	5	Nonattainment	37	no
New York-N. New Jersey-Long Island	NY-NJ-CT	1, 2	Nonattainment	38	no
Nogales	AZ	9	Nonattainment	40	no
Oakridge	OR	10	Nonattainment	40	no
Philadelphia-Wilmington	PA-NJ-DE	2, 3	Nonattainment	36	no
Pittsburgh-Beaver Valley	PA	3	Nonattainment	39	no
Provo	UT	8	Nonattainment	44	no
Sacramento	CA	9	Nonattainment	56	no
Salt Lake City	UT	8	Nonattainment	48	no
San Francisco Bay Area	CA	9	Nonattainment	36	no
San Joaquin Valley	CA	9	Nonattainment	70	no
Tacoma	WA	10	Nonattainment	44	no
Steubenville-Weirton	OH-WV	3, 5	Nonattainment	41	no
Yuba City-Marysville	CA	9	Nonattainment	47	no

1. A Federal Register notice regarding 24-hour PM_{2.5} nonattainment designations based primarily on 2005-2007 design values was signed by the EPA Administrator Steven Johnson in December 2008 but never published in the Federal Register. The areas listed in this table were designated nonattainment for the 2006 NAAQS by Administrator Lisa Jackson in 2009.

2. The 24-hour standard design values shown here are calculated in accordance with 40 CFR Part 50, Appendix N (2006, amended 2007). The 24-hour (or 'daily') standard design value (i.e., the 3-year average 98th percentile) is computed at each site by determining the 98th percentile of the daily FRM samples taken in a given year for each of the three years, and then averaging these three numbers. The NAAQS level for the 24-hour standard is 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). In general, EPA regulations require at least 75% data capture in each quarter of a consecutive 3-year period in order for a design value to be valid. However, if an annual 98th percentile (or 3-year 24-hour design value) is over the level of the standard, less data (i.e., only 1 sample in that year) is sufficient to make that 98th percentile valid. Further, EPA regulations and guidance permit data substitution under certain circumstances in order to consider design values as valid that otherwise would be considered incomplete. The information presented in this update is based on data after applying the substitution protocols.

3. Data that have been flagged for exceptional events, for which documentation has been submitted and approved by the EPA (AQS concurrence field set to 'Y'), if any, were excluded from the design value calculations. In several situations, submitted documentation is still under review and, as such, revisions to design values are possible.

4. One or more previously violating sites (i.e., for 2005-2007) in this area do not have valid 2006-2008 24-hour design values (i.e., those meeting NAAQS completeness criteria). As such, a 2006-2008 area-level design value is not shown, even in situations where there are additional sites in the area with valid/complete ones, because the highest of those might not represent actual maximum population exposure in the area. The 2006-2008 site listing included in the Excel version of this file shows 2006-2008 design values for each site.

Data Source: U.S. EPA's Air Quality System (AQS) as of July 7, 2009.

Table 3. 24-hour standard design value history for areas designated nonattainment for the 2006 NAAQS in October 2009

<u>Designated Area</u>	<u>State</u>	<u>EPA Region</u>	<u>Designation Status</u> ¹	<u>24-hour Design Value</u> ^{2,3}							
				<u>1999-2001</u>	<u>2000-2002</u>	<u>2001-2003</u>	<u>2002-2004</u>	<u>2003-2005</u>	<u>2004-2006</u>	<u>2005-2007</u>	<u>2006-2008</u>
Allentown	PA	3	Nonattainment	38	40	40	38	36	37	37	36
Birmingham	AL	4	Nonattainment	49	44	40	40	44	44	44	39
Canton-Massillon	OH	5	Nonattainment	42	42	40	37	38	37	36	see footnote ⁴
Charleston	WV	3	Nonattainment	41	40	40	36	36	37	38	36
Chico	CA	9	Nonattainment	62	60	47	46	47	56	55	69
Cleveland-Akron-Lorain	OH	5	Nonattainment	46	45	46	45	47	43	42	38
Detroit-Ann Arbor	MI	5	Nonattainment	46	45	44	43	45	44	43	37
Fairbanks	AK	10	Nonattainment	41	50	40	41	40	43	39	41
Harrisburg-Lebanon-Carlisle	PA	4	Nonattainment	44	45	43	41	40	38	38	36
Imperial County	CA	9	Nonattainment	49	50	46	40	39	40	42	36
Johnstown	PA	4	Nonattainment	incomplete	40	41	40	39	39	39	see footnote ⁴
Klamath Falls	OR	10	Nonattainment	39	41	39	41	41	46	45	46
Knoxville-Sevierville-La Follette	TN	4	Nonattainment	42	39	35	34	34	33	37	see footnote ⁴
Lancaster	PA	3	Nonattainment	42	43	45	42	44	39	40	37
Liberty-Clairton	PA	3	Nonattainment	59	63	63	65	68	65	60	53
Logan	UT-ID	8, 10	Nonattainment	incomplete	55	54	64	65	64	42	36
Los Angeles-South Coast Air Basin	CA	9	Nonattainment	76	73	72	67	65	57	55	53
Milwaukee-Racine	WI	5	Nonattainment	39	37	38	38	39	41	41	37
New York-N. New Jersey-Long Island	NY-NJ-CT	1, 2	Nonattainment	43	40	41	41	42	41	41	38
Nogales	AZ	9	Nonattainment	33	29	29	29	31	38	39	40
Oakridge	OR	10	Nonattainment	56	56	56	52	53	48	47	40
Philadelphia-Wilmington	PA-NJ-DE	2, 3	Nonattainment	40	43	43	39	39	37	38	36
Pittsburgh-Beaver Valley	PA	3	Nonattainment	49	45	49	52	52	45	43	39
Provo	UT	8	Nonattainment	43	46	45	45	43	44	45	44
Sacramento	CA	9	Nonattainment	68	60	51	49	45	49	54	56
Salt Lake City	UT	8	Nonattainment	55	62	55	54	49	49	55	48
San Francisco Bay	CA	9	Nonattainment	57	52	47	43	39	39	38	36

Table 3. 24-hour standard design value history for areas designated nonattainment for the 2006 NAAQS in October 2009

Area											
San Joaquin Valley	CA	9	Nonattainment	104	90	76	62	60	64	69	70
Tacoma	WA	10	Nonattainment	43	44	40	41	40	42	43	44
Steubenville-Weirton	OH-WV	4, 5	Nonattainment	47	47	46	47	46	43	44	41
Yuba City-Marysville	CA	9	Nonattainment	49	42	39	34	36	40	39	47

1. A Federal Register notice regarding 24-hour PM_{2.5} nonattainment designations based primarily on 2005-2007 design values was signed by the EPA Administrator Steven Johnson in December 2008 but never published in the Federal Register. The areas listed in this table were designated nonattainment for the 2006 NAAQS by Administrator Lisa Jackson in 2009.

2. The 24-hour standard design values shown here are calculated in accordance with 40 CFR Part 50, Appendix N (2006, amended 2007). The 24-hour (or 'daily') standard design value (i.e., the 3-year average 98th percentile) is computed at each site by determining the 98th percentile of the daily FRM samples taken in a given year for each of the three years, and then averaging these three numbers. The NAAQS level for the 24-hour standard is 35 micrograms per cubic meter (µg/m³). In general, EPA regulations require at least 75% data capture in each quarter of a consecutive 3-year period in order for a design value to be valid. However, if an annual 98th percentile (or 3-year 24-hour design value) is over the level of the standard, less data (i.e., only 1 sample in that year) is sufficient to make that 98th percentile valid. Further, EPA regulations and guidance permit data substitution under certain circumstances in order to consider design values as valid that otherwise would be considered incomplete. The information presented in this update is based on data after applying the substitution protocols.

3. Note: Data that have been flagged for exceptional events, for which documentation has been submitted and approved by the EPA (AQS concurrence field set to 'Y'), if any, were excluded from the design value calculations. In several situations, submitted documentation is still under review and, as such, revisions to design values are possible.

4. One or more previously violating sites (i.e., for 2005-2007) in this area do not have valid 2006-2008 24-hour design values (i.e., those meeting NAAQS completeness criteria). As such, a 2006-2008 area-level design value is not shown, even in situations where there are additional sites in the area with valid/complete ones, because the highest of those might not represent actual maximum population exposure in the area. The 2006-2008 site listing included in the Excel version of this file shows 2006-2008 design values for each site.

Data Source: U.S. EPA's Air Quality System (AQS) as of July 7, 2009.