


## Projected Fine Particle Concentrations for Counties with Monitors in 2020

 projected not to meet an annual primary fine particle standard of 12.0 µg/m<sup>3</sup>

State	County	2020 Projected Annual Design Value (µg/m <sup>3</sup> )
Alabama	Baldwin	7.4
Alabama	Clay	8.0
Alabama	Colbert	8.2
Alabama	DeKalb	7.9
Alabama	Escambia	9.7
Alabama	Etowah	8.9
Alabama	Houston	8.6
Alabama	Jefferson	11.6
Alabama	Madison	8.0
Alabama	Mobile	8.0
Alabama	Montgomery	9.8
Alabama	Morgan	8.1
Alabama	Russell	10.3
Alabama	Shelby	8.6
Alabama	Tuscaloosa	8.7
Alabama	Walker	8.6
Arizona	Cochise	7.0
Arizona	Coconino	6.6
Arizona	Gila	8.5
Arizona	Maricopa	10.5
Arizona	Pima	5.4
Arizona	Pinal	8.6
Arkansas	Arkansas	8.8
Arkansas	Ashley	9.2
Arkansas	Crittenden	8.5
Arkansas	Faulkner	9.0
Arkansas	Garland	9.1
Arkansas	Jackson	8.2
Arkansas	Phillips	8.1
Arkansas	Polk	8.9
Arkansas	Pope	9.7
Arkansas	Pulaski	9.8
Arkansas	Sebastian	9.0
Arkansas	Union	9.3
Arkansas	White	8.6
California	Alameda	8.2
California	Butte	10.6
California	Calaveras	7.0
California	Contra Costa	7.7
California	Fresno	11.6

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
California	Humboldt	6.9
California	Imperial	12.6
California	Inyo	5.8
California	Kern	12.7
California	Kings	11.8
California	Lake	4.6
California	Los Angeles	12.3
California	Mendocino	6.4
California	Merced	12.1
California	Monterey	5.9
California	Nevada	6.6
California	Orange	9.6
California	Placer	8.4
California	Plumas	11.2
California	Riverside	14.6
California	Sacramento	10.3
California	San Benito	5.2
California	San Bernardino	12.6
California	San Diego	10.5
California	San Francisco	8.0
California	San Joaquin	11.0
California	San Luis Obispo	6.5
California	San Mateo	7.6
California	Santa Barbara	8.9
California	Santa Clara	9.7
California	Santa Cruz	5.7
California	Shasta	6.6
California	Solano	8.7
California	Sonoma	7.6
California	Stanislaus	11.0
California	Sutter	8.2
California	Tulare	13.2
California	Ventura	8.4
California	Yolo	7.9
Colorado	Adams	8.4
Colorado	Arapahoe	6.4
Colorado	Boulder	7.2
Colorado	Denver	7.8
Colorado	Douglas	5.3
Colorado	El Paso	7.0
Colorado	Elbert	4.0
Colorado	Larimer	6.6
Colorado	Mesa	8.8
Colorado	Pueblo	7.2
Colorado	Weld	8.1
Connecticut	Fairfield	8.5

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Connecticut	Hartford	7.4
Connecticut	Litchfield	6.3
Connecticut	New Haven	8.7
Connecticut	New London	7.3
Delaware	Kent	7.0
Delaware	New Castle	9.0
Delaware	Sussex	7.8
District of Columbia	District of Columbia	7.8
Florida	Alachua	6.1
Florida	Bay	7.6
Florida	Brevard	5.4
Florida	Broward	5.2
Florida	Citrus	5.4
Florida	Duval	6.9
Florida	Escambia	7.2
Florida	Hillsborough	6.3
Florida	Lee	5.4
Florida	Leon	8.3
Florida	Manatee	5.8
Florida	Marion	6.7
Florida	Miami-Dade	6.0
Florida	Orange	5.7
Florida	Palm Beach	4.9
Florida	Pinellas	5.7
Florida	Polk	5.9
Florida	Sarasota	5.2
Florida	Seminole	5.7
Florida	St. Lucie	5.5
Florida	Volusia	6.4
Georgia	Bibb	10.9
Georgia	Chatham	9.7
Georgia	Clarke	9.9
Georgia	Clayton	9.4
Georgia	Cobb	9.3
Georgia	DeKalb	8.6
Georgia	Dougherty	10.5
Georgia	Floyd	9.5
Georgia	Fulton	9.4
Georgia	Glynn	8.2
Georgia	Gwinnett	8.8
Georgia	Hall	8.2
Georgia	Houston	8.8
Georgia	Lowndes	8.8
Georgia	Muscogee	10.1
Georgia	Paulding	8.0
Georgia	Richmond	10.2

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Georgia	Washington	9.9
Georgia	Wilkinson	10.9
Idaho	Ada	6.3
Idaho	Benewah	9.3
Idaho	Canyon	7.5
Idaho	Franklin	6.8
Idaho	Idaho	9.3
Idaho	Shoshone	11.5
Illinois	Champaign	8.9
Illinois	Cook	11.5
Illinois	DuPage	9.5
Illinois	Hamilton	8.4
Illinois	Jersey	8.6
Illinois	Kane	9.7
Illinois	Lake	8.1
Illinois	Macon	9.5
Illinois	Madison	11.7
Illinois	McHenry	8.5
Illinois	McLean	8.6
Illinois	Peoria	9.4
Illinois	Randolph	8.9
Illinois	Rock Island	9.0
Illinois	Sangamon	9.2
Illinois	St. Clair	10.6
Illinois	Will	9.8
Illinois	Winnebago	9.5
Indiana	Allen	9.8
Indiana	Clark	9.8
Indiana	Delaware	8.9
Indiana	Dubois	9.8
Indiana	Floyd	8.6
Indiana	Henry	8.2
Indiana	Howard	9.1
Indiana	Knox	8.7
Indiana	Lake	11.2
Indiana	LaPorte	9.2
Indiana	Madison	9.0
Indiana	Marion	10.4
Indiana	Porter	9.4
Indiana	Spencer	8.7
Indiana	St. Joseph	9.5
Indiana	Tippecanoe	8.9
Indiana	Vanderburgh	9.6
Indiana	Vigo	9.4
Iowa	Black Hawk	9.0
Iowa	Clinton	10.7

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Iowa	Johnson	9.2
Iowa	Lee	9.2
Iowa	Linn	8.2
Iowa	Montgomery	7.6
Iowa	Muscatine	10.8
Iowa	Palo Alto	7.3
Iowa	Polk	7.8
Iowa	Pottawattamie	8.6
Iowa	Scott	11.5
Iowa	Van Buren	8.0
Iowa	Woodbury	8.6
Iowa	Wright	7.9
Kansas	Johnson	7.5
Kansas	Linn	7.9
Kansas	Sedgwick	7.8
Kansas	Shawnee	8.0
Kansas	Sumner	7.5
Kansas	Wyandotte	8.6
Kentucky	Bell	8.9
Kentucky	Boyd	8.5
Kentucky	Bullitt	8.9
Kentucky	Carter	7.5
Kentucky	Christian	8.6
Kentucky	Daviess	8.6
Kentucky	Fayette	8.0
Kentucky	Franklin	7.5
Kentucky	Hardin	8.2
Kentucky	Henderson	8.9
Kentucky	Jefferson	9.0
Kentucky	Kenton	8.2
Kentucky	Madison	7.0
Kentucky	McCracken	8.9
Kentucky	Ohio	8.4
Kentucky	Perry	8.5
Kentucky	Pike	7.9
Louisiana	Caddo Parish	9.4
Louisiana	Calcasieu Parish	7.6
Louisiana	East Baton Rouge Parish	9.2
Louisiana	Iberville Parish	8.8
Louisiana	Jefferson Parish	7.4
Louisiana	Lafayette Parish	7.5
Louisiana	Ouachita Parish	8.2
Louisiana	Rapides Parish	7.5
Louisiana	St. Bernard Parish	7.9
Louisiana	Tangipahoa Parish	8.0
Louisiana	Terrebonne Parish	7.2

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Louisiana	West Baton Rouge Parish	9.7
Maine	Androscoggin	7.6
Maine	Aroostook	8.7
Maine	Cumberland	8.4
Maine	Hancock	4.1
Maine	Kennebec	7.7
Maine	Oxford	8.2
Maine	Penobscot	7.2
Maine	Piscataquis	4.7
Maryland	Anne Arundel	8.3
Maryland	Baltimore	8.5
Maryland	Baltimore city	8.9
Maryland	Cecil	7.2
Maryland	Harford	7.0
Maryland	Montgomery	6.7
Maryland	Prince George's	7.6
Maryland	Washington	7.5
Massachusetts	Berkshire	7.3
Massachusetts	Bristol	6.3
Massachusetts	Essex	6.9
Massachusetts	Hampden	8.8
Massachusetts	Middlesex	6.4
Massachusetts	Plymouth	6.7
Massachusetts	Suffolk	8.5
Massachusetts	Worcester	8.2
Michigan	Allegan	8.3
Michigan	Bay	7.9
Michigan	Berrien	8.2
Michigan	Genesee	8.0
Michigan	Ingham	8.2
Michigan	Kalamazoo	9.2
Michigan	Kent	9.0
Michigan	Macomb	8.6
Michigan	Manistee	6.0
Michigan	Missaukee	6.2
Michigan	Monroe	9.3
Michigan	Muskegon	8.1
Michigan	Oakland	9.0
Michigan	Ottawa	8.7
Michigan	St. Clair	8.8
Michigan	Washtenaw	9.3
Michigan	Wayne	11.6
Minnesota	Cass	5.0
Minnesota	Dakota	7.7
Minnesota	Hennepin	8.2
Minnesota	Mille Lacs	5.6

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Minnesota	Olmsted	8.0
Minnesota	Ramsey	9.2
Minnesota	Scott	7.6
Minnesota	St. Louis	6.7
Minnesota	Stearns	7.1
Mississippi	Adams	7.8
Mississippi	Bolivar	8.5
Mississippi	DeSoto	8.0
Mississippi	Forrest	10.2
Mississippi	Grenada	7.2
Mississippi	Harrison	7.7
Mississippi	Hinds	8.9
Mississippi	Jackson	7.7
Mississippi	Jones	10.5
Mississippi	Lauderdale	9.1
Mississippi	Lee	8.6
Mississippi	Lowndes	8.7
Missouri	Buchanan	9.7
Missouri	Cass	7.9
Missouri	Clay	8.0
Missouri	Greene	8.8
Missouri	Jackson	9.2
Missouri	Jefferson	10.2
Missouri	St. Charles	9.6
Missouri	St. Louis	9.2
Missouri	St. Louis city	10.2
Missouri	Ste. Genevieve	9.5
Montana	Cascade	5.9
Montana	Flathead	9.3
Montana	Gallatin	8.4
Montana	Lewis and Clark	8.3
Montana	Missoula	9.4
Montana	Ravalli	8.9
Montana	Sanders	6.9
Montana	Silver Bow	10.9
Montana	Yellowstone	7.5
Nebraska	Douglas	7.3
Nebraska	Hall	6.4
Nebraska	Lancaster	6.3
Nebraska	Sarpy	7.2
Nebraska	Scotts Bluff	5.7
Nebraska	Washington	6.7
Nevada	Clark	8.7
Nevada	Washoe	7.8
New Hampshire	Belknap	5.4
New Hampshire	Cheshire	9.4

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
New Hampshire	Grafton	6.6
New Hampshire	Hillsborough	7.6
New Hampshire	Merrimack	7.6
New Hampshire	Rockingham	7.0
New Hampshire	Sullivan	8.0
New Jersey	Atlantic	7.2
New Jersey	Bergen	7.8
New Jersey	Camden	8.9
New Jersey	Essex	8.4
New Jersey	Gloucester	7.2
New Jersey	Hudson	9.0
New Jersey	Mercer	7.7
New Jersey	Middlesex	7.3
New Jersey	Morris	6.6
New Jersey	Ocean	6.4
New Jersey	Passaic	7.8
New Jersey	Union	8.5
New Jersey	Warren	7.8
New Mexico	Bernalillo	5.9
New Mexico	Chaves	6.1
New Mexico	Douglas	10.2
New Mexico	Grant	4.9
New Mexico	San Juan	5.6
New Mexico	Sandoval	7.3
New Mexico	Santa Fe	4.2
New York	Albany	6.9
New York	Bronx	9.7
New York	Chautauqua	6.0
New York	Erie	8.2
New York	Essex	4.0
New York	Kings	8.4
New York	Monroe	6.6
New York	Nassau	6.9
New York	New York	10.8
New York	Niagara	7.8
New York	Onondaga	6.5
New York	Orange	6.6
New York	Queens	7.2
New York	Richmond	7.9
New York	St. Lawrence	4.8
New York	Steuben	5.4
New York	Suffolk	6.4
New York	Westchester	7.0
North Carolina	Alamance	7.5
North Carolina	Buncombe	7.0
North Carolina	Caswell	6.9



<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
North Carolina	Catawba	8.7
North Carolina	Chatham	6.7
North Carolina	Cumberland	8.1
North Carolina	Davidson	8.7
North Carolina	Duplin	6.3
North Carolina	Durham	8.4
North Carolina	Edgecombe	7.2
North Carolina	Forsyth	7.7
North Carolina	Gaston	8.0
North Carolina	Guilford	6.4
North Carolina	Haywood	9.1
North Carolina	Jackson	7.6
North Carolina	Lenoir	6.3
North Carolina	Martin	6.4
North Carolina	McDowell	8.5
North Carolina	Mecklenburg	8.4
North Carolina	Mitchell	7.7
North Carolina	Montgomery	7.1
North Carolina	New Hanover	5.9
North Carolina	Onslow	6.4
North Carolina	Orange	7.7
North Carolina	Pitt	7.0
North Carolina	Robeson	7.8
North Carolina	Rowan	8.3
North Carolina	Swain	7.9
North Carolina	Wake	7.8
North Carolina	Watauga	6.3
North Carolina	Wayne	7.7
North Dakota	Billings	4.3
North Dakota	Burleigh	6.1
North Dakota	Cass	6.8
North Dakota	Mercer	5.8
Ohio	Athens	7.0
Ohio	Butler	9.9
Ohio	Clark	9.5
Ohio	Clermont	8.2
Ohio	Cuyahoga	10.7
Ohio	Franklin	9.1
Ohio	Greene	8.2
Ohio	Hamilton	10.5
Ohio	Jefferson	9.0
Ohio	Lake	8.1
Ohio	Lawrence	9.7
Ohio	Lorain	8.4
Ohio	Lucas	10.2
Ohio	Mahoning	9.3

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Ohio	Medina	8.0
Ohio	Montgomery	9.5
Ohio	Portage	8.4
Ohio	Preble	8.6
Ohio	Scioto	8.5
Ohio	Stark	10.8
Ohio	Summit	9.7
Ohio	Trumbull	9.4
Ohio	Warren	8.1
Oklahoma	Caddo	6.9
Oklahoma	Cherokee	9.8
Oklahoma	Kay	8.7
Oklahoma	Mayes	9.2
Oklahoma	Muskogee	9.2
Oklahoma	Oklahoma	7.9
Oklahoma	Ottawa	8.9
Oklahoma	Pittsburg	8.8
Oklahoma	Sequoyah	9.6
Oklahoma	Tulsa	8.9
Oregon	Harney	9.8
Oregon	Jackson	9.7
Oregon	Josephine	8.6
Oregon	Klamath	11.3
Oregon	Lake	9.4
Oregon	Lane	10.7
Oregon	Multnomah	7.8
Oregon	Umatilla	7.7
Oregon	Union	7.3
Oregon	Washington	8.1
Pennsylvania	Adams	7.4
Pennsylvania	Allegheny	11.1
Pennsylvania	Beaver	10.1
Pennsylvania	Berks	8.6
Pennsylvania	Bucks	8.4
Pennsylvania	Cambria	9.2
Pennsylvania	Centre	7.0
Pennsylvania	Cumberland	8.5
Pennsylvania	Dauphin	8.8
Pennsylvania	Delaware	9.4
Pennsylvania	Erie	8.1
Pennsylvania	Lackawanna	7.2
Pennsylvania	Lancaster	9.4
Pennsylvania	Mercer	8.1
Pennsylvania	Montgomery	7.7
Pennsylvania	Northampton	8.7
Pennsylvania	Philadelphia	8.6

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Pennsylvania	Washington	8.6
Pennsylvania	Westmoreland	8.5
Pennsylvania	York	9.5
Rhode Island	Kent	5.2
Rhode Island	Providence	8.6
South Carolina	Beaufort	7.5
South Carolina	Charleston	7.2
South Carolina	Chesterfield	7.6
South Carolina	Edgefield	8.2
South Carolina	Florence	7.9
South Carolina	Greenville	9.8
South Carolina	Greenwood	8.9
South Carolina	Horry	7.8
South Carolina	Lexington	8.6
South Carolina	Oconee	6.4
South Carolina	Richland	8.4
South Carolina	Spartanburg	8.4
South Dakota	Brookings	7.2
South Dakota	Brown	7.1
South Dakota	Codington	8.1
South Dakota	Custer	5.2
South Dakota	Jackson	4.8
South Dakota	Minnehaha	7.9
South Dakota	Pennington	7.8
Tennessee	Blount	9.4
Tennessee	Davidson	9.1
Tennessee	Dyer	7.8
Tennessee	Hamilton	8.9
Tennessee	Knox	10.2
Tennessee	Lawrence	7.4
Tennessee	Loudon	10.0
Tennessee	Madison	7.4
Tennessee	Maury	7.9
Tennessee	McMinn	9.1
Tennessee	Montgomery	8.2
Tennessee	Putnam	7.0
Tennessee	Roane	8.9
Tennessee	Shelby	9.1
Tennessee	Sullivan	8.1
Tennessee	Sumner	7.9
Texas	Bowie	9.4
Texas	Dallas	8.1
Texas	Ector	7.6
Texas	El Paso	11.4
Texas	Harris	11.4
Texas	Harrison	8.3

<b>State</b>	<b>County</b>	<b>2020 Projected Annual Design Value (<math>\mu\text{g}/\text{m}^3</math>)</b>
Texas	Hidalgo	9.8
Texas	Nueces	8.6
Texas	Orange	8.5
Texas	Potter	5.3
Texas	Tarrant	8.6
Texas	Travis	7.0
Utah	Box Elder	7.3
Utah	Cache	8.7
Utah	Davis	9.0
Utah	Salt Lake	9.4
Utah	Tooele	5.7
Utah	Utah	9.1
Utah	Weber	9.3
Vermont	Bennington	5.7
Vermont	Chittenden	7.1
Vermont	Rutland	9.5
Virginia	Arlington	7.7
Virginia	Bristol city	7.6
Virginia	Charles City	6.9
Virginia	Chesterfield	7.4
Virginia	Fairfax	7.9
Virginia	Hampton city	7.1
Virginia	Henrico	7.2
Virginia	Loudoun	7.3
Virginia	Lynchburg city	7.4
Virginia	Norfolk city	7.7
Virginia	Page	6.8
Virginia	Roanoke city	8.9
Virginia	Rockingham	7.5
Virginia	Virginia Beach city	7.3
Washington	King	7.7
Washington	Pierce	8.6
Washington	Snohomish	8.1
Washington	Spokane	9.0
Washington	Yakima	8.8
West Virginia	Berkeley	10.0
West Virginia	Brooke	9.2
West Virginia	Cabell	10.0
West Virginia	Hancock	8.6
West Virginia	Harrison	8.2
West Virginia	Kanawha	9.4
West Virginia	Marion	9.0
West Virginia	Marshall	8.4
West Virginia	Monongalia	7.7
West Virginia	Ohio	7.8
West Virginia	Raleigh	7.1

State	County	2020 Projected Annual Design Value ( $\mu\text{g}/\text{m}^3$ )
West Virginia	Wood	9.2
Wisconsin	Ashland	5.3
Wisconsin	Brown	9.8
Wisconsin	Dane	10.4
Wisconsin	Dodge	9.0
Wisconsin	Forest	5.9
Wisconsin	Grant	10.1
Wisconsin	Kenosha	9.8
Wisconsin	La Crosse	10.1
Wisconsin	Manitowoc	8.8
Wisconsin	Milwaukee	12.0
Wisconsin	Outagamie	9.3
Wisconsin	Ozaukee	9.5
Wisconsin	Sauk	8.4
Wisconsin	St. Croix	7.8
Wisconsin	St. Croix	8.7
Wisconsin	Taylor	6.3
Wisconsin	Taylor	7.5
Wisconsin	Vilas	5.4
Wisconsin	Vilas	5.8
Wisconsin	Waukesha	9.8
Wisconsin	Waukesha	11.2
Wyoming	Campbell	5.3
Wyoming	Campbell	5.9
Wyoming	Converse	3.3
Wyoming	Converse	3.4
Wyoming	Fremont	7.3
Wyoming	Fremont	7.4
Wyoming	Laramie	3.8
Wyoming	Laramie	3.8
Wyoming	Sheridan	8.7
Wyoming	Sheridan	8.7

*All 7 counties are already part of currently designated  $\text{PM}_{2.5}$  nonattainment areas.*

*This map shows projections for 2020 used in the Regulatory Impact Analysis (RIA) to estimate the costs and benefits of attaining the revised NAAQS. These projections reflect 2020 based on 2007 emissions for those counties with monitoring data within the contiguous 48 states with the exception of South Coast Air Basin and San Joaquin Valley, CA, which include 2025 mobile NOx emissions estimates.*

*These 2020 projections account for emissions reductions from “on-the-books” federal and state rules, and an estimate of emissions reductions needed to attain the  $\text{PM}_{2.5}$  standards of 15/ 35  $\mu\text{g}/\text{m}^3$ . Three additional counties in the San Joaquin Valley were projected to meet an annual standard of 12  $\mu\text{g}/\text{m}^3$  only after simulating emissions reductions needed to meet the 24-hour standard of 35  $\mu\text{g}/\text{m}^3$ .*

*For a list of the federal rules included in the projections, see the Executive Summary of the PM NAAQS RIA [www.epa.gov/pm](http://www.epa.gov/pm)*