

**National Ambient Air Quality Standards for
Sulfur Dioxide**

Attainment Analysis

Lake Michigan Air Directors Consortium

December 21, 2009

DATA SUMMARY

Annual Sulfur Dioxide Standard = 0.03 ppm

24-Hour Sulfur Dioxide Standard = 0.14 ppm

Number of Sulfur Dioxide Monitors Exceeding the NAAQS Based on 2008 Data:

State	Annual Standard	24-Hour Standard
Illinois	0 out of 18 (0.0%)	0 out of 18 (0.0%)
Indiana	0 out of 23 (0.0%)	0 out of 23 (0.0%)
Michigan	0 out of 3 (0.0%)	0 out of 3 (0.0%)
Minnesota	0 out of 2 (0.0%)	0 out of 2 (0.0%)
Ohio	0 out of 23 (0.0%)	0 out of 23 (0.0%)
Wisconsin	0 out of 2 (0.0%)	0 out of 2 (0.0%)

On November 16, 2009, EPA proposed to strengthen the NAAQS for sulfur dioxide. EPA is proposing to revise the primary SO₂ standard to a level between 50 and 100 ppb measured over 1-hour. Also, EPA is proposing to revoke both the annual and 24-hour sulfur dioxide standards.

For the new 1-hour SO₂ standard, EPA is proposing that the form be a 3-year average of the 4th highest daily maximum 1-hour average concentration in a year, or its equivalent (a 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations).

The first three pages are a summary of 1-hour sulfur dioxide concentrations by county based on 2006 – 2008 monitoring data.

The next twelve pages list sulfur dioxide design values for all active air quality monitors, as of 2008, for the following time periods: 2007 and 2008. The state-specific design values are sorted based on 2008 data and shaded according to their nearness to exceeding the NAAQS.

Reference: <http://www.epa.gov/airtrends/values.html>

Sulfur Dioxide Concentrations by County (3-Year Average 1-Hour 99th Percentiles from 2006 - 2008)		
State	County	Concentrations
Illinois	La Salle	307
Illinois	Tazewell	238
Illinois	Sangamon	120
Illinois	Wabash	120
Illinois	Madison	106
Illinois	Cook	104
Illinois	Will	62
Illinois	Peoria	60
Illinois	Macon	47
Illinois	Saint Clair	38
Illinois	Randolph	31
Illinois	Macoupin	27
Indiana	Fountain	202
Indiana	Floyd	171
Indiana	Gibson	164
Indiana	Warrick	138
Indiana	Vigo	125
Indiana	Daviess	123
Indiana	Morgan	113
Indiana	Marion	109
Indiana	Wayne	101
Indiana	Lake	70
Indiana	Porter	66
Indiana	Vanderburgh	59
Indiana	Jasper	58
Indiana	Hendricks	38
Indiana	LaPorte	27
Indiana	Pike	14
Iowa	Muscatine	189
Iowa	Linn	77
Iowa	Clinton	40
Iowa	Scott	19
Iowa	Van Buren	6
Kentucky	Jefferson	144
Kentucky	Henderson	92
Kentucky	Boyd	58
Kentucky	Greenup	40
Kentucky	McCracken	26
Michigan	Wayne	114
Minnesota	Dakota	14
Missouri	Jefferson	372
Missouri	Jackson	169
Missouri	Greene	77
Missouri	Saint Louis City	60
Missouri	Saint Louis	36

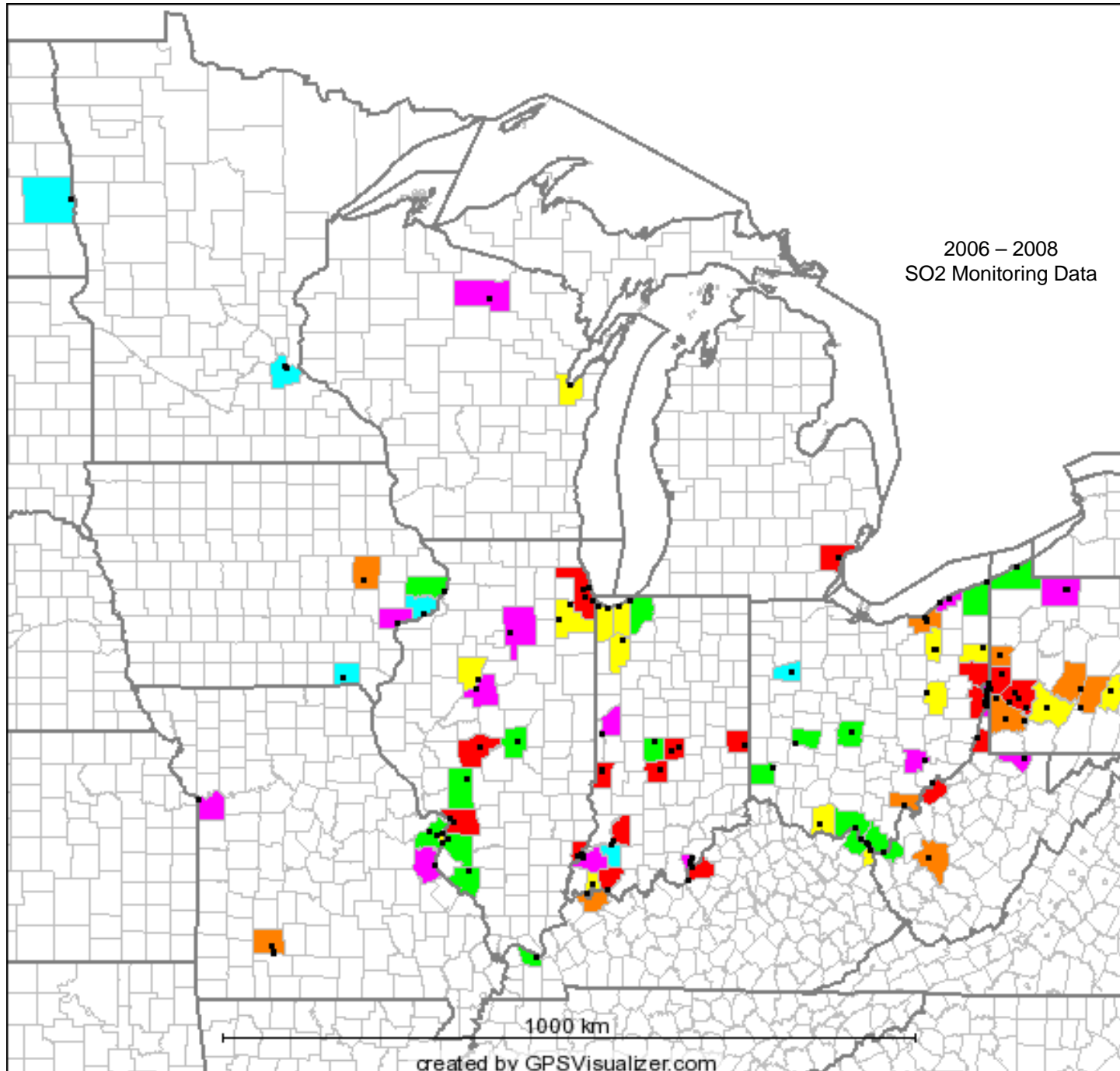
LEGEND (ppb)	
	> 150
	101 - 150
	76 - 100
	51 - 75
	26 - 50
	< 25

Sulfur Dioxide Concentrations by County (3-Year Average 1-Hour 99th Percentiles from 2006 - 2008)		
State	County	Concentrations
North Dakota	Oliver	54
North Dakota	Mercer	39
North Dakota	Burke	33
North Dakota	Burleigh	29
North Dakota	Williams	27
North Dakota	McKenzie	22
North Dakota	Dunn	13
North Dakota	Billings	6
North Dakota	Cass	5
Ohio	Morgan	262
Ohio	Lake	171
Ohio	Jefferson	146
Ohio	Columbiana	115
Ohio	Meigs	90
Ohio	Cuyahoga	85
Ohio	Summit	73
Ohio	Adams	68
Ohio	Tuscarawas	67
Ohio	Mahoning	59
Ohio	Lawrence	47
Ohio	Scioto	42
Ohio	Butler	41
Ohio	Ashtabula	36
Ohio	Franklin	33
Ohio	Clark	31
Ohio	Allen	20
Pennsylvania	Warren	178
Pennsylvania	Northampton	173
Pennsylvania	Allegheny	141
Pennsylvania	Beaver	128
Pennsylvania	Indiana	99
Pennsylvania	York	99
Pennsylvania	Washington	80
Pennsylvania	Cambria	79
Pennsylvania	Lawrence	79
Pennsylvania	Westmoreland	69
Pennsylvania	Lancaster	63
Pennsylvania	Dauphin	59
Pennsylvania	Blair	53
Pennsylvania	Lehigh	51
Pennsylvania	Lycoming	46
Pennsylvania	Erie	40
Pennsylvania	Philadelphia	37
Pennsylvania	Perry	36
Pennsylvania	Lackawanna	35
Pennsylvania	Bucks	32
Pennsylvania	Centre	29
Pennsylvania	Montgomery	29
South Dakota	Jackson	4
West Virginia	Monongalia	168
West Virginia	Hancock	166
West Virginia	Brooke	161
West Virginia	Marshall	140
West Virginia	Wood	125
West Virginia	Kanawha	87
West Virginia	Cabell	44
Wisconsin	Oneida	196
Wisconsin	Brown	74

LEGEND (ppb)	
	> 150
	101 - 150
	76 - 100
	51 - 75
	26 - 50
	< 25

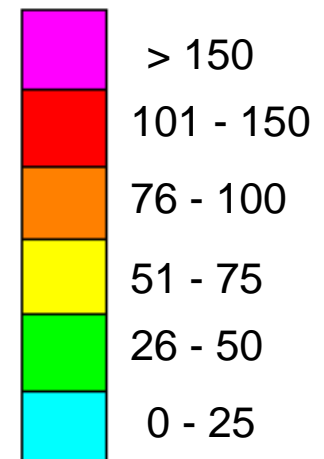
Reference: <http://www.epa.gov/air/sulfurdioxide/actions.html#nov09>

EPA's Proposed Revisions to the NAAQS for Sulfur Dioxide (SO₂)



EPA is proposing to revise the primary SO₂ standard, designed to protect public health, to a level of **between 50 and 100 parts per billion (ppb)** measured over 1- hour.

LEGEND (ppb)



State	County	Site ID	2007 Design Value (Annual)	2008 Design Value (Annual)
Illinois	La Salle	170990007	0.006	0.006
Illinois	Cook	170311601	0.005	0.005
Illinois	Tazewell	171790004	0.004	0.005
Illinois	Wabash	171850001	0.005	0.005
Illinois	Will	171970013	0.004	0.005
Illinois	Wabash	171851001	0.004	0.004
Illinois	Madison	171191010	0.004	0.004
Illinois	Cook	170314002	0.004	0.003
Illinois	Madison	171193007	0.003	0.003
Illinois	Sangamon	171670006	0.003	0.003
Illinois	Macon	171150013	0.003	0.003
Illinois	Cook	170310076	0.003	0.003
Illinois	Peoria	171430024	0.004	0.003
Illinois	Cook	170310063	0.002	0.002
Illinois	Cook	170310050	0.002	0.002
Illinois	Saint Clair	171630010	0.002	0.002
Illinois	Randolph	171570001	0.002	0.002
Illinois	Macoupin	171170002	0.001	0.002

LEGEND

	Exceeds Standard	> 0.03 ppm
	> 75% of Standard	0.023 - 0.03 ppm
	> 50% of Standard	0.015 - 0.023 ppm
	> 25% of Standard	0.008 - 0.014 ppm
	< 25% of Standard	< 0.008 ppm

State	County	Site ID	2007 Design Value (Annual)	2008 Design Value (Annual)
Indiana	Vigo	181671014	0.005	0.008
Indiana	Floyd	180431004	0.006	0.007
Indiana	Gibson	180510002	0.008	0.006
Indiana	Fountain	180450001	0.006	0.006
Indiana	Floyd	180430007	-	0.006
Indiana	Floyd	180430004	0.007	0.006
Indiana	Wayne	181770006	0.006	0.006
Indiana	Porter	181270011	0.005	0.006
Indiana	Daviess	180270002	0.006	0.005
Indiana	Lake	180892008	0.005	0.005
Indiana	Morgan	181091001	0.005	0.005
Indiana	Marion	180970057	0.005	0.005
Indiana	Pike	181250005	0.005	0.005
Indiana	Vigo	181670018	0.004	0.004
Indiana	Gibson	180510001	0.004	0.004
Indiana	Vanderburgh	181630012	0.003	0.004
Indiana	Marion	180970073	0.010	0.004
Indiana	Lake	180890022	0.003	0.004
Indiana	Hendricks	180630002	0.003	0.003
Indiana	Warrick	181730002	0.007	0.003
Indiana	Vanderburgh	181631002	0.001	0.003
Indiana	Jasper	180730002	0.005	0.003
Indiana	LaPorte	180910005	0.003	0.003

LEGEND

	Exceeds Standard	> 0.03 ppm
	> 75% of Standard	0.023 - 0.03 ppm
	> 50% of Standard	0.015 - 0.023 ppm
	> 25% of Standard	0.008 - 0.014 ppm
	< 25% of Standard	< 0.008 ppm

State	County	Site ID	2007 Design Value (Annual)	2008 Design Value (Annual)
Michigan	Wayne	261630015	0.005	0.005
Michigan	Wayne	261630001	-	0.002
Michigan	Kent	260810020	0.001	0.001
Michigan	St. Clair	261630005	0.005	-
Michigan	Wayne	261630016	0.003	-
Michigan	Wayne	261630019	0.003	-
Michigan	Macomb	260991003	0.002	-
Michigan	Genesee	260490021	0.001	-

LEGEND

	Exceeds Standard	> 0.03 ppm
	> 75% of Standard	0.023 - 0.03 ppm
	> 50% of Standard	0.015 - 0.023 ppm
	> 25% of Standard	0.008 - 0.014 ppm
	< 25% of Standard	< 0.008 ppm

State	County	Site ID	2007 Design Value (Annual)	2008 Design Value (Annual)
Minnesota	Dakota	270370423	0.001	0.001
Minnesota	Dakota	270370442	0.000	0.001

LEGEND

	Exceeds Standard	> 0.03 ppm
	> 75% of Standard	0.023 - 0.03 ppm
	> 50% of Standard	0.015 - 0.023 ppm
	> 25% of Standard	0.008 - 0.014 ppm
	< 25% of Standard	< 0.008 ppm

State	County	Site ID	2007 Design Value (Annual)	2008 Design Value (Annual)
Ohio	Lake	390853002	0.008	0.008
Ohio	Cuyahoga	390350060	0.008	0.008
Ohio	Morgan	391150004	0.007	0.007
Ohio	Tuscarawas	391570006	0.006	0.006
Ohio	Jefferson	390810017	0.006	0.006
Ohio	Scioto	391450020	0.004	0.005
Ohio	Athens	390090004	-	0.005
Ohio	Columbiana	390290022	0.004	0.005
Ohio	Mahoning	390990013	0.005	0.005
Ohio	Lake	390850003	0.004	0.005
Ohio	Adams	390010001	0.004	0.005
Ohio	Summit	391530017	0.006	0.004
Ohio	Meigs	391051001	0.005	0.004
Ohio	Butler	390171004	0.004	0.004
Ohio	Cuyahoga	390350065	0.005	0.004
Ohio	Lawrence	390870006	0.003	0.004
Ohio	Summit	391530022	0.004	0.003
Ohio	Ashtabula	390071001	0.003	0.003
Ohio	Cuyahoga	390350045	0.004	0.003
Ohio	Franklin	390490034	0.003	0.003
Ohio	Clark	390230003	0.003	0.003
Ohio	Allen	390030002	0.002	0.002
Ohio	Scioto	391450013	0.002	0.002

LEGEND

	Exceeds Standard	> 0.03 ppm
	> 75% of Standard	0.023 - 0.03 ppm
	> 50% of Standard	0.015 - 0.023 ppm
	> 25% of Standard	0.008 - 0.014 ppm
	< 25% of Standard	< 0.008 ppm

State	County	Site ID	2007 Design Value (Annual)	2008 Design Value (Annual)
Wisconsin	Oneida	550850996	0.007	0.008
Wisconsin	Brown	550090005	0.004	0.003

LEGEND

	Exceeds Standard	> 0.03 ppm
	> 75% of Standard	0.023 - 0.03 ppm
	> 50% of Standard	0.015 - 0.023 ppm
	> 25% of Standard	0.008 - 0.014 ppm
	< 25% of Standard	< 0.008 ppm

State	County	Site ID	2008 Design Value (24-Hr)
Illinois	Tazewell	171790004	0.133
Illinois	La Salle	170990007	0.082
Illinois	Sangamon	171670006	0.047
Illinois	Cook	170311601	0.025
Illinois	Peoria	171430024	0.025
Illinois	Wabash	171850001	0.023
Illinois	Wabash	171851001	0.023
Illinois	Macon	171150013	0.021
Illinois	Madison	171191010	0.021
Illinois	Madison	171193007	0.017
Illinois	Will	171970013	0.017
Illinois	Cook	170314002	0.013
Illinois	Cook	170310063	0.010
Illinois	Cook	170310050	0.010
Illinois	Saint Clair	171630010	0.010
Illinois	Cook	170310076	0.009
Illinois	Macoupin	171170002	0.008
Illinois	Randolph	171570001	0.007

LEGEND

	Exceeds Standard	> 0.14 ppm
	> 75% of Standard	0.105 - 0.14 ppm
	> 50% of Standard	0.070 - 0.104 ppm
	> 25% of Standard	0.035 - 0.069 ppm
	< 25% of Standard	< 0.035 ppm

State	County	Site ID	2008 Design Value (24-Hr)
Indiana	Fountain	180450001	0.089
Indiana	Vigo	181671014	0.062
Indiana	Gibson	180510002	0.041
Indiana	Floyd	180431004	0.036
Indiana	Morgan	181091001	0.036
Indiana	Daviess	180270002	0.036
Indiana	Floyd	180430004	0.036
Indiana	Floyd	180430007	0.032
Indiana	Wayne	181770006	0.031
Indiana	Marion	180970057	0.028
Indiana	Warrick	181730002	0.026
Indiana	Porter	181270011	0.021
Indiana	Vigo	181670018	0.021
Indiana	Lake	180890022	0.021
Indiana	Gibson	180510001	0.020
Indiana	Vanderburgh	181631002	0.019
Indiana	Lake	180892008	0.017
Indiana	Vanderburgh	181630012	0.016
Indiana	Hendricks	180630002	0.013
Indiana	Jasper	180730002	0.012
Indiana	Marion	180970073	0.012
Indiana	LaPorte	180910005	0.010
Indiana	Pike	181250005	0.008

LEGEND

	Exceeds Standard	> 0.14 ppm
	> 75% of Standard	0.105 - 0.14 ppm
	> 50% of Standard	0.070 - 0.104 ppm
	> 25% of Standard	0.035 - 0.069 ppm
	< 25% of Standard	< 0.035 ppm

State	County	Site ID	2008 Design Value (24-Hr)
Michigan	Wayne	261630015	0.053
Michigan	Wayne	261630001	0.013
Michigan	Kent	260810020	0.005
Michigan	Genesee	260490021	-
Michigan	Macomb	260991003	-
Michigan	St. Clair	261470005	-
Michigan	Wayne	261630016	-
Michigan	Wayne	261630019	-

LEGEND

	Exceeds Standard	> 0.14 ppm
	> 75% of Standard	0.105 - 0.14 ppm
	> 50% of Standard	0.070 - 0.104 ppm
	> 25% of Standard	0.035 - 0.069 ppm
	< 25% of Standard	< 0.035 ppm

State	County	Site ID	2008 Design Value (24-Hr)
Minnesota	Dakota	270370423	0.004
Minnesota	Dakota	270370442	0.002

LEGEND

	Exceeds Standard	> 0.14 ppm
	> 75% of Standard	0.105 - 0.14 ppm
	> 50% of Standard	0.070 - 0.104 ppm
	> 25% of Standard	0.035 - 0.069 ppm
	< 25% of Standard	< 0.035 ppm

State	County	Site ID	2008 Design Value (24-Hr)
Ohio	Jefferson	390810017	0.057
Ohio	Lake	390853002	0.053
Ohio	Morgan	391150004	0.040
Ohio	Columbiana	390290022	0.039
Ohio	Cuyahoga	390350060	0.029
Ohio	Tuscarawas	391570006	0.026
Ohio	Cuyahoga	390350065	0.022
Ohio	Adams	390010001	0.021
Ohio	Athens	390090004	0.021
Ohio	Meigs	391051001	0.020
Ohio	Lawrence	390870006	0.017
Ohio	Mahoning	390990013	0.017
Ohio	Summit	391530017	0.017
Ohio	Scioto	391450020	0.015
Ohio	Summit	391530022	0.015
Ohio	Lake	390850003	0.015
Ohio	Cuyahoga	390350045	0.014
Ohio	Ashtabula	390071001	0.013
Ohio	Butler	390171004	0.013
Ohio	Clark	390230003	0.012
Ohio	Franklin	390490034	0.012
Ohio	Scioto	391450013	0.012
Ohio	Allen	390030002	0.011

LEGEND

	Exceeds Standard	> 0.14 ppm
	> 75% of Standard	0.105 - 0.14 ppm
	> 50% of Standard	0.070 - 0.104 ppm
	> 25% of Standard	0.035 - 0.069 ppm
	< 25% of Standard	< 0.035 ppm

State	County	Site ID	2008 Design Value (24-Hr)
Wisconsin	Oneida	550850996	0.084
Wisconsin	Brown	550090005	0.015

LEGEND

	Exceeds Standard	> 0.14 ppm
	> 75% of Standard	0.105 - 0.14 ppm
	> 50% of Standard	0.070 - 0.104 ppm
	> 25% of Standard	0.035 - 0.069 ppm
	< 25% of Standard	< 0.035 ppm