

National Ambient Air Quality Standards for PM_{2.5}
Attainment Analysis

Lake Michigan Air Directors Consortium

December 21, 2009

DATA SUMMARY

1997 & 2006 Annual PM_{2.5} Standard = 15.0 µg/m³

Number of PM_{2.5} Monitors Exceeding the 2006 Annual PM_{2.5} Standard Based on 2006 – 2008 Data:

- Illinois – 2 out of 39 (5.1%)
- Indiana – 3 out of 37 (8.1%)
- Michigan – 1 out of 27 (3.7%)
- Minnesota – 0 out of 17 (0.0%)
- Ohio – 4 out of 45 (8.9%)
- Wisconsin – 0 out of 21 (0.0%)

The following maps are included:

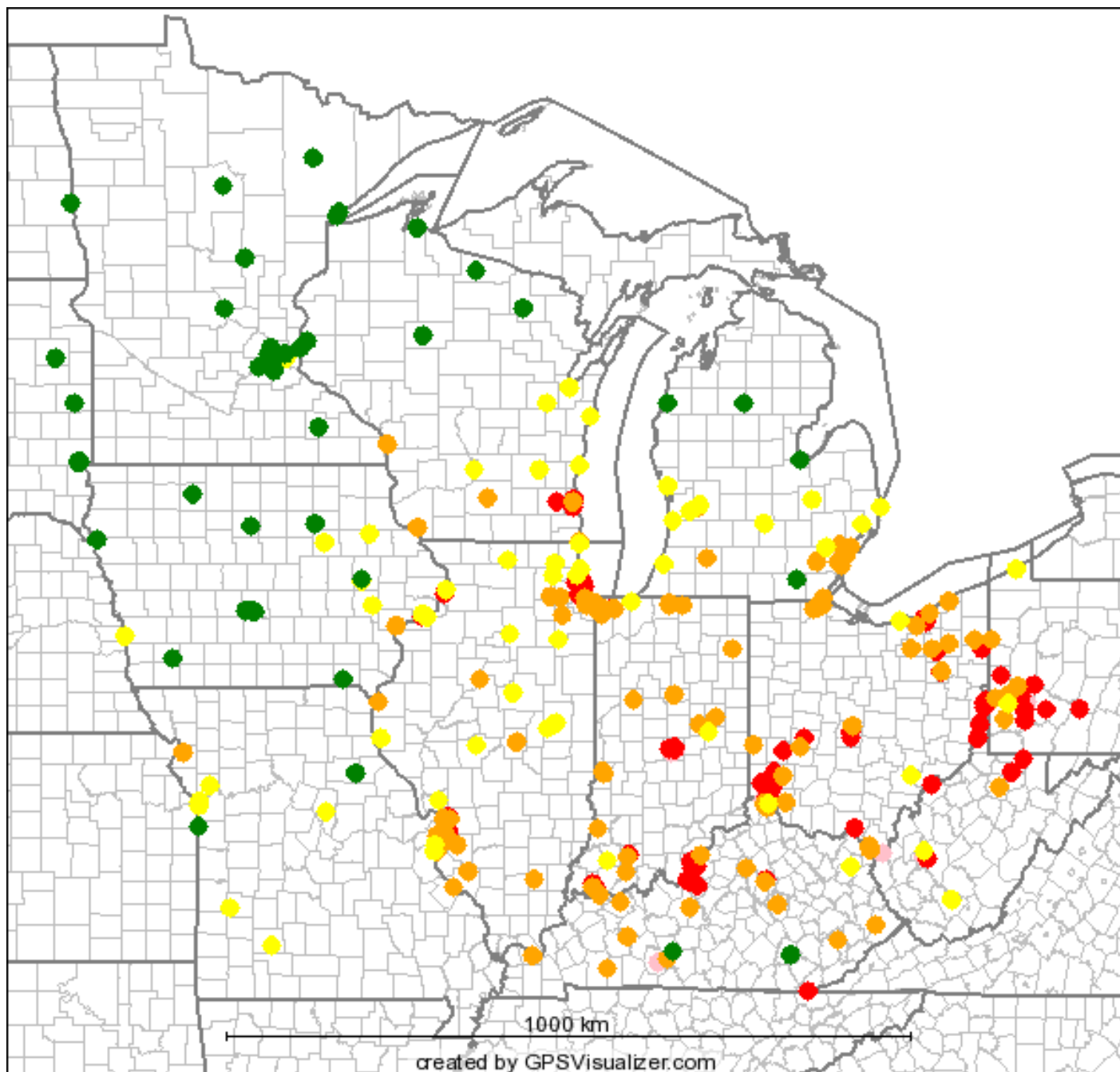
- 2006 – 2008 PM_{2.5} Design Values
- Percent Change in PM_{2.5} Design Values Compared to 2006 – 2008
- 2009 Critical Values






The included tables list PM_{2.5} annual design values for all active air quality monitors, as of 2008, for the following time periods: 2003 – 2005, 2004 – 2006, 2005 – 2007, and 2006 – 2008. The state-specific design values are sorted based on 2006 – 2008 data and shaded according to their nearness to exceeding the annual PM_{2.5} standard. Finally, a table of 2009 critical values is provided.

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

2006 – 2008 Fine Particulate Matter (PM_{2.5})

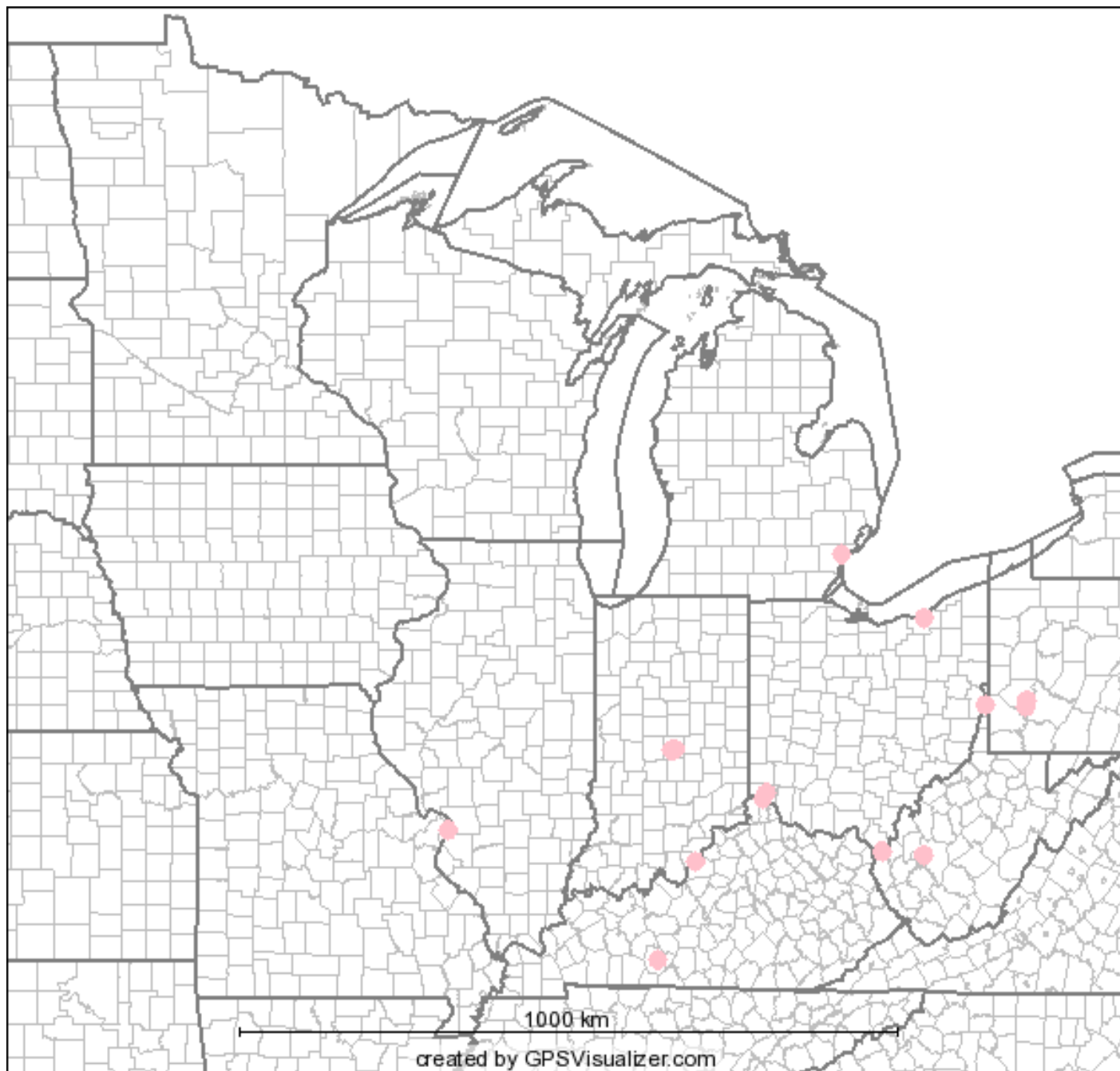
Annual Design Value Attainment Analysis








	Exceeds the 1997/2006 Standard > 15.0 $\mu\text{g}/\text{m}^3$
	> 90% of the 2006 Standard 13.5 $\mu\text{g}/\text{m}^3$ - 15.0 $\mu\text{g}/\text{m}^3$
	> 80% of the 2006 Standard 12.0 $\mu\text{g}/\text{m}^3$ - 13.4 $\mu\text{g}/\text{m}^3$
	> 70% of the 2006 Standard 10.5 $\mu\text{g}/\text{m}^3$ - 11.9 $\mu\text{g}/\text{m}^3$
	< 70% of the 2006 Standard < 10.5 $\mu\text{g}/\text{m}^3$

2006 – 2008 Fine Particulate Matter (PM_{2.5})

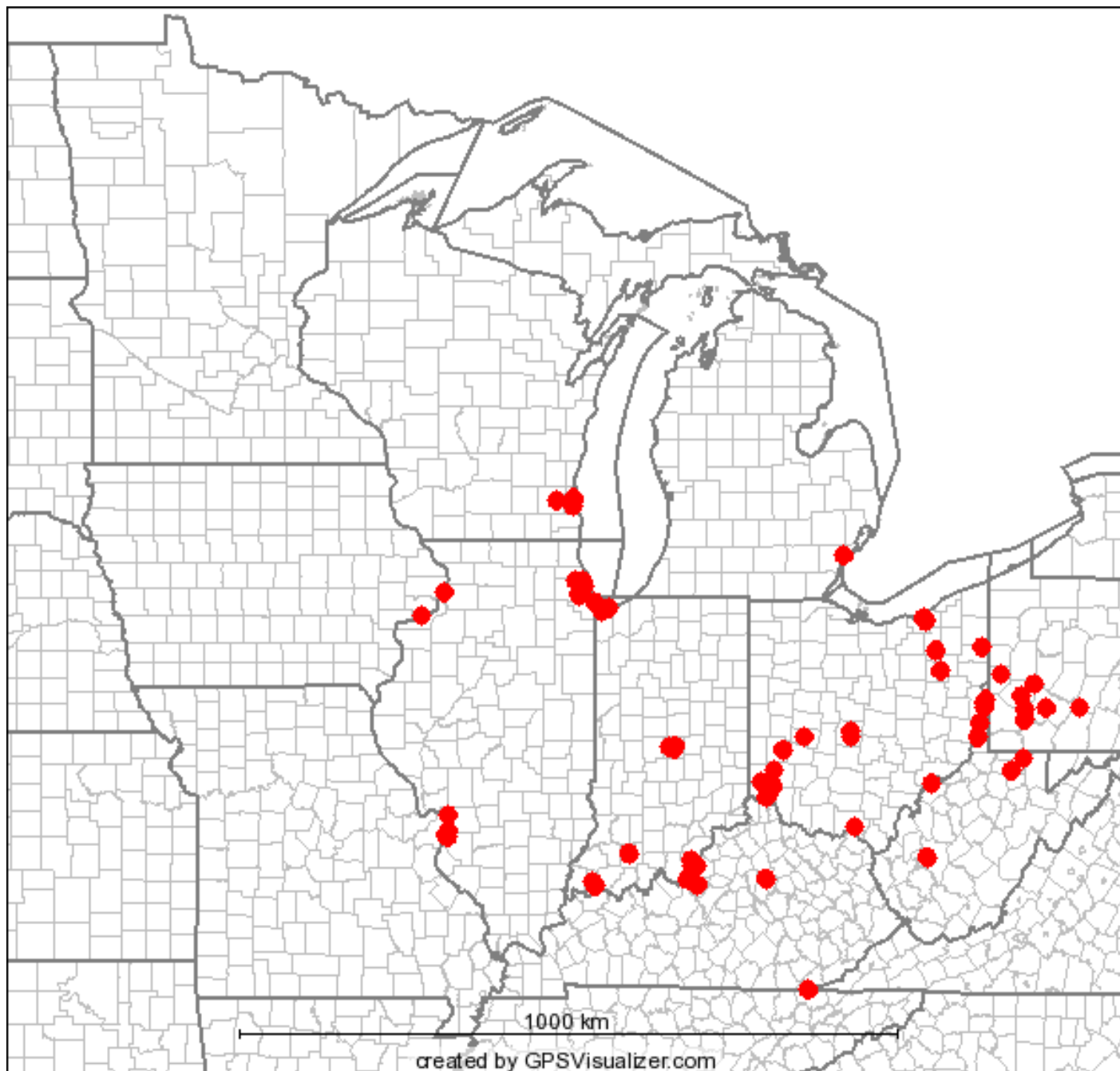
Annual Design Value Attainment Analysis








	Exceeds the 1997/2006 Standard > 15.0 $\mu\text{g}/\text{m}^3$
	> 90% of the 2006 Standard 13.5 $\mu\text{g}/\text{m}^3$ - 15.0 $\mu\text{g}/\text{m}^3$
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2006 – 2008 Fine Particulate Matter (PM_{2.5})

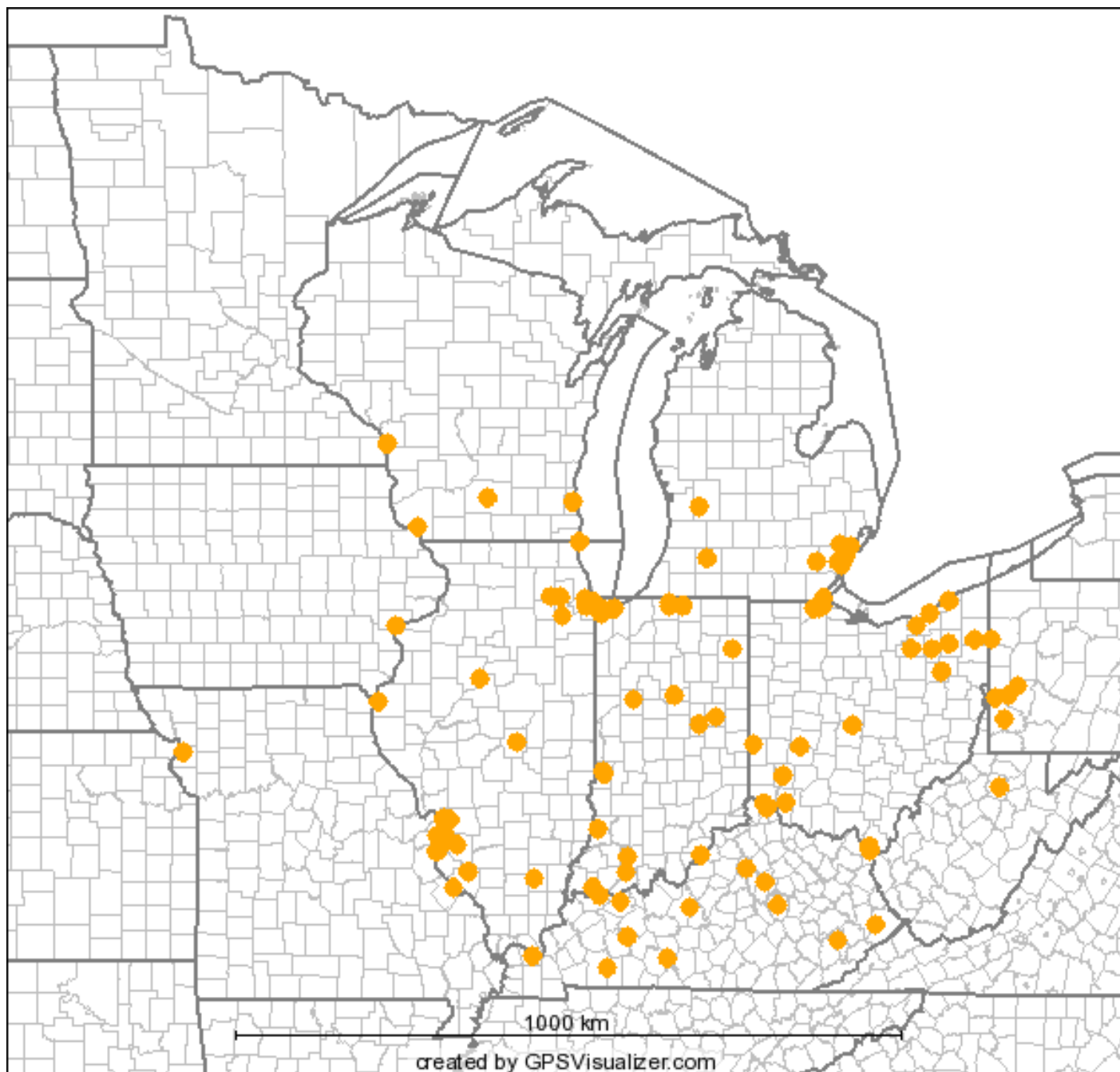
Annual Design Value Attainment Analysis








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2006 – 2008 Fine Particulate Matter (PM_{2.5})

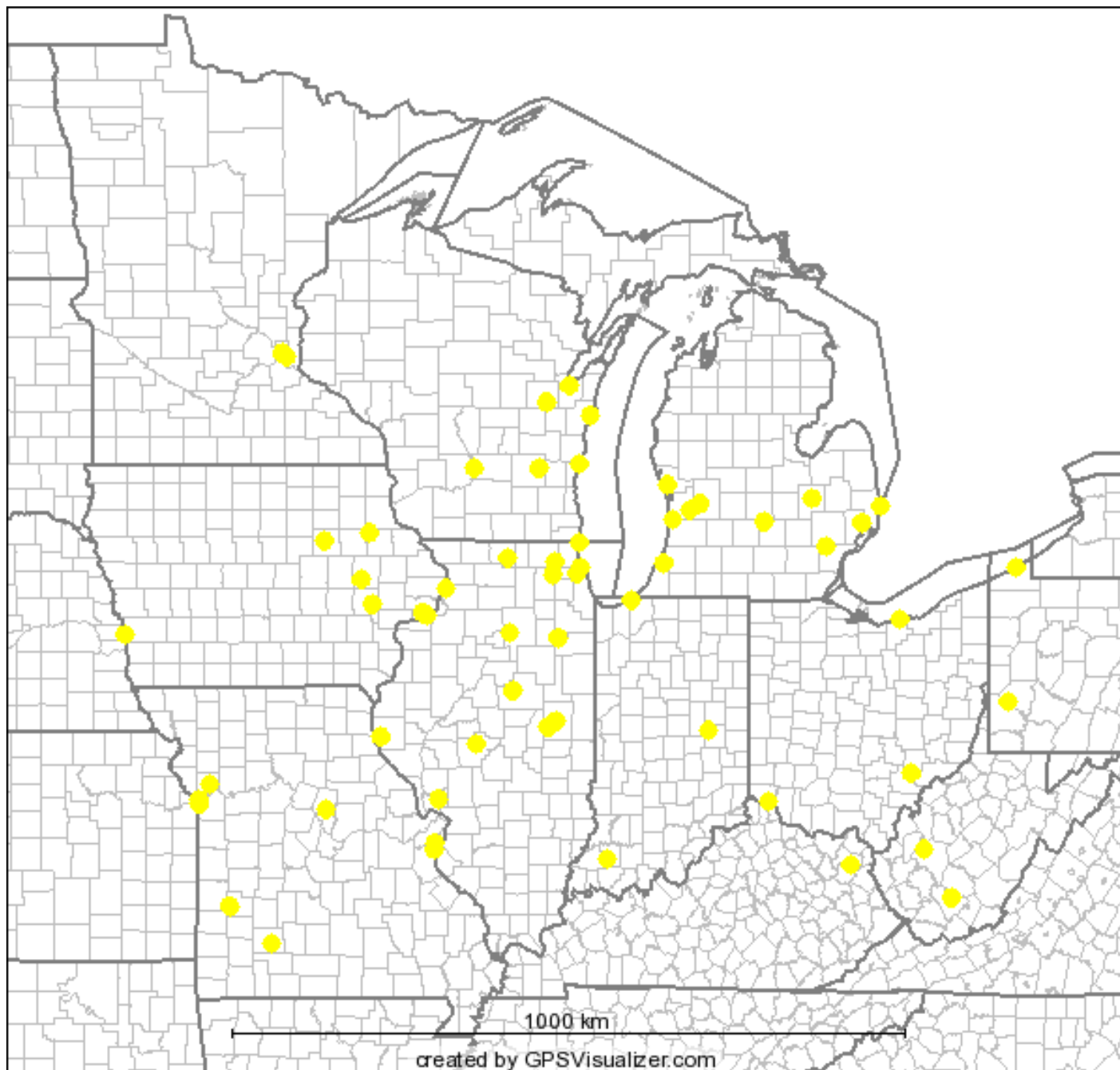
Annual Design Value Attainment Analysis








	Exceeds the 1997/2006 Standard > 15.0 $\mu\text{g}/\text{m}^3$
	> 90% of the 2006 Standard 13.5 $\mu\text{g}/\text{m}^3$ - 15.0 $\mu\text{g}/\text{m}^3$
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2006 – 2008 Fine Particulate Matter (PM_{2.5})

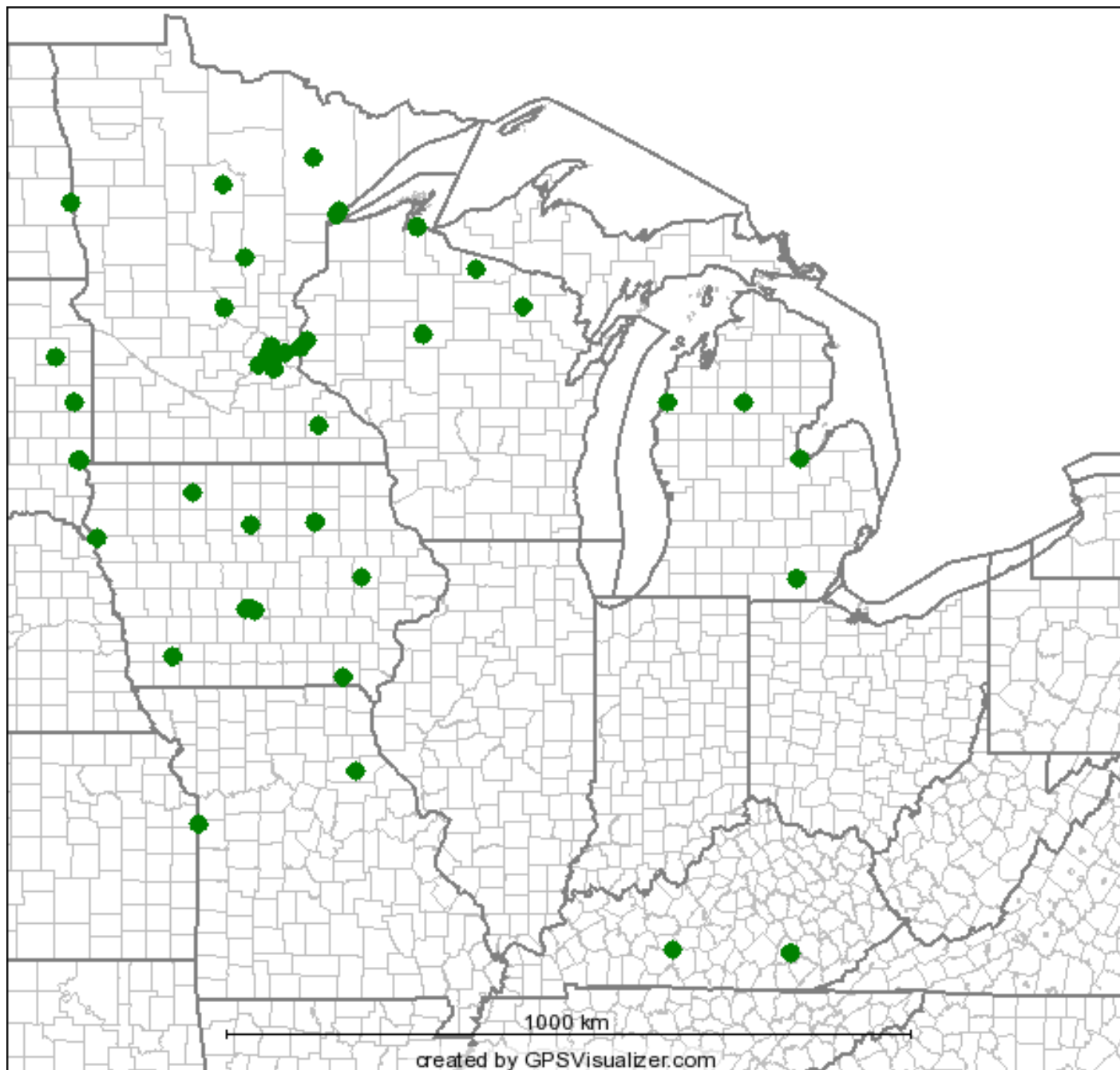
Annual Design Value Attainment Analysis



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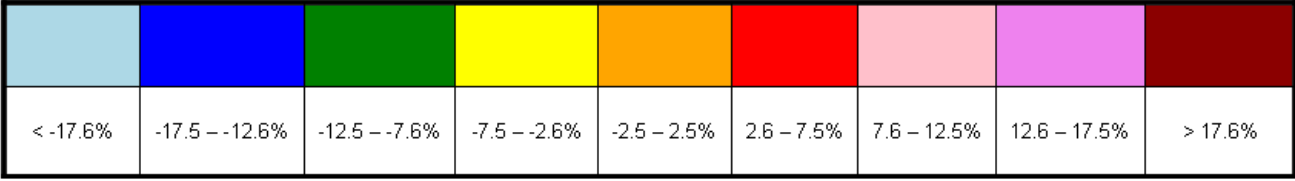
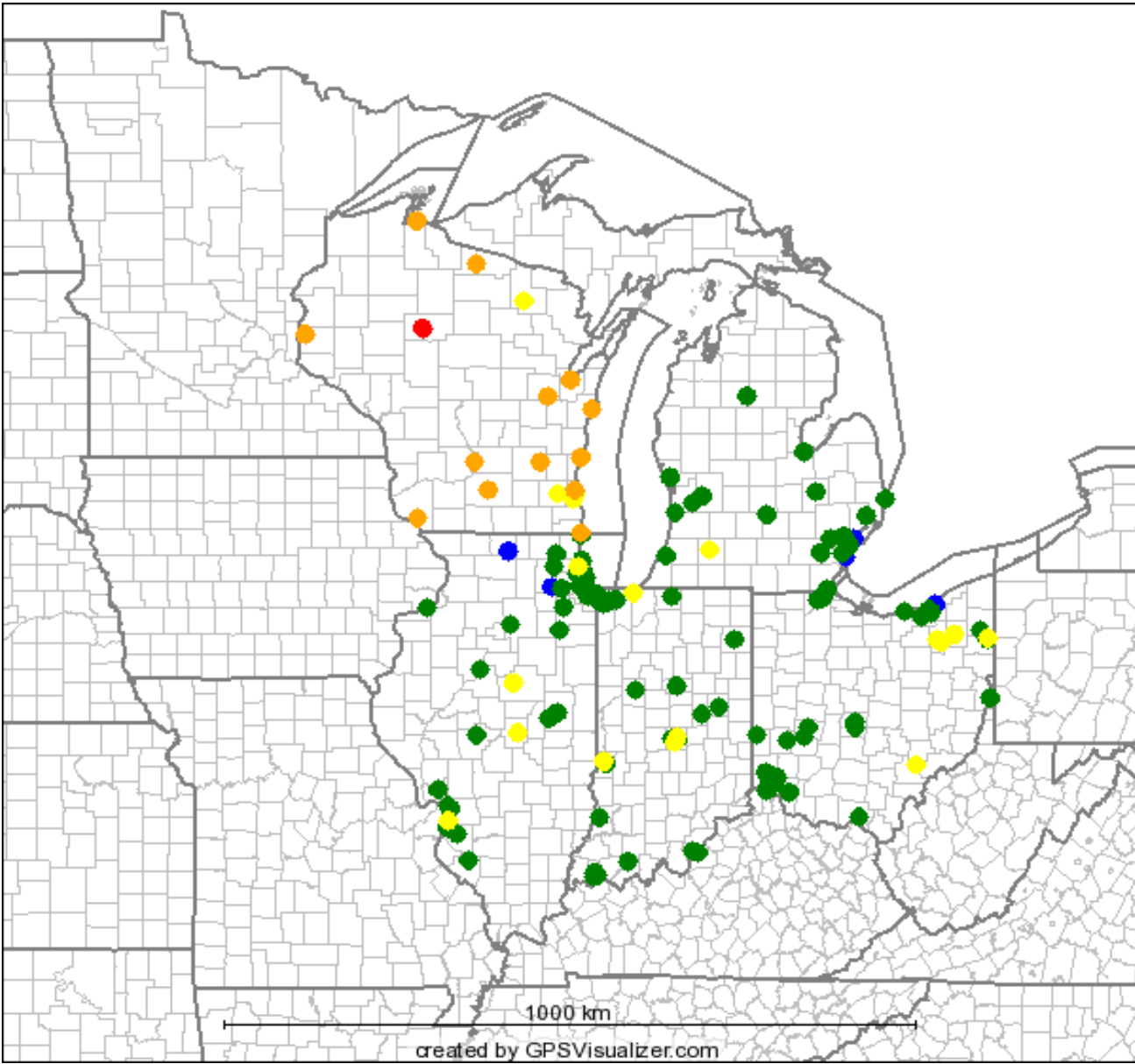
2006 – 2008 Fine Particulate Matter (PM_{2.5})

Annual Design Value Attainment Analysis



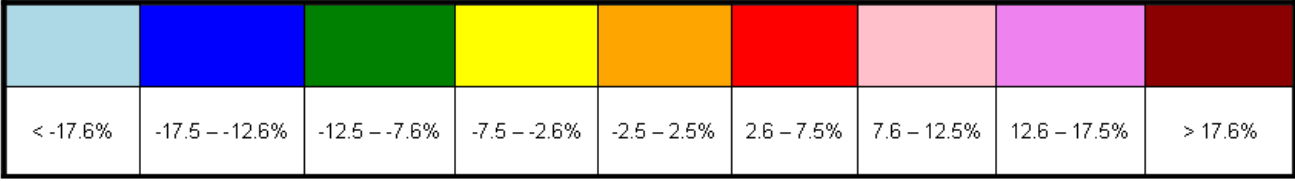
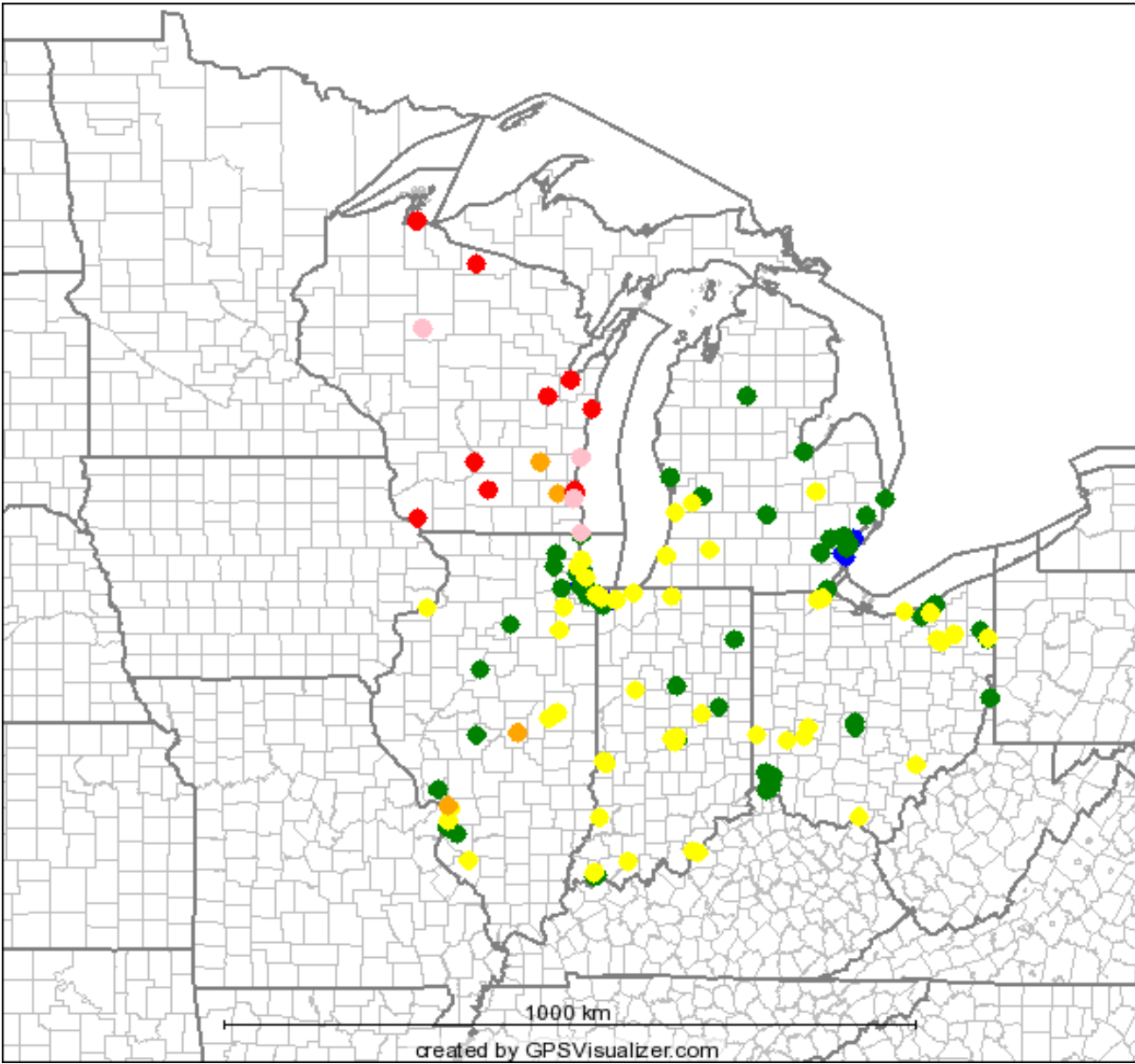
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**Percent Change
2005/07 – 2006/08
Annual PM2.5 Design Values**



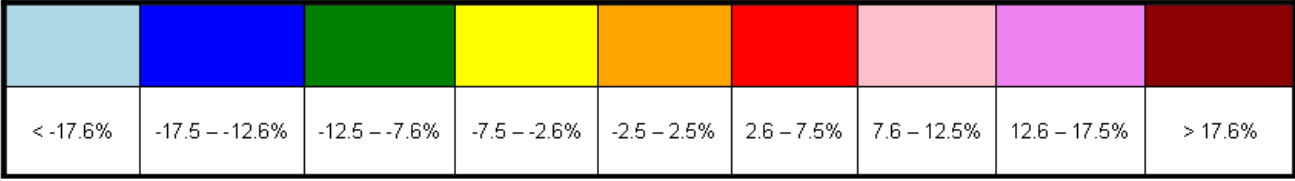
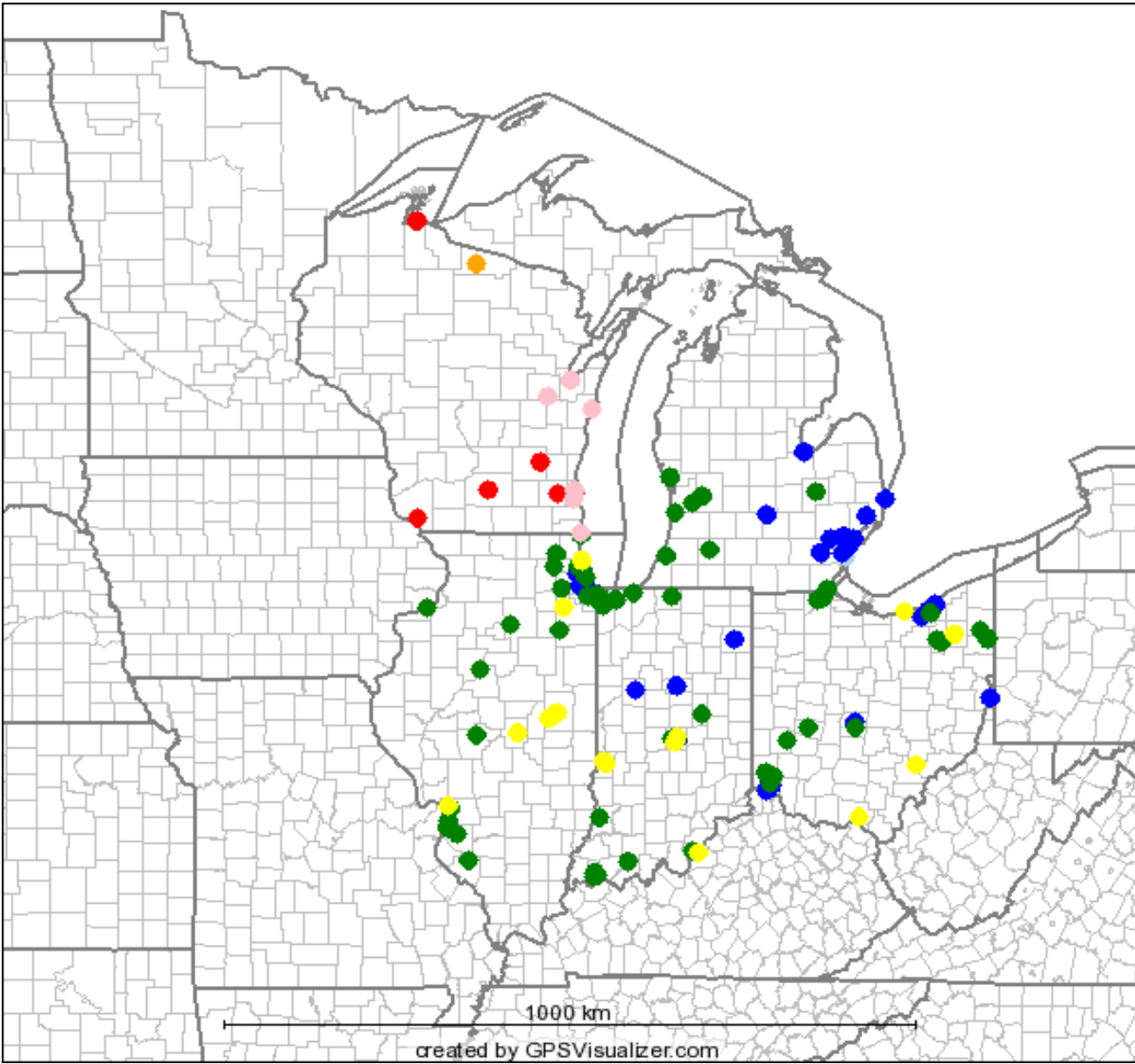
BIGGEST DECREASE		
	SITE ID	% CHANGE
1	261630036	-13.3%
2	172010013	-13.2%
3	390350034	-13.0%
4	261630019	-12.8%
5	170890007	-12.6%
6	170971007	-12.4%
7	180890022	-12.2%
8	180970066	-12.1%
9	170831001	-12.1%
10	261130001	-11.9%
BIGGEST INCREASE		
	SITE ID	% CHANGE
1	551198001	7.1%
2	551091002	2.0%
3	550030010	1.6%
4	551250001	1.5%
5	550430009	0.8%
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-

**Percent Change
2004/06 – 2006/08
Annual PM2.5 Design Values**



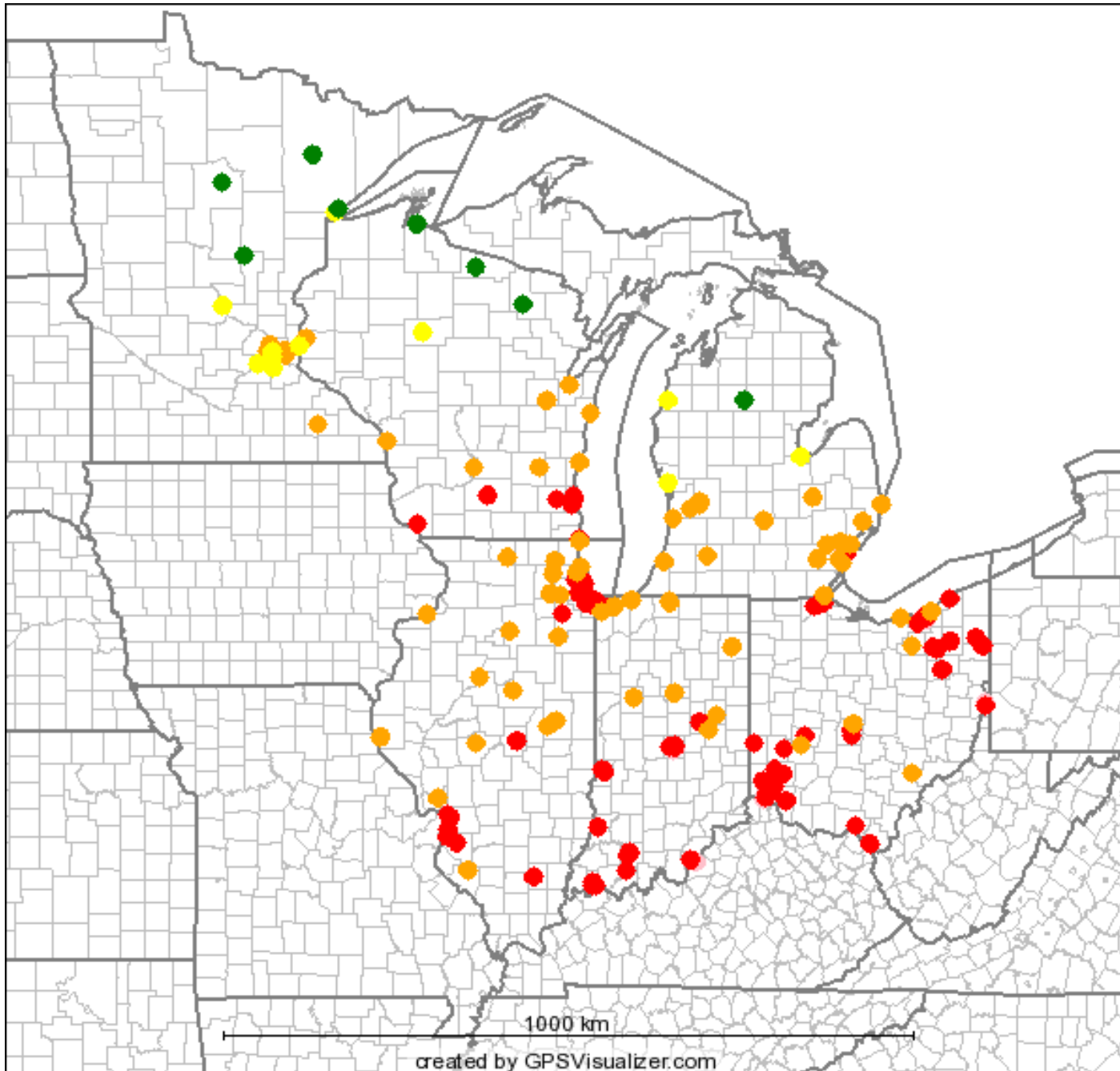
BIGGEST DECREASE		
	SITE ID	% CHANGE
1	180890022	-14.4%
2	261630036	-13.3%
3	261630001	-13.1%
4	170311016	-13.0%
5	261630019	-12.8%
6	390350038	-12.2%
7	390350060	-11.8%
8	390350027	-11.8%
9	390350045	-11.7%
10	390351002	-11.5%
BIGGEST INCREASE		
	SITE ID	% CHANGE
1	551198001	12.5%
2	550790059	9.0%
3	550890009	8.2%
4	550590019	7.6%
5	550710007	7.0%
6	550790026	6.3%
7	551110007	6.1%
8	550430009	6.0%
9	550250047	5.0%
10	550030010	5.0%






**Percent Change
2003/05 – 2006/08
Annual PM2.5 Design Values**



BIGGEST DECREASE		
	SITE ID	% CHANGE
1	261630036	-19.5%
2	180890022	-19.4%
3	261630019	-16.9%
4	390350038	-16.6%
5	261630001	-16.6%
6	390350027	-16.1%
7	390350045	-15.9%
8	390350060	-15.8%
9	390351002	-15.8%
10	261250001	-15.4%
BIGGEST INCREASE		
	SITE ID	% CHANGE
1	550790059	12.4%
2	550590019	12.4%
3	550790026	11.6%
4	550710007	10.3%
5	550790099	9.4%
6	550870009	8.6%
7	550090005	8.2%
8	550430009	7.0%
9	550250047	5.0%
10	550030010	5.0%

2009
Fine Particulate
Matter (PM_{2.5})
Annual Critical Value



	< 15.1 µg/m ³
	15.1 µg/m ³ – 20.0 µg/m ³
	20.1 µg/m ³ – 25.0 µg/m ³
	25.1 µg/m ³ – 30.0 µg/m ³
	> 30.0 µg/m ³

ILLINOIS

COUNTY	SITE ID	2003 - 2005	2004 - 2006	2005 - 2007	2006 - 2008
Madison	171190023	17.7	17.0	17.5	16.0
Madison	171191007	17.0	16.6	16.5	15.6
Cook	170311016	17.2	16.9	16.5	14.7
Madison	171190024	-	-	15.0 ¹	14.7 ¹
Cook	170313103	16.8	16.1	15.9	14.6
Saint Clair	171630010	15.6	15.5	15.7	14.2
Cook	170310052	16.0	15.6	15.7	14.1
Cook	170316005	16.1	15.3	15.1	14.1 ¹
Cook	170310022	15.6	14.8	15.3	13.8
Cook	170310057	15.3	14.6	15.1	13.6
Cook	170313301	15.6	15.0	15.2	13.5
Madison	171192009	13.9	13.5	14.7	13.5
Cook	170312001	15.1	14.6	14.6	13.3
Cook	170310076	15.2	14.7	14.8	13.2
Madison	171193007	14.4	14.1	14.5	13.2
Cook	170310050	15.2	14.5	14.7	13.1
Saint Clair	171634001	14.5	14.2	14.2	13.1
Will	171971002	13.7	13.2	14.1	12.8
Macon	171150013	13.3	12.8	13.6	12.7
DuPage	170434002	13.8	13.7	14.0	12.6
Kane	170890007	15.9 ¹	14.2 ¹	14.3	12.5
Hamilton	170650002	14.3 ¹	12.7 ¹	13.0 ¹	12.3
Peoria	171430037	13.7	13.1	13.2	12.1
Randolph	171570001	13.2	12.5	13.6	12.0
Kane	170890003	13.5	13.0	13.5	11.9
Sangamon	171670012	13.3	12.9	13.2	11.9
Winnebago	172010013	16.0 ¹	14.1 ¹	13.6	11.8
Cook	170314007	13.2	12.5	12.7	11.8
Cook	170314201	12.6	12.5	13.2	11.7
Champaign	170191001	12.6	12.1	12.9	11.7
Champaign	170190004	12.5	12.1	12.9	11.7
Jersey	170831001	13.1 ¹	12.6	13.2	11.6
McLean	171132003	13.4 ¹	12.4 ¹	12.4	11.5
La Salle	170990007	12.8	12.4	12.5	11.4
McHenry	171110001	12.5	12.3	12.4	11.2
Rock Island	171613002	12.3	11.5	12.2	11.2
Will	171971011	11.8	11.1	11.7	10.7
Lake	170971007	11.8	11.6	12.1	10.6
Adams	170010007	-	-	11.8 ¹	10.5 ¹

¹ Incomplete Data Capture

LEGEND

	Exceeds 1997/2006 Standard	> 15.0 µg/m ³
	> 90% of 2006 Standard	13.5 - 15.0 µg/m ³
	> 80% of 2006 Standard	12.0 - 13.4 µg/m ³
	> 70% of 2006 Standard	10.5 - 11.9 µg/m ³
	< 70% of 2006 Standard	< 10.5 µg/m ³

INDIANA

COUNTY	SITE ID	2003 - 2005	2004 - 2006	2005 - 2007	2006 - 2008
Marion	180970043	17.3	16.8	17.3	16.0
Clark	180190006	16.5	16.2	16.7	15.3
Marion	180970066	17.8	17.1	17.3	15.2
Lake	180890026	17.5	16.7	16.5	14.9
Marion	180970081	16.4	15.7	16.1	14.7
Marion	180970083	16.3	15.6	15.9	14.4
Marion	180970078	15.4	15.0	15.4	14.3
Lake	180890022	17.0	16.0	15.6	13.7
Vanderburgh	181630012	15.0	14.6	14.9	13.7
Dubois	180370005	-	13.7 ¹	14.3 ¹	13.7
Vanderburgh	181630016	15.1	14.8	15.0	13.6
Floyd	180431004	15.0	14.6	15.0	13.6
Dubois	180372001	15.7	15.0	14.9	13.6 ¹
Clark	180190008	-	-	-	13.4 ¹
Vanderburgh	181630006	14.9	14.5	14.7	13.4
Dubois	180370004	-	13.6 ¹	14.1 ¹	13.4 ¹
Lake	180890031	16.8 ¹	15.1 ¹	14.9 ¹	13.3
Lake	180890006	14.5	14.0	14.5 ¹	13.2
Vigo	181670018	14.1	13.7	14.2	13.2
Spencer	181470009	14.5	13.9	14.6	13.0
Knox	180830004	14.1	13.8	14.2	12.9
Lake	180892010	14.1	13.6	14.0	12.9
Lake	180892004	14.4	13.8	14.0	12.7
Madison	180950009	14.4	13.6	13.9	12.6
Vigo	181670023	13.6	13.2	13.7	12.6
Howard	180670003	14.3	13.6	13.9	12.4
Lake	180890027	14.1	13.5	13.7 ¹	12.4
St. Joseph	181410015	-	12.8 ¹	12.9 ¹	12.4 ¹
Elkhart	180390008	-	-	-	12.3 ¹
Delaware	180350006	14.2 ¹	13.5	13.9	12.3
Tippecanoe	181570008	14.1	13.3	13.7	12.3
Allen	180030004	14.1	13.4	13.6	12.3
Porter	181270024	13.3	12.9	13.4	12.2
St. Joseph	181410014	13.7	13.0	13.2	12.1
Henry	180650003	13.6	12.9 ¹	13.3 ¹	11.9 ¹
LaPorte	180910011	12.8	12.3	12.4	11.6
Gibson	180510012	-	-	-	11.3 ¹

¹ Incomplete Data Capture

LEGEND

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	> 90% of 2006 Standard	13.5 - 15.0 µg/m ³
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	> 70% of 2006 Standard	10.5 - 11.9 µg/m ³
	< 70% of 2006 Standard	< 10.5 µg/m ³

MICHIGAN

COUNTY	SITE ID	2003 - 2005	2004 - 2006	2005 - 2007	2006 - 2008
Wayne	261630033	18.2	17.2	17.2	15.4
Wayne	261630015	16.4	15.8	15.5	14.0
Wayne	261630039	16.2 ¹	14.7 ¹	14.4 ¹	13.1
Wayne	261630016	15.2	14.2	14.3	12.9
Wayne	261630038	23.1 ¹	19.5 ¹	14.3 ¹	12.8 ¹
Wayne	261630001	15.1	14.5	14.0	12.6
Wayne	261630036	15.4	14.3	14.3	12.4
Monroe	261150005	14.1	13.8	13.8	12.4
Wayne	261630019	14.8	14.1	14.1	12.3
Washtenaw	261610008	14.3	13.6	13.7	12.2
Oakland	261250001	14.3	13.4	13.6	12.1
Kalamazoo	260770008	13.1	12.6	12.9	12.0
Kent	260810007	-	-	12.8 ¹	12.0 ¹
Wayne	261630025	13.9	13.1	13.2	11.9
St. Clair	261470005	13.8	13.1	13.2	11.9
Kent	260810020	13.1	12.8	12.8	11.8
Ottawa	261390005	12.7	12.4	12.6	11.5
Macomb	260990009	13.0	12.5	12.5	11.3
Ingham	260650012	12.5	12.0	12.2	10.9
Allegan	260050003	12.0	11.7	11.9	10.9
Berrien	260210014	11.9	11.4	11.8	10.8
Genesee	260490021	11.8	11.4	11.6	10.6
Muskegon	261210040	11.7	11.5	11.6	10.5
Lenawee	260910007	-	-	-	9.7 ¹
Bay	260170014	11.1	10.8	10.9	9.7
Manistee	261010922	-	9.1 ¹	8.8 ¹	8.4 ¹
Missaukee	261130001	8.2 ¹	8.2	8.4	7.4

¹ Incomplete Data Capture

LEGEND

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	> 70% of 2006 Standard	10.5 - 11.9 µg/m ³
	< 70% of 2006 Standard	< 10.5 µg/m ³

MINNESOTA

COUNTY	SITE ID	2003 - 2005	2004 - 2006	2005 - 2007	2006 - 2008
Ramsey	271230866	11.6	11.2	11.2	11.0
Ramsey	271230868	11.3	10.9	10.9	10.7
Ramsey	271230871	9.7	9.4	9.8	10.0 ¹
Hennepin	270531007	9.6	9.3	9.8	9.9
Hennepin	270532006	9.4	9.3	9.7 ¹	9.7 ¹
Olmsted	271095008	10.1	9.5 ¹	10.0 ¹	9.6 ¹
Hennepin	270530963	9.8	9.3	9.7	9.6
Dakota	270370470	9.3	9.1	9.6	9.3
Scott	271390505	9.0	8.8	9.2	9.1
Hennepin	270530961	9.3	8.9	9.2	9.0
Washington	271630446	-	-	9.5 ¹	8.9 ¹
Stearns	271453052	8.8	8.4	8.5	8.4
Saint Louis	271377551	7.6	7.4	7.6	7.6
Mille Lacs	270953051	6.5	6.4	6.7	6.6 ¹
Saint Louis	271377550	6.2	6.1	6.3	6.3
Saint Louis	271377001	6.1	6.1	6.2	6.0
Cass	270210001	5.6	5.8	5.7	5.5 ¹

¹ Incomplete Data Capture

LEGEND

	Exceeds 1997/2006 Standard	> 15.0 µg/m ³
	> 90% of 2006 Standard	13.5 - 15.0 µg/m ³
	> 80% of 2006 Standard	12.0 - 13.4 µg/m ³
	> 70% of 2006 Standard	10.5 - 11.9 µg/m ³
	< 70% of 2006 Standard	< 10.5 µg/m ³

OHIO

COUNTY	SITE ID	2003 - 2005	2004 - 2006	2005 - 2007	2006 - 2008
Hamilton	390610014	17.5	17.1	17.3	15.7
Hamilton	390618001	17.9	17.4	17.3	15.5
Cuyahoga	390350038	18.1	17.2	16.8	15.1
Hamilton	390610042	17.3	16.7	16.6	15.1
Cuyahoga	390350060	17.7	16.9	16.8	14.9
Jefferson	390811001	17.2	16.3	16.1	14.8
Stark	391510017	16.7	16.0	16.1	14.8 ¹
Jefferson	390810017	15.8 ¹	15.4	15.5	14.8 ¹
Cuyahoga	390350065	16.4	15.6	15.8	14.5
Butler	390170003	16.2 ¹	15.7 ¹	16.2 ¹	14.4
Hamilton	390617001	16.6	16.0	15.9	14.4
Cuyahoga	390350045	17.0	16.2	16.2	14.3
Butler	390170016	16.1	15.5	15.6	14.2
Montgome	391130032	15.9	15.2	15.5	14.2
Hamilton	390610043	15.8	15.4	15.4	14.2
Summit	391530017	15.6	15.0	14.9	14.0
Hamilton	390610040	15.9	15.2	15.4	13.8
Franklin	390490024	16.0	15.0	14.9	13.7
Franklin	390490025	15.5	14.9	14.9	13.6
Mahoning	390990014	15.5	15.0	14.8	13.6
Cuyahoga	390350027	16.1	15.3	14.9	13.5
Hamilton	390610006	16.6 ¹	14.9 ¹	14.8	13.5
Scioto	391450013	14.6	14.5	14.8	13.5
Clark	390230005	14.7	14.4	14.8	13.5
Mahoning	390990005	15.0	14.5	14.5	13.5
Trumbull	391550007	14.7	14.4	14.5	13.3
Lawrence	390870012	-	-	-	13.1 ¹
Lucas	390950024	14.7	14.1	14.4	13.1
Lucas	390950026	14.3	13.8	14.2	13.1
Summit	391530023	14.6	14.1	14.1	13.1
Warren	391650007	-	-	14.0 ¹	13.0 ¹
Stark	391510020	15.2	14.2 ¹	14.3 ¹	12.9 ¹
Clermont	390250022	15.7 ¹	14.2 ¹	14.2	12.8
Preble	391351001	13.9 ¹	13.5	13.9	12.7
Lucas	390950025	14.4	13.6	13.9	12.6 ¹
Portage	391330002	13.4	13.2	13.6	12.6
Cuyahoga	390351002	14.6	13.9	13.9	12.3
Greene	390570005	12.4 ¹	13.2	13.6	12.3
Franklin	390490081	14.3	13.7 ¹	13.5 ¹	12.3 ¹
Lake	390853002	-	11.5 ¹	12.7 ¹	12.3
Medina	391030003	15.2 ¹	13.6 ¹	13.3 ¹	12.1
Lucas	390950028	-	-	-	12.0 ¹
Cuyahoga	390350034	14.1	13.4	13.8	12.0
Lorain	390933002	12.8	12.6	13.0	11.9
Athens	390090003	12.3	12.2	12.7	11.8

¹ Incomplete Data Capture

LEGEND

	Exceeds 1997/2006 Standard	> 15.0 µg/m ³
	> 90% of 2006 Standard	13.5 - 15.0 µg/m ³
	> 80% of 2006 Standard	12.0 - 13.4 µg/m ³
	> 70% of 2006 Standard	10.5 - 11.9 µg/m ³
	< 70% of 2006 Standard	< 10.5 µg/m ³

WISCONSIN

COUNTY	SITE ID	2003 - 2005	2004 - 2006	2005 - 2007	2006 - 2008
Milwaukee	550790059	12.9	13.3	14.9	14.5
Milwaukee	550790099	12.8	13.4	14.4	14.0
Milwaukee	550790043	13.2 ¹	13.5	14.6	13.9
Waukesha	551330027	13.5	13.9	14.3	13.9
Milwaukee	550790026	12.1	12.7	13.8	13.5
Milwaukee	550790010	13.0	13.0	13.9	13.4
Kenosha	550590019	11.3	11.8	12.9	12.7
Dane	550250047	12.0	12.0	12.7	12.6
Grant	550430009	11.5	11.6	12.2	12.3
La Crosse	550630012	19.9 ¹	16.1 ¹	14.8 ¹	12.1
Ozaukee	550890009	11.0 ¹	11.0	12.2	11.9
Brown	550090005	11.0	11.4	11.9	11.9
Outagamie	550870009	10.5	10.9	11.5	11.4
Dodge	550270007	10.8	11.0	11.3	11.1
Manitowoc	550710007	9.7	10.0	10.9	10.7
Sauk	551110007	9.5 ¹	9.9	10.6	10.5
St. Croix	551091002	9.6 ¹	9.3 ¹	10.1	10.3
Taylor	551198001	7.9 ¹	8.0	8.4	9.0
Forest	550410007	6.6 ¹	7.0 ¹	7.4	7.1
Vilas	551250001	6.9	6.6	6.8	6.9
Ashland	550030010	6.0	6.0	6.2	6.3

¹ Incomplete Data Capture

LEGEND

	Exceeds 1997/2006 Standard	> 15.0 µg/m ³
	> 90% of 2006 Standard	13.5 - 15.0 µg/m ³
	> 80% of 2006 Standard	12.0 - 13.4 µg/m ³
	> 70% of 2006 Standard	10.5 - 11.9 µg/m ³
	< 70% of 2006 Standard	< 10.5 µg/m ³

Site ID	Latitude	Longitude	2009 Critical Value
180970043	39.74496	-86.1665	12.78
390610014	39.19417	-84.47889	13.48
180190006	38.27768	-85.74015	14.28
171191007	38.70453	-90.13967	14.58
390618001	39.18028	-84.49194	14.68
390810017	40.3661	-80.615	14.68
390350065	41.44639	-81.66194	14.78
180970066	39.76044	-86.10885	14.88
390350038	41.47694	-81.68194	14.88
390610042	39.105	-84.55111	14.88
261630033	42.30667	-83.14875	14.98
180970081	39.7889	-86.21463	15.28
391510017	40.78667	-81.39444	15.38
180890026	41.57324	-87.40591	15.48
390350060	41.49396	-81.67854	15.48
390811001	40.32194	-80.60639	15.48
550790059	42.955	-87.93417	15.58
171190024	38.70063	-90.14476	15.78
390170003	39.49361	-84.35389	15.98
180970083	39.77494	-86.12205	16.08
390350045	41.47167	-81.65722	16.18
170313103	41.96519	-87.87626	16.28
180970078	39.8111	-86.11447	16.38
390617001	39.16	-84.45778	16.38
391130032	39.76028	-84.18778	16.38
390170016	39.33833	-84.56639	16.48
391530017	41.06333	-81.46861	16.58
170311016	41.80117	-87.83194	16.68
170310022	41.68717	-87.53932	16.98
170316005	41.86443	-87.7489	17.08
171630010	38.61203	-90.16048	17.08
390610043	39.29028	-84.41444	17.08
550790099	43.03972	-87.92056	17.28
551330027	43.02028	-88.215	17.38
170310052	41.96548	-87.74993	17.48
390610040	39.12861	-84.50417	17.48
550790043	43.02641	-87.91111	17.48
180890022	41.60667	-87.30472	17.68
390350027	41.4775	-81.70306	17.68
550790010	43.01667	-87.93333	17.68
171192009	38.90309	-90.14317	17.78
180370005	38.40478	-86.92832	17.78
180431004	38.30806	-85.83417	17.78
390490024	39.99833	-82.99306	17.78
390990005	41.11111	-80.64528	17.78
261630015	42.30279	-83.10653	17.88
390230005	39.92889	-83.80972	17.88
170310057	41.91286	-87.72272	17.98
180372001	38.39144	-86.92916	17.98
390990014	41.09587	-80.65843	17.98

Site ID	Latitude	Longitude	2009 Critical Value
390490025	39.92806	-82.98111	18.08
390610006	39.2785	-84.36597	18.08
550790026	43.06111	-87.9125	18.08
391550007	41.21417	-80.7875	18.18
181630012	38.02167	-87.56944	18.28
170312001	41.66211	-87.69647	18.38
170313301	41.78277	-87.80538	18.38
180890031	41.59851	-87.34299	18.38
391510020	40.80056	-81.37333	18.38
180370004	38.36944	-86.95903	18.48
181630016	37.97444	-87.53229	18.48
390950024	41.64417	-83.54667	18.48
390950026	41.62056	-83.64139	18.58
391530023	41.08806	-81.54167	18.58
181630006	37.97173	-87.56724	18.68
181670018	39.48611	-87.40139	18.68
171193007	38.86067	-90.10585	18.78
180890006	41.63613	-87.44084	18.78
171971002	41.52689	-88.11647	18.88
170310076	41.7514	-87.71349	18.98
180892010	41.67835	-87.50835	19.08
181470009	38.16752	-86.98321	19.08
391450013	38.75417	-82.9175	19.08
171150013	39.86683	-88.92559	19.18
261630039	42.32334	-83.06847	19.18
170310050	41.70757	-87.56857	19.28
171634001	38.52963	-89.99285	19.28
391650007	39.4278	-84.20221	19.28
550590019	42.50472	-87.8093	19.28
170650002	38.08216	-88.62494	19.38
261630016	42.35781	-83.09603	19.38
261630038	42.33501	-83.10956	19.38
390870010	38.51972	-82.66556	19.38
390950025	41.66194	-83.47944	19.38
391330002	41.16417	-81.235	19.38
550250047	43.07333	-89.43583	19.38
180950009	40.11198	-85.67995	19.48
181670023	39.45624	-87.37055	19.48
390250022	39.08232	-84.14419	19.48
391351001	39.83556	-84.72083	19.58
180892004	41.5855	-87.47449	19.68
180830004	38.74088	-87.48473	19.78
390351002	41.39556	-81.81806	19.78
390853002	41.7225	-81.24194	19.78
550430009	42.69215	-90.68637	19.88
170434002	41.77107	-88.15253	20.08
180670003	40.48548	-86.13288	20.08
180030004	41.09472	-85.10194	20.18
180350006	40.20114	-85.388	20.28

Site ID	Latitude	Longitude	2009 Critical Value
180890027	41.54659	-87.42648	20.28
390570005	39.80806	-83.88694	20.28
170890007	41.78472	-88.32937	20.38
181570008	40.43164	-86.8525	20.38
181270024	41.6175	-87.19917	20.48
171570001	38.17628	-89.78846	20.58
261630001	42.22862	-83.2082	20.58
180650003	40.01167	-85.52361	20.68
261150005	41.76389	-83.47194	20.68
390350034	41.555	-81.575	20.68
391030003	41.10278	-81.91167	20.68
181410015	41.69669	-86.21468	20.88
261630019	42.43084	-83.00014	20.88
261630036	42.18729	-83.15391	20.88
390933002	41.46306	-82.11444	20.88
181410014	41.66346	-86.20783	20.98
261250001	42.46306	-83.1832	20.98
550890009	43.49806	-87.81	20.98
170191001	40.05224	-88.37255	21.08
171430037	40.69701	-89.58474	21.08
390490081	40.08778	-82.95972	21.08
170314007	42.06028	-87.86323	21.18
170890003	42.0504	-88.28001	21.18
171670012	39.83192	-89.64416	21.18
260810007	42.95612	-85.67912	21.18
261610008	42.24057	-83.5996	21.18
550630012	43.778	-91.225	21.28
261630025	42.42306	-83.42626	21.38
260770008	42.27807	-85.54189	21.48
390090003	39.4425	-81.90861	21.58
180910011	41.70721	-86.89122	21.68
261470005	42.95334	-82.45623	21.68
170831001	39.11054	-90.32408	21.78
170314201	42.14	-87.79923	21.88
170190004	40.1238	-88.22953	21.98
171613002	41.51473	-90.51735	21.98
172010013	42.26308	-89.09277	21.98
550090005	44.51667	-87.99389	21.98
171132003	40.51874	-88.9969	22.18
260810020	42.98417	-85.67134	22.28
260990009	42.73139	-82.79346	22.58
170990007	41.29301	-89.04942	22.68
261390005	42.89445	-85.85273	22.68
171971011	41.22154	-88.19097	22.78
271230866	44.89926	-93.01708	22.78
550870009	44.30694	-88.39556	22.78
550270007	43.435	-88.52778	22.98
271230868	44.95072	-93.09827	23.28
550710007	44.13861	-87.61611	23.38

Site ID	Latitude	Longitude	2009 Critical Value
171110001	42.22144	-88.24221	23.48
260050003	42.76779	-86.14858	23.78
551110007	43.43556	-89.68028	23.78
260210014	42.19779	-86.30969	23.88
260650012	42.73862	-84.53463	23.88
551091002	45.12444	-92.6625	23.88
170971007	42.46757	-87.81005	23.98
170010007	39.91541	-91.33587	24.18
260490021	43.04722	-83.67016	24.28
271230871	44.95939	-93.03587	24.38
270531007	45.03972	-93.29874	24.68
271095008	43.99691	-92.45037	24.78
270532006	44.94805	-93.34315	24.98
261210040	43.23306	-86.23858	25.08
270530963	44.95366	-93.25821	25.08
260170014	43.57139	-83.89072	26.08
270370470	44.73846	-93.23725	26.08
271390505	44.79144	-93.51253	26.28
270530961	44.87551	-93.25892	26.58
271630445	45.01876	-92.78027	26.68
551198001	45.20389	-90.6	26.78
271630446	45.02798	-92.77415	27.38
271453052	45.54984	-94.13345	27.98
261010922	44.307	-86.24265	29.08
271377551	46.76643	-92.13354	29.98
261130001	44.31056	-84.89187	30.78
550410007	45.56498	-88.80859	31.38
551250001	46.04806	-89.65361	31.68
270953051	46.2053	-93.75945	31.88
271377550	46.81826	-92.08936	32.58
550030010	46.61455	-90.69868	32.98
271377001	47.52336	-92.53631	33.68
270210001	47.15994	-94.15099	34.98