



# Minnesota Pollution Control Agency

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May 23, 2011

Ms. Susan Hedman  
Regional Administrator  
U.S. Environmental Protection Agency  
Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

RE: State of Minnesota Designation Recommendation for Primary National Ambient Air Quality Standard for Sulfur Dioxide

Dear Ms. Hedman:

Pursuant to Section 107(d) of the Clean Air Act, and following the revision of the sulfur dioxide (SO<sub>2</sub>) National Ambient Air Quality Standard (NAAQS) on June 3, 2010, (75 FR 35520), the Minnesota Pollution Control Agency (MPCA) hereby submits the following designation recommendation for the new one-hour NAAQS for SO<sub>2</sub>.

This recommendation does not include areas in the state that are under tribal jurisdiction. Those tribal governments which have met eligibility determination and have submitted a Tribal Implementation Plan to the U.S. Environmental Protection Agency (EPA) may submit designation requests to EPA under the Tribal Authority Rule of 1998 (63 FR 7254).

This designation recommendation is based on a combination of air monitoring data collected from 2008 through 2010 and emission inventory information.

### **Monitoring Data**

Minnesota currently has seven monitoring sites, in four locations for SO<sub>2</sub>. Locations are shown in the enclosed map. Quality assured SO<sub>2</sub> monitoring data for Minnesota has been submitted to the Air Quality System through 2010. The design values for all of these monitors clearly demonstrate attainment with the new one-hour standard.

**Monitored SO<sub>2</sub> Design Values**

Monitor Name	Monitor County	2008-2010 SO <sub>2</sub> Design Value
FHR 420	Dakota	20
FHR 423	Dakota	11
FHR 442	Dakota	3
FHR 443	Dakota	2
Minneapolis (954)	Hennepin	35
Duluth* (2010 data only)	St. Louis	9
Saint Paul Park	Washington	16

The MPCA believes that this data could be used to support an attainment designation, particularly in Dakota County. Although four of the monitors are sited very close to Flint Hills Resources, a major source with average SO<sub>2</sub> emissions over 1000 tons per year (tpy), they showed concentrations that are about one quarter of the standard.

However, on March 24, 2011, EPA issued a memorandum on *Area Designations for the 2010 Revised Primary Sulfur Dioxide National Ambient Air Quality Standards*. This guidance indicates that an area that has no monitored violations and lacks an appropriate modeling analysis or other supporting information will be designated as unclassifiable. Therefore, the MPCA is not making any designation recommendations based solely on the monitoring data.

#### **Emissions Inventory Information**

The above-mentioned designation guidance, along with discussion in the preamble of the Final Rule concerning the Primary National Ambient Air Quality Standard for Sulfur Dioxide (75 FR 35520), indicate a focus on sources with allowable emissions greater than 100 tpy as those that could cause or contribute to a violation of the new NAAQS.

Based on this guidance, and taking into account the fact that there are no monitored violations in Minnesota, the MPCA recommends an attainment designation for all counties in Minnesota that contain only sources with a potential to emit less than 100 tpy.

These counties include:

<b>Recommendation: Attainment; Counties with No Sources of SO<sub>2</sub> PTE &gt; 100 tpy</b>			
Aitkin	Anoka	Becker	Beltrami
Big Stone	Cass	Chippewa	Chisago
Clearwater	Cottonwood	Dodge	Douglas
Fillmore	Freeborn	Grant	Houston
Isanti	Jackson	Kanabec	Kittson
Lake of the Woods	Le Sueur	Lincoln	Mahnomen
Marshall	Meeker	Mille Lacs	Morrison
Murray	Nicollet	Norman	Pennington
Pine	Pipestone	Pope	Red Lake
Redwood	Rice	Rock	Roseau
Sibley	Steele	Stevens	Todd
Traverse	Wabasha	Wadena	Waseca
Watonwan	Wilkin	Wright	Yellow Medicine

Promulgating an attainment designation for all counties without a large SO<sub>2</sub> source (PTE > 100 tpy) and an unclassifiable designation for counties with such a source and no monitored attainment will allow the MPCA to focus resources in developing a maintenance state implementation plan (air quality control) on

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the counties where the evidence shows there is most likely to be sources that could cause or contribute to an exceedance of the standard. This represents the MPCA's preferred set of designations for Minnesota.

As Commissioner of the Minnesota Pollution Control Agency, I am duly authorized by the Governor of the State of Minnesota to submit this letter on his behalf. If you have questions or comments on this submission, please contact Catherine Neuschler of my staff at 651-757-2607.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul W. Aasen", with a long horizontal flourish extending to the right.

Paul W. Aasen  
Commissioner

PA/CN:jab

Enclosure

## Technical Support

### Monitored Values

More information on SO<sub>2</sub> monitoring in Minnesota can be found in the MPCA's Annual Air Monitoring Network Plan.<sup>1</sup>

Figure 1: SO<sub>2</sub> Monitoring Sites in Minnesota

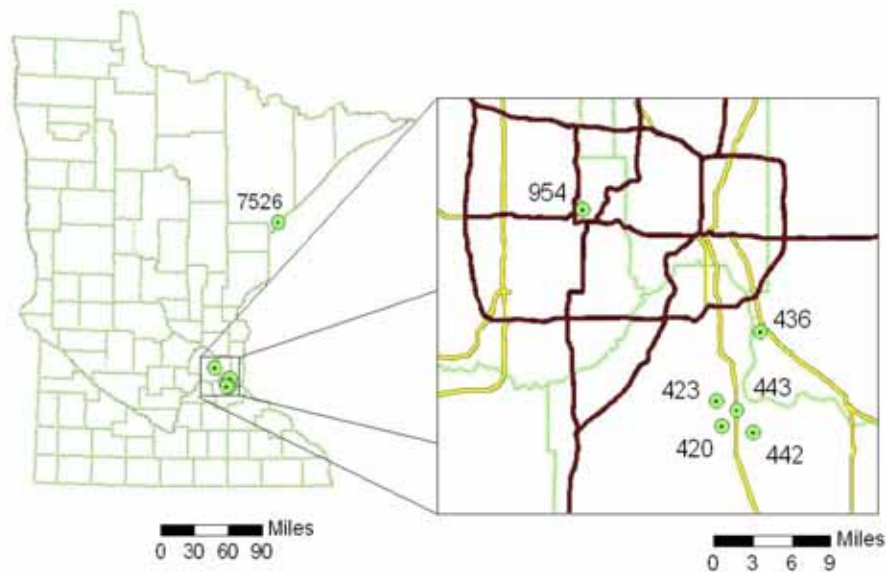
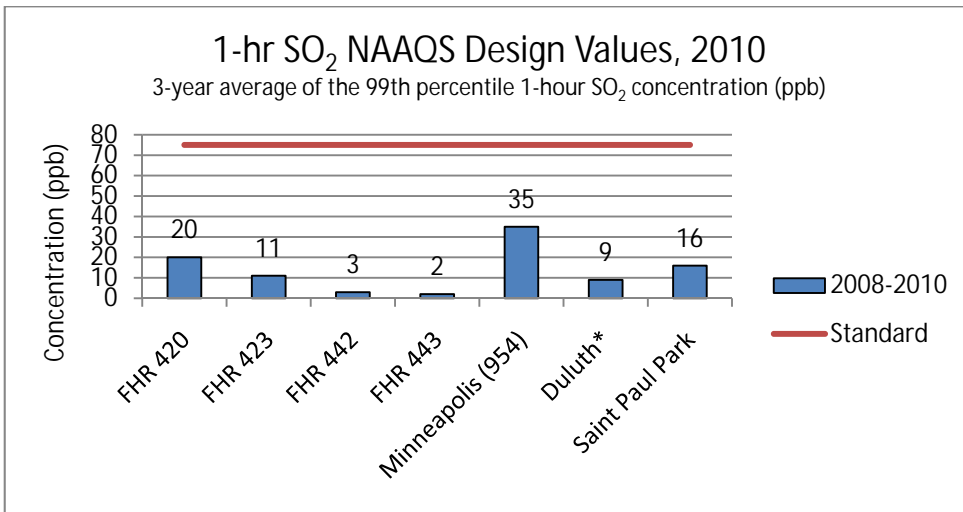


Figure 2: Monitored SO<sub>2</sub> Design Values



<sup>1</sup> Gavin, K., McMahon, C. and Palmer, K. (2011) Annual air monitoring network plan for Minnesota. <http://www.pca.state.mn.us/index.php/view-document.html?gid=13400>

## Emissions Inventory

In determining which counties should be modeled during the implementation phase, the MPCA looked at average actual SO<sub>2</sub> emissions from 2002 – 2009, and selected all facilities with average actual emissions over 10 tpy. Of these sources, all those with a PTE greater than 100 tpy are listed in the table below, sorted by county. The MPCA recommends that all counties without a source greater with a PTE greater than 100 tpy should be given an attainment designation. Any county with a source with a PTE greater than 100 tpy should be given an unclassifiable designation, and the MPCA will conduct modeling of those counties for the maintenance SIP due in June 2013.

Table 1: SO<sub>2</sub> Emission Sources

Facility ID	County	Facility Name	Avg 2002 - 2009 Actual Emissions (tpy)	PTE (tpy)
00900011	Benton	Verso Paper Corp - Sartell Mill	849	2,624
01300007	Blue Earth	CHS Oilseed Processing - Mankato	188	3,090
01300006	Blue Earth	ADM - Mankato	143	1,847
01300015	Blue Earth	Xcel Energy - Key City/Wilmarth	36	519
01500007	Brown	Acme-Ochs Plant	25	240
01700002	Carlton	Sappi Cloquet LLC	261	2,975
01900001	Carver	Bongards' Creameries	44	1,409
02700022	Clay	Busch Agricultural Resources - Moorhead	383	2,805
02700001	Clay	American Crystal Sugar - Moorhead	491	2,293
03100001	Cook	Minnesota Power - Tac Harbor Energy Ctr	4,769	5,873
03500002	Crow Wing	Wausau Paper Mills LLC	462	4,198
03700003	Dakota	Xcel Energy - Black Dog	3,376	17,480
03700015	Dakota	Xcel Energy - Inver Hills	4	12,300
03700011	Dakota	Flint Hills Resources Pine Bend LLC	1,386	3,169
03700016	Dakota	Gopher Resource LLC	1,536	2,414
03700043	Dakota	Seneca Wastewater Treatment Plant	98	589
03700070	Dakota	Sanimax USA Inc	103	240
04300041	Faribault	Corn Plus	53	125
04900007	Goodhue	USG Interiors Inc - Red Wing	1,109	1,709
04900001	Goodhue	ADM - Red Wing	100	807
04900005	Goodhue	Xcel Energy - Red Wing Generating Plant	79	110
05300011	Hennepin	NRG Energy Center Minneapolis LLC	347	646
05301050	Hennepin	University of MN - Twin Cities	10	277
05300127	Hennepin	Owens Corning Roofing & Asphalt LLC Mpls	72	183
05700006	Hubbard	Lamb Weston/RDO Frozen	41	244
06100004	Itasca	Minnesota Power Inc - Boswell Energy Ctr	19,724	52,240
06100001	Itasca	Blandin Paper/Rapids Energy Center	89	2,606
06100067	Itasca	Essar Steel Minnesota (MSI)	N/A	417
06700005	Kandiyohi	Willmar Municipal Utilities	615	1,936

Facility ID	County	Facility Name	Avg 2002 - 2009 Actual Emissions (tpy)	PTE (tpy)
07100002	Koochiching	Boise White Paper LLC - Intl Falls	74	446
07300016	Lac Qui Parle	Associated Milk Producers Inc - Dawson	44	554
07500003	Lake	Northshore Mining - Silver Bay	2,499	9,095
08300038	Lyon	ADM Corn Processing - Marshall	515	1,024
09100007	Martin	Interstate Power & Light - Fox Lake	186	2,427
08500049	McLeod	3M - Hutchinson Tape Manufacturing Plant	190	1,124
09900001	Mower	Austin Utilities - NE Power Station	1,562	4,840
09900002	Mower	Hormel Foods Corp/QPP - Austin	142	236
10500001	Nobles	Swift Pork Co - Worthington	29	240
10900011	Olmsted	Rochester Public Utilities - Silver Lake	2,241	6,221
10900084	Olmsted	Mayo Medical Center Rochester	77	3,868
10900010	Olmsted	Associated Milk Producers Inc - Rochester	61	241
10900005	Olmsted	Olmsted Waste-to-Energy Facility	20	101
11100002	Otter Tail	Otter Tail Power Co - Hoot Lake Plant	2,987	19,360
11900002	Polk	American Crystal Sugar - E Grand Forks	747	3,589
11900001	Polk	American Crystal Sugar - Crookston	486	1,809
12300410	Ramsey	Waldorf Corp - A Rock-Tenn Co	149	8,914
12300694	Ramsey	3M - Administrative Offices - Maplewood	453	4,336
12300063	Ramsey	District Energy St Paul Inc-Hans O'Nyman	345	2,863
12300055	Ramsey	Gerdau Ameristeel US Inc - St Paul Mill	35	707
12900014	Renville	Southern Minnesota Beet Sugar Coop	1,039	3,716
13900005	Scott	Anchor Glass Container Corp - Shakopee	380	540
13900013	Scott	CertainTeed Corp	32	152
13900003	Scott	Rahr Malting Co - Shakopee	101	127
14100004	Sherburne	Xcel Energy - Sherburne Generating Plant	24,860	79,545
14100003	Sherburne	Great River Energy - Energy Recovery Project	40	148
13700015	St Louis	Minnesota Power Inc - Hibbard	297	7,464
13700005	St Louis	US Steel Corp - Minntac	1,771	5,790
13700027	St Louis	Hibbing Public Utilities Commission	520	4,733
13700113	St Louis	United Taconite LLC - Fairlane Plant	2,894	3,914
13700028	St Louis	Virginia Dept of Public Utilities	471	2,997
13700013	St Louis	Minnesota Power - Laskin Energy Center	1,539	2,865
13700061	St Louis	Hibbing Taconite Co	440	1,628
13700031	St Louis	Georgia-Pacific - Duluth Hardboard	230	1,546
13700063	St Louis	US Steel Corp - Keetac	642	1,480
13700022	St Louis	Duluth Steam Cooperative Association	345	1,000
13700318	St Louis	Mesabi Nugget, Phase I	N/A	421
13700032	St Louis	Northshore Mining Co - Babbitt	34	402
13700062	St Louis	ArcelorMittal Minorca Mine Inc	128	333

<b>Facility ID</b>	<b>County</b>	<b>Facility Name</b>	<b>Avg 2002 - 2009 Actual Emissions (tpy)</b>	<b>PTE (tpy)</b>
14500003	Stearns	Melrose Dairy Proteins LLC	41	317
14500026	Stearns	St Cloud State University	57	248
14500032	Stearns	Associated Milk Producers - Paynesville	31	239
14500008	Stearns	Order of St Benedict/St John's Abbey	91	225
15100038	Swift	Fibrominn Biomass Power Plant	56	590
16300005	Washington	Xcel Energy - Allen S King Generating	15,192	3,027
16300003	Washington	Saint Paul Park Refining Co LLC (Marathon)	495	2,770
16900013	Winona	Malteurop North America Inc - Winona	27	240

### Map of Recommendation

Figure 3: Minnesota County Map; Proposed Unclassifiable Areas Shaded

