

Minnesota Air Quality Index (AQI) 2006 Summary

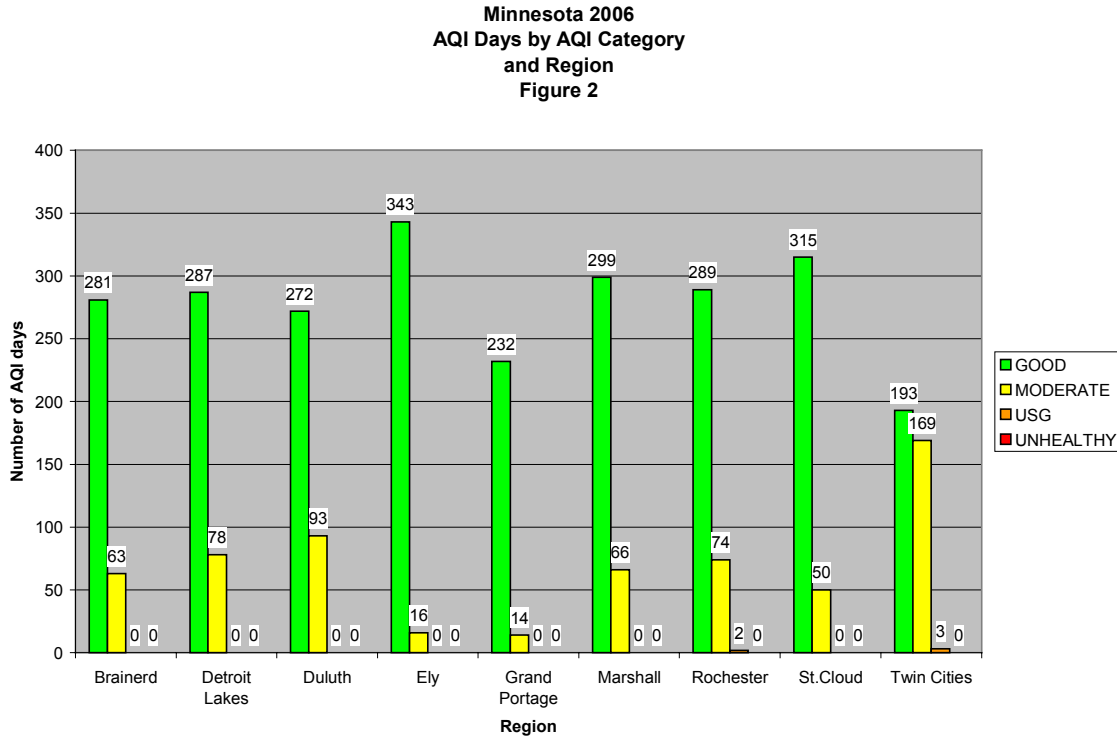
AQI Monitoring Network

Figure 1 shows the network of air monitors the MPCA uses to collect data for the Air Quality Index (AQI). The number and type of monitors vary from region to region, with the most monitors in the Twin Cities Metro area. The 2006 monitoring network is similar to the network used in 2005. The Grand Portage region of Minnesota was added to the network this year with a new site in Grand Portage, MN. The pollutant monitored at this location is Fine Particulate Matter (PM_{2.5}). Grand Portage was operational for 246 days.

Minnesota Pollution Control Agency Air Quality Index (AQI) 2006 Operational Network Figure 1							
REGION	SITES	MONITORS				Total	
		O3	PM2.5	CO	SO2		
Brainerd	2	2	1			3	
Detroit Lakes	1	1	1			2	
Duluth	4	2	1	1		4	
Ely	1	1	1			2	
Grand Portage	1		1			1	O3 Ozone
Marshall	1	1	1			2	PM2.5 Particulate Matter
St. Cloud	2	1	1	1		3	CO Carbon Monoxide
Rochester	1	1	1			2	SO2 Sulfur Dioxide
Twin Cities	12	6	5	3	2	16	
TOTALS							
9	25	15	13	5	2	35	

2006 AQI Days by AQI Category and Region

Figure 2 summarizes the number of days in each of four health categories (Good, Moderate, Unhealthy for Sensitive Groups, and Unhealthy) in each of the nine current reporting regions (Brainerd, Detroit Lakes, Duluth, Ely, Grand Portage, Marshall, Rochester, St. Cloud, and the Twin Cities). Each day's AQI is calculated by using the highest hourly AQI value that day for all sites and measured pollutants in a particular region. Some regions do not show a total of 365 days because of monitoring problems or non operational days.



The air quality throughout Minnesota in 2006 was better than in 2005 as measured by the number of unhealthy days (days with AQI values greater than 100). The differences were Brainerd (3 to 0), Duluth (4 to 0), Rochester (4 to 2), St. Cloud (3 to 0), and the Twin Cities (8 to 3). The variability of the AQI readings across the 9 regions is described below in terms of a ratio of Good/Moderate days, Annual Average AQI, and Annual Median AQI.

	Good/Moderate Ratio	Average AQI	Median AQI
Ely	21.40	24.26	27
Grand Portage	16.57	17.04	13
Saint Cloud	6.30	32.97	33
Marshall	4.53	37.45	37
Brainerd	4.46	35.21	35
Rochester	3.91	39.26	39
Detroit Lakes	3.68	40.39	39
Duluth	2.92	41.33	40
Twin Cities	1.14	50.30	49

