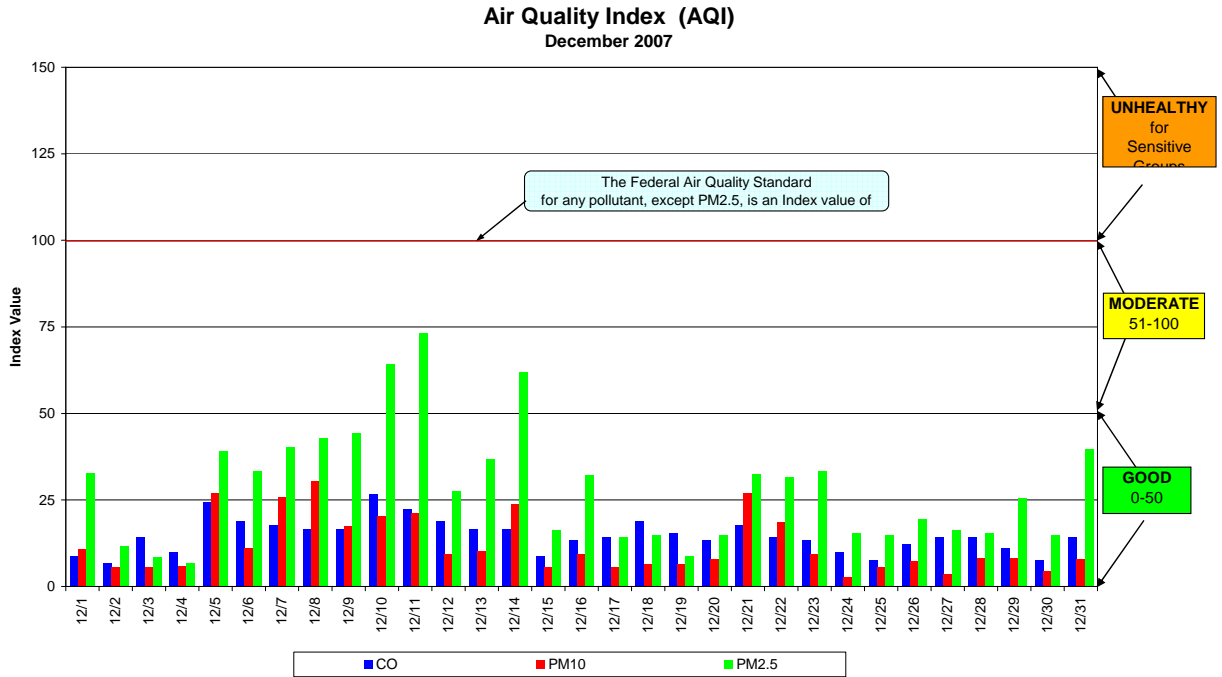


# Air Quality Report December 2007

The chart below shows the daily maximum Air Quality Index (AQI) for December 2007. Carbon Monoxide (CO), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and ozone (O<sub>3</sub>) are the criteria air pollutants defined by the US EPA that are monitored in the Spokane area. Air quality information is updated hourly on the Spokane Regional Clean Air Agency (SRCAA) web page ([http://www.spokanecleanair.org/air\\_quality.asp](http://www.spokanecleanair.org/air_quality.asp)). There were no measured exceedances of federal air quality standards in December. Ozone monitoring ended September 30 and will resume May 1, 2008.



The following tables contain the maximum AQI values for each pollutant for December and for the year to date. A table summarizing the year to date daily AQIs by category follows on the next page.

### Maximum for this reporting period

Pollutant	AQI/Concentration	Location	Date
CO	27/2.4 ppm	3 <sup>rd</sup> & Washington	12/10/07
PM <sub>10</sub>	31/33 µg/m <sup>3</sup>	Freya & Ferry	12/8/07
PM <sub>2.5</sub>	73/27.1 µg/m <sup>3</sup>	Freya & Ferry	12/11/07

### Maximum for the current year

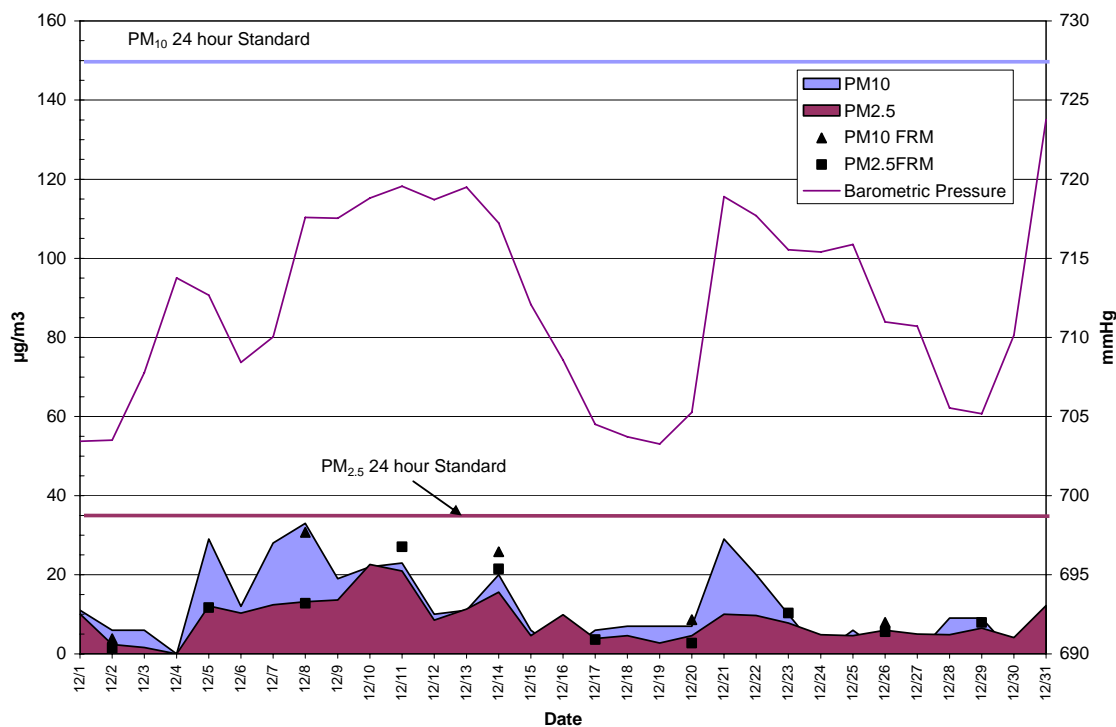
Pollutant	AQI/Concentration	Location	Date
CO	34/3.1 ppm	3 <sup>rd</sup> & Washington	1/19/07
PM <sub>10</sub>	68/89 µg/m <sup>3</sup>	Freya & Ferry	7/13/07
PM <sub>2.5</sub>	79/30 µg/m <sup>3</sup>	Freya & Ferry	1/15/07
O <sub>3</sub>	70/0.073 ppm	Greenbluff	6/1/07

### AQI Summary as of December 31, 2007

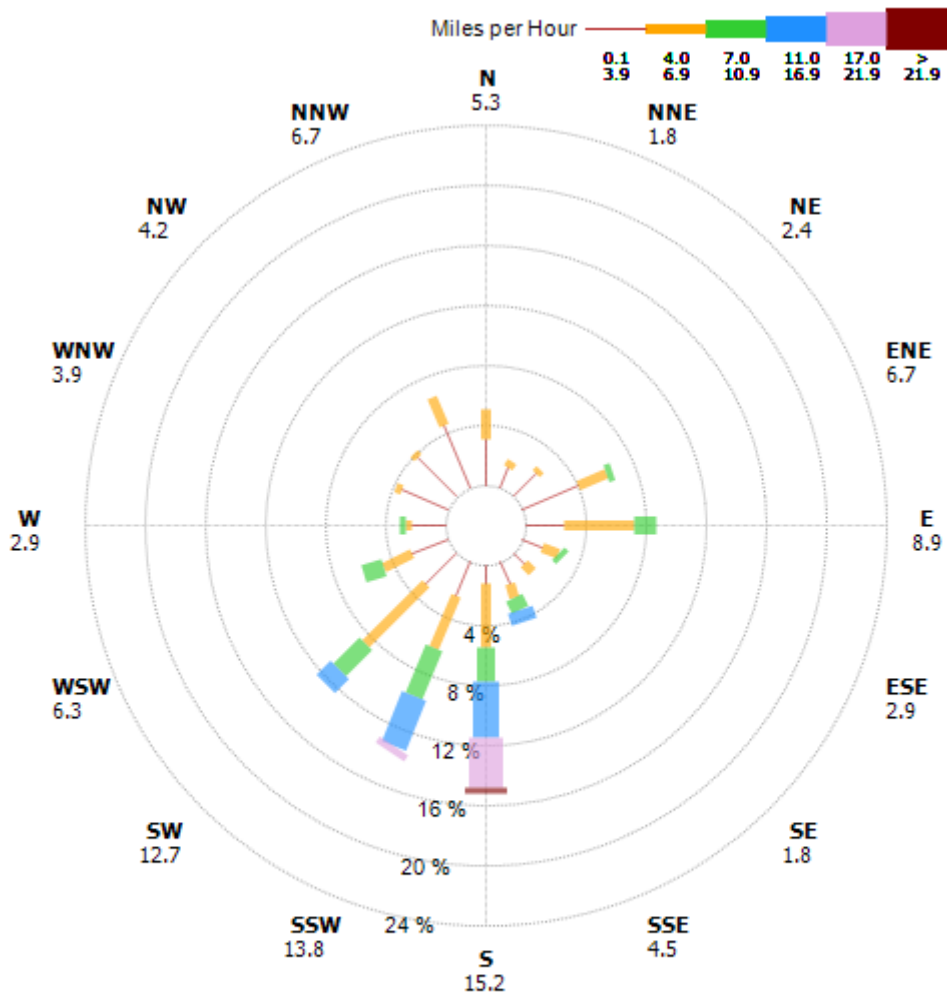
Category	Number of Days This Year	Last Year to Date
Good (0-50)	300	295
Moderate (51-100)	65	70
Unhealthy for Sensitive Groups (101-150)	0	0
Unhealthy (151-200)	0	0
Very Unhealthy (201-300)	0	0
Hazardous (>300)	0	0

The next chart compares the mass concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> measured at the Freya & Ferry monitoring site. The site is located in a commercial/light industrial area on the eastern side of the City of Spokane. The data shown in solid colors were obtained using Tapered Element Oscillating Microbalance (TEOM) continuous analyzers. The TEOM is an automated method and provides “real time” data, which SRCAA uses in its day-to-day programs, e.g., air quality forecasting and burning curtailment. The manually-operated Federal Reference Method (FRM) is the “gold-standard” for measurement of the 24-hour average particulate matter concentration and meets the requirements for demonstrating attainment of federal air quality standards. The accuracy of the TEOM sample data can be verified by comparison with co-located FRM data. The correlation ( $r^2$ ) between the TEOM and FRM data for December was 0.96 for PM<sub>10</sub> and 0.98 for PM<sub>2.5</sub>. Particulate matter concentrations in December appear to have been closely linked to barometric pressure, as the chart shows.

**Freya & Ferry Particulate Matter Data**  
24hr Average Daily Maximum



The wind rose below summarizes hourly average wind speeds (mph) and directions (degrees) measured at the Freya and Ferry Site in December.



**Hour Average Wind Speed**  
 Spokane E Ferry ~ 717 Observations  
 01 Dec 2007 through 31 Dec 2007

The table below summarizes the air quality data for December from all of the analyzers operated in Spokane County. The CO data are 8-hour maximums in parts per million (ppm) and the PM data are 24-hour averages in micrograms per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ).

Date	CO 3rd & Washington (ppm)	PM10 Freya & Ferry TEOM ( $\mu\text{g}/\text{m}^3$ )	PM10 Freya & Ferry FRM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Freya & Ferry TEOM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Freya & Ferry FRM ( $\mu\text{g}/\text{m}^3$ )	PM10 Monroe & College TEOM ( $\mu\text{g}/\text{m}^3$ )	PM10 Monroe & College FRM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Monroe & College TEOM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Monroe & College FRM ( $\mu\text{g}/\text{m}^3$ )	PM10 Turnbull Wildlife Refuge FRM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Turnbull Wildlife Refuge ( $\mu\text{g}/\text{m}^3$ )	PM10 Garland & Market ( $\mu\text{g}/\text{m}^3$ )	PM10 Liberty Lake ( $\mu\text{g}/\text{m}^3$ )	PM10-2.5 Liberty Lake ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Liberty Lake ( $\mu\text{g}/\text{m}^3$ )
12/1/2007	0.8	11		10		12		9.8							
12/2/2007	0.6	6	4	2.4	1.4	5	4	3.6	1.6	2	1	4	5.0	3.7	1.3
12/3/2007	1.3	6		1.6		3		2.6							
12/4/2007	0.9					7		2.1							
12/5/2007	2.2	29		12	11.7	10		4.1							
12/6/2007	1.7	12		10		10		9							
12/7/2007	1.6	28		12				11							
12/8/2007	1.5	33	31	13	12.8	14	15	7.7	7.0	7	4	9	10.5	5.6	4.9
12/9/2007	1.5	19		14		15		12							
12/10/2007	2.4	22		23		14		13							
12/11/2007	2	23		21	27.1	19		18							
12/12/2007	1.7	10		8.5		6		6.9							
12/13/2007	1.5	11		11		8		8.6							
12/14/2007	1.5	20	26	16	21.5		23	14	19.0	6	4	19	19.1	4.2	14.9
12/15/2007	0.8	6		4.6		5		5							
12/16/2007	1.2			9.9		10		8.9							
12/17/2007	1.3	6		3.9	3.6	5		4.4							
12/18/2007	1.7	7		4.6		3		4.3							
12/19/2007	1.4	7		2.7		1		1.1							
12/20/2007	1.2	7	9	4.6	2.7	3	5	3.4	1.7	2		2	6.3	4.6	1.8
12/21/2007	1.6	29		10		12		6.1							
12/22/2007	1.3	20		9.7		14		7.8							
12/23/2007	1.2	10		7.8	10.3	7		7.1							
12/24/2007	0.9			4.8		3		4.1							
12/25/2007	0.7	6		4.6		5		4.6							
12/26/2007	1.1		8	6	5.6	4	6	4.8	3.4	4		3	4.0	1.9	2.1
12/27/2007	1.3			5		4		3.9							
12/28/2007	1.3	9		4.8		4		4							
12/29/2007	1	9		6.5	7.9	6		6.1							
12/30/2007	0.7			4.1		5		4.6							
12/31/2007	1.3			12		9		7.9							