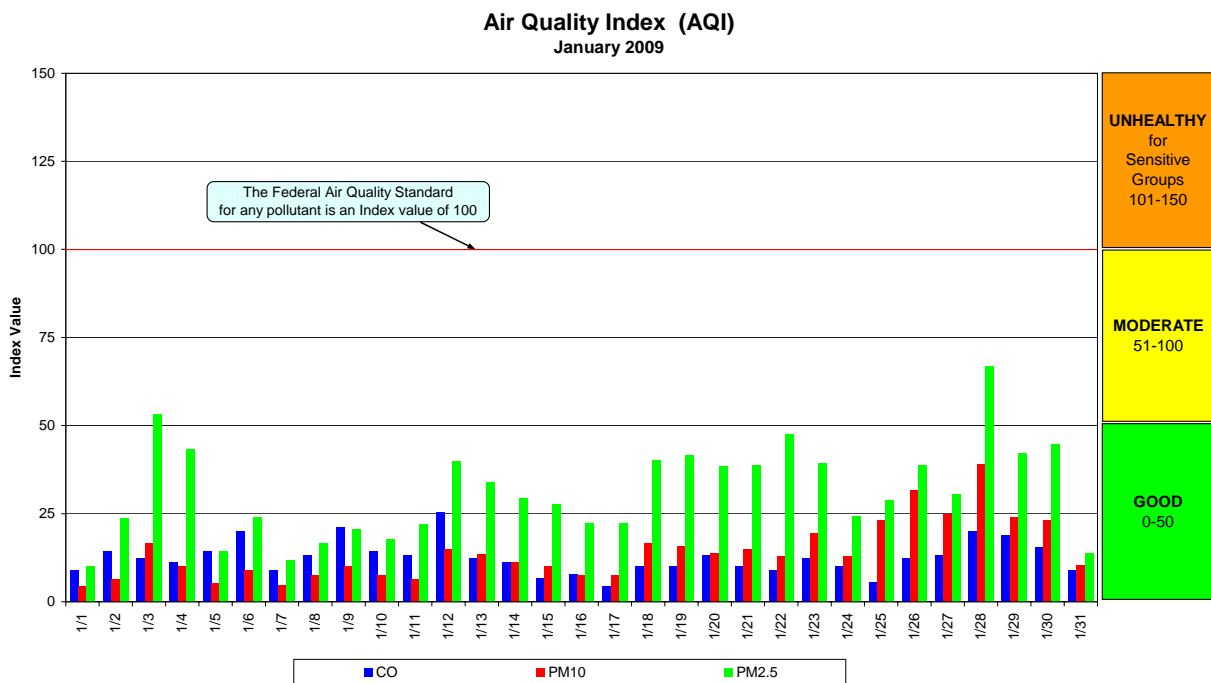


# Spokane Regional Clean Air Agency Air Quality Report January 2009

The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for six common air pollutants, carbon Monoxide (CO), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), ground-level ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>) and lead (Pb). These are known as “criteria” pollutants because EPA established permissible concentrations in ambient air using human health or environmentally based criteria. These pollutants, with the exception of nitrogen dioxide and lead, are monitored in Spokane County. Ozone monitoring ended September 30, 2008 and will resume May 1, 2009. 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)).

The chart below shows the daily maximum Air Quality Index (AQI) for each pollutant for January 2009. An index value above 100 indicates that the concentration of at least one criteria pollutant exceeded the limit established in the NAAQS.



The following table contains the maximum AQI values for each pollutant for the month. A table summarizing the daily AQIs by category follows on the next page.

### Maximum AQI values and pollutant concentrations for this reporting period

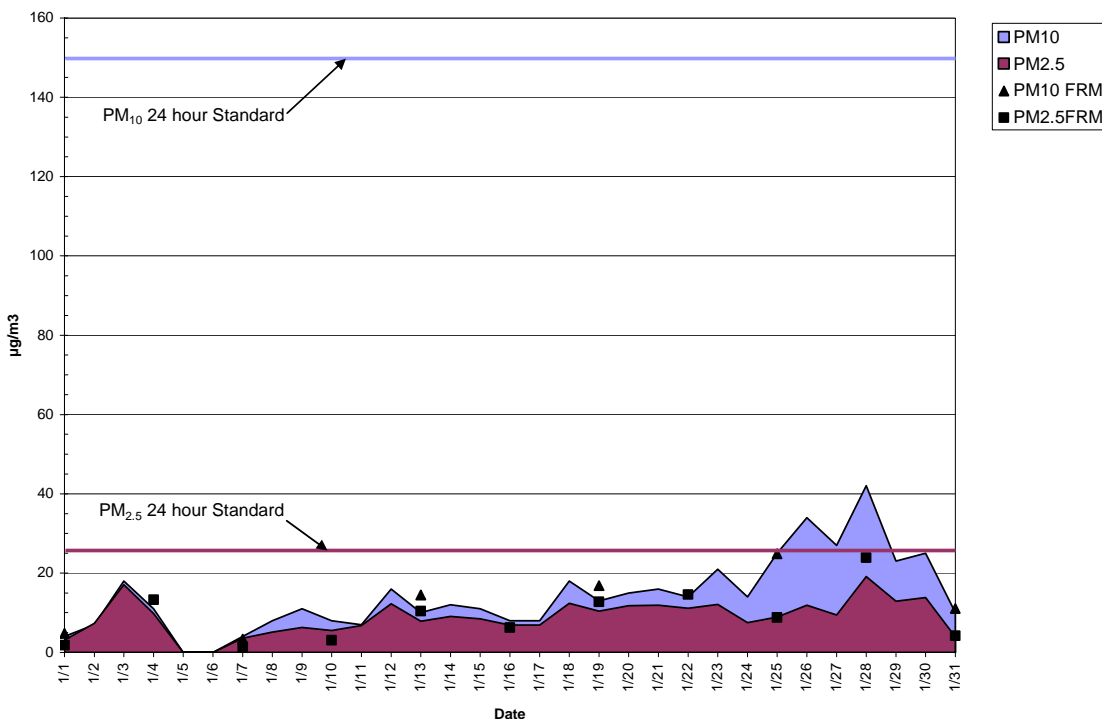
Pollutant	AQI/Concentration	Location	Date
CO	26/2.3 ppm	3 <sup>rd</sup> & Washington	1/12/09
PM <sub>10</sub>	39/42 µg/m <sup>3</sup>	Freya & Ferry	1/28/09
PM <sub>2.5</sub>	67/23.9 µg/m <sup>3</sup>	Freya & Ferry	1/28/09

**AQI Summary as of January 31, 2009**

Category	Number of Days This Year	Last Year to Date
Good (0-50)	29	24
Moderate (51-100)	2	7
Unhealthy for Sensitive Groups (101-150)	0	0
Unhealthy (151-200)	0	0
Very Unhealthy (201-300)	0	0
Hazardous (>300)	0	0

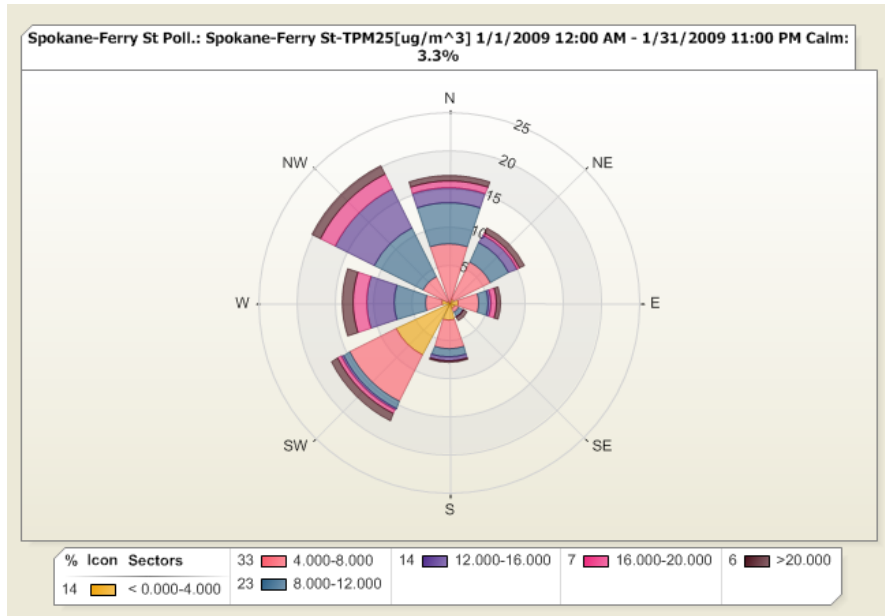
The next chart compares the mass concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> measured at the Freya & Ferry monitoring site. The site is located in a commercial/light industrial area on the eastern side of the City of Spokane. The data shown in solid colors were obtained using Tapered Element 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<sup>2</sup>) between the TEOM and FRM data for January was 0.96 for PM<sub>10</sub> and 0.98 for PM<sub>2.5</sub>. Barometric pressure data were not available for January because we shut down the pressure sensor in the laboratory prior to moving our office.

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

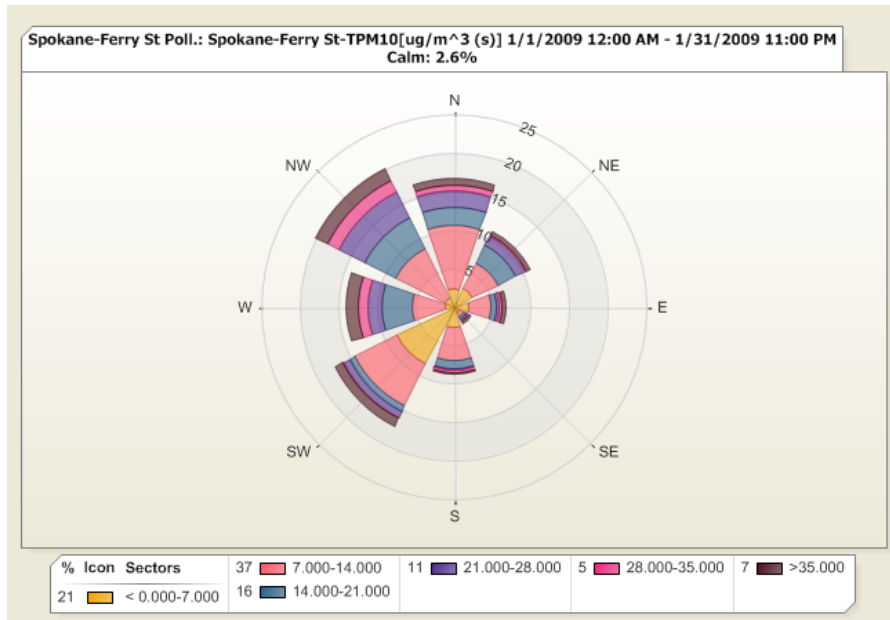


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The pollution rose below summarizes hourly average PM<sub>2.5</sub> concentrations (µg/m<sup>3</sup>) and hourly average wind directions (degrees) measured at the Freya and Ferry Site in January.

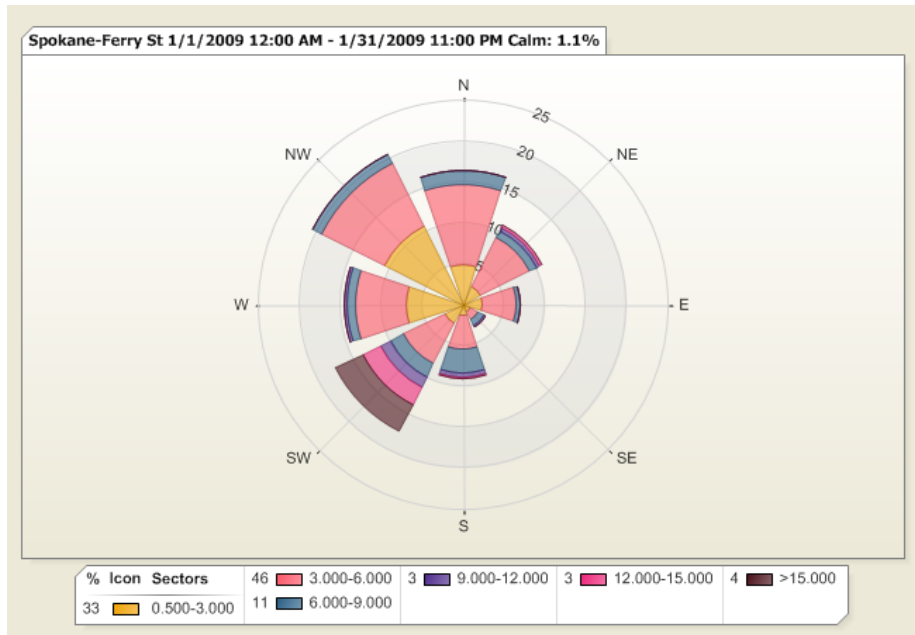


The pollution rose below summarizes hourly average PM<sub>10</sub> concentrations (µg/m<sup>3</sup>) and hourly average wind directions (degrees) measured at the Freya and Ferry Site in January.



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The wind rose below summarizes the percent time during the month the wind blew from a particular direction and in what speed range. The data are hourly averages.



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The table below summarizes the air quality data for January from all of the analyzers operated in Spokane County. The CO and 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 ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Monroe & Wellesley Nephelometer ( $\mu\text{g}/\text{m}^3$ )	PM10 Turnbull Wildlife Refuge FRM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Turnbull Wildlife Refuge ( $\mu\text{g}/\text{m}^3$ )	PM10 Liberty Lake ( $\mu\text{g}/\text{m}^3$ )	PM10-2.5 Liberty Lake ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Liberty Lake ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Deer Park TEOM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Spokane Valley TEOM ( $\mu\text{g}/\text{m}^3$ )	PM2.5 Airway Heights TEOM ( $\mu\text{g}/\text{m}^3$ )
1/1	0.8	4	5	3.1	1.8	2.3	3	2.5	1.7	3.6	2	0.8	1.9	0.4	1.4	6.8	4.5	2.6
1/2	1.3	7		7.3				5.2		7.2						8.9	8.2	4.2
1/3	1.1	18		17.1		9.8		11		10.7						15.8	23.2	11.1
1/4	1	11		9.8	13.3	10.1		9.3		14.6						13.3	14	5
1/5	1.3					5.7		4.4		5.4						5.6	6.2	5.1
1/6	1.8					9.7		7.4		9.6						9.3	8.1	3.6
1/7	0.8	4	3	3.6	1.4	5.2	3	2.8	1.0	1.1	2		2.8	1.6	1.2	1.7	1.9	2.2
1/8	1.2	8		5.1		6.6		3.3		1.2						4.3	3	3.1
1/9	1.9	11		6.3		8.3		4.6		3.5						9.4	5.9	5
1/10	1.3	8		5.5	3.1	7.3		4.6		4						9.8	5.4	4.8
1/11	1.2	7		6.8		6.8		5.4		5.4						4.6	8.5	4.7
1/12	2.3	16		12.3		12.1		9.2		13.7						6.2	12.9	5.3
1/13	1.1	10	15	7.9	10.4	8	12	5.9	8.4	10.4	6	3.1	8.0	3.8	4.2	7.4	7.5	4.1
1/14	1	12		9.1		8.6		6.4		7.8						5.2	8.3	5.1
1/15	0.6	11		8.5		7.4		6.2		6.2						4.9	7.2	4.7
1/16	0.7	8		6.9	6.3	6.8		5.5		5.5						5.6	6	
1/17	0.4	8		6.9		7		5.5		5.9						6.6	8.3	
1/18	0.9	18		12.4		10.8		6.9		9.3						8.7	18.7	
1/19	0.9	13	17	10.4	12.8	8.3	10	6.7	7.5	9	8	5.6	17.0	4.5	12.5	13.6	12.1	
1/20	1.2	15		11.8		13.9		9		12.6						12	11.5	
1/21	0.9	16		11.9		14.3		10.6		13.9						9.2	11.5	8.9
1/22	0.8	14		11.1	14.6	11.9		8.1		11.1						8.3	11.9	7
1/23	1.1	21		12.1		13.7		8.1		10.8						8.9	13.8	7.8
1/24	0.9	14		7.5		12		5.9		6.8						8.3	10.1	6.4
1/25	0.5	25	25	8.9	8.8	18.6	16	6.5	5.8	5.3	6	3.8	7.3	3.9	3.4	7.8	8.2	4.6
1/26	1.1	34		11.9		21.3		8.2		6.3						13.6	16.2	7.6
1/27	1.2	27		9.4		21.1		8		9.1						10.4	7.8	6.5
1/28	1.8	42		19.1	23.9	25.3		10.1		18.2						14.5	19.2	10.5
1/29	1.7	23		12.9		25.8		13		17.8						14.5	14.9	5.5
1/30	1.4	25		13.8						15.6						14.9	14.4	6
1/31	0.8	10	11	3.9	4.2	2.3	7		2.6	4.3	5	2.6	6.3	3.5	2.8	4.5	4	3.6
Maximum	2.3	42	25	19.1	23.9	25.8	16	13	8.4	18.2	8	5.6	17	4.5	12.5	15.8	23.2	11.1
Average	1.1	15.2	12.7	9.4	9.1	11.1	8.5	6.9	4.5	8.6	4.8	3.2	7.2	3.0	4.3	8.9	10.1	5.6