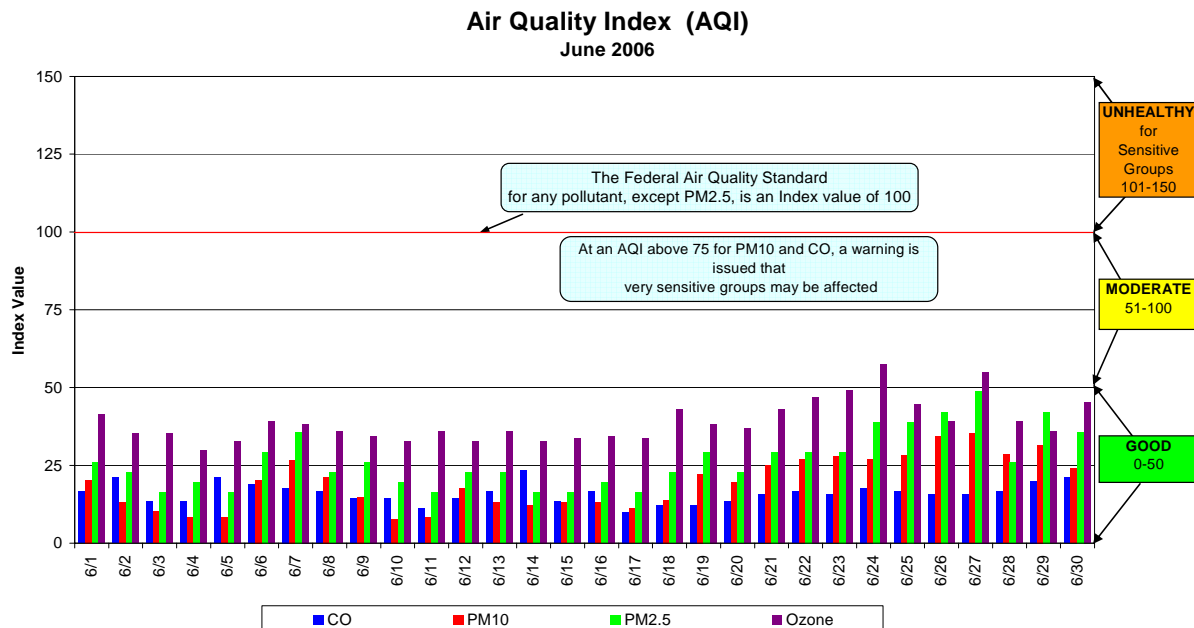


## SCAPCA Air Quality Report June 2006

Below is the maximum Air Quality Index (AQI) for the period June 1 through June 30, 2006. The AQI data are now reported on the day the value occurred. The AQI information is updated hourly on the Department of Ecology and SCAPCA web page ([http://www.scapca.org/air\\_quality.asp](http://www.scapca.org/air_quality.asp)).



### Maximum for this reporting period

Pollutant	AQI/Concentration	Location	Date
CO	23/2.1 ppm	3 <sup>rd</sup> & Washington	06/14/06
PM <sub>10</sub>	35/38 µg/m <sup>3</sup>	Freya & Ferry	06/27/06
PM <sub>2.5</sub>	49/15 µg/m <sup>3</sup>	Monroe & College	06/27/06
O <sub>3</sub>	58/0.068 ppm	Turnbull NWR	06/24/06

### Maximum for the current year

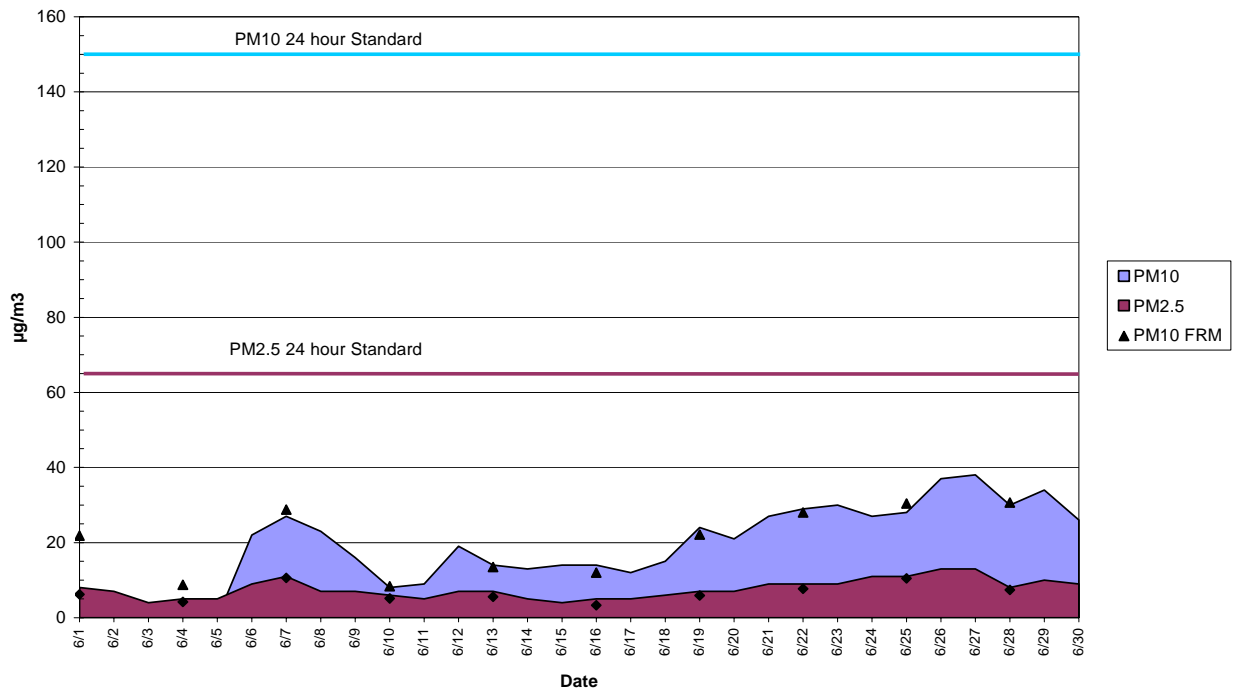
Pollutant	AQI/Concentration	Location	Date
CO	39 / 3.5 ppm	3 <sup>rd</sup> & Washington	02/08/06
PM <sub>10</sub>	67/88 µg/m <sup>3</sup>	Freya & Ferry	02/08/06
PM <sub>2.5</sub>	71/26 µg/m <sup>3</sup>	Freya & Ferry	02/08/06
O <sub>3</sub>	68/0.072 ppm	Greenbluff	05/13/06

### AQI Summary as of June 30, 2006

Category	Number of Days This Year	Last Year to Date
Good (0-50)	163	145
Moderate (51-100)	18	35
Unhealthy for Sensitive Groups (101-150)	0	1
Unhealthy (151-200)	0	0
Very Unhealthy (201-300)	0	0
Hazardous (>300)	0	0

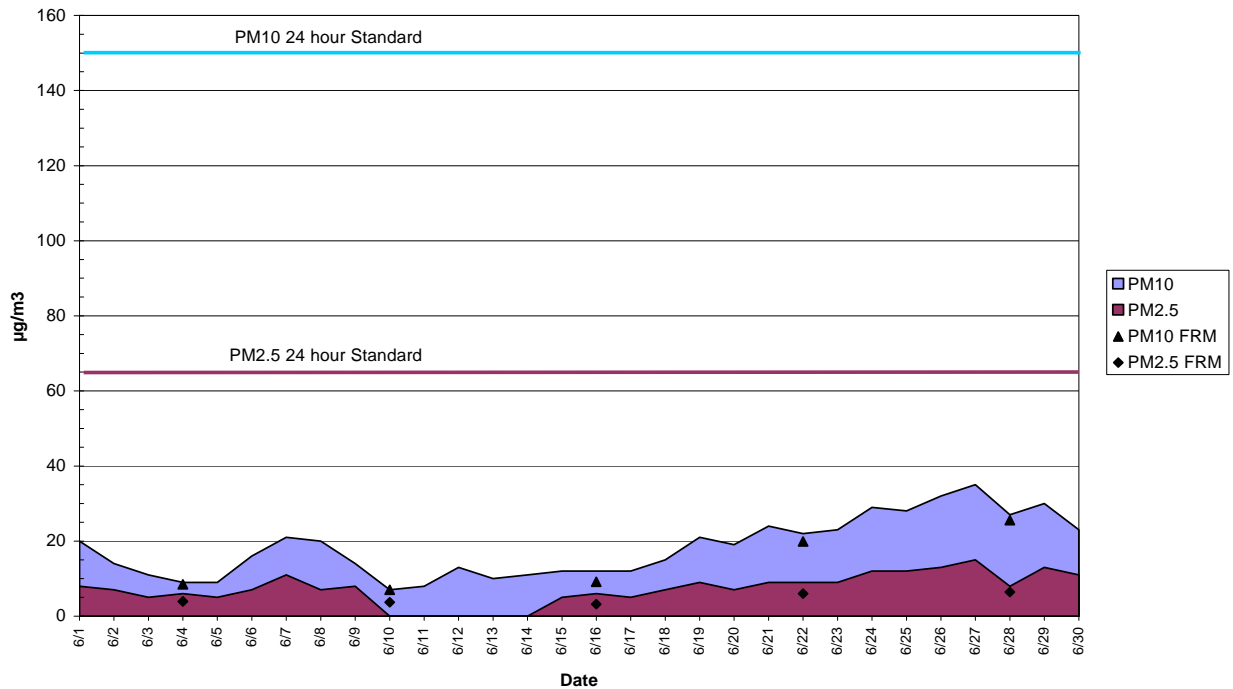
The next chart is a comparison between the concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> measured at the Freya & Ferry monitoring site. The site is located in a commercial, light industrial area on the east edge of the City of Spokane. Data on the chart are shown with the result of continuous monitors in solid colors and the Federal Reference Method (FRM) filter-based samplers as points. The correlation ( $r^2$ ) between the TEOM and FRM data is 0.99 for PM<sub>10</sub> for the month. The correlation between the PM<sub>2.5</sub> TEOM and FRM data is 0.98.

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



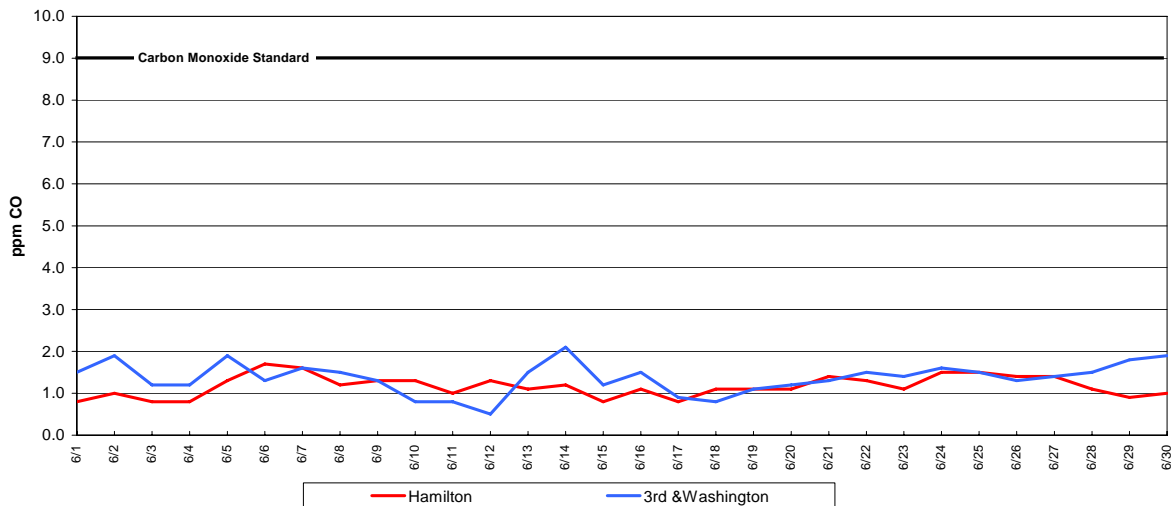
The data below are from the Monroe & College site located on the north side of the river just northwest of downtown. The correlation was 0.99 for PM<sub>10</sub> for the month. The PM<sub>2.5</sub> FRM correlation with the TEOM was 0.91. The FRM samplers are run on a one in six schedule so that only five points are available for a monthly correlation calculation.

### Monroe & College Particulate Matter Data 24hr Average Daily Maximum

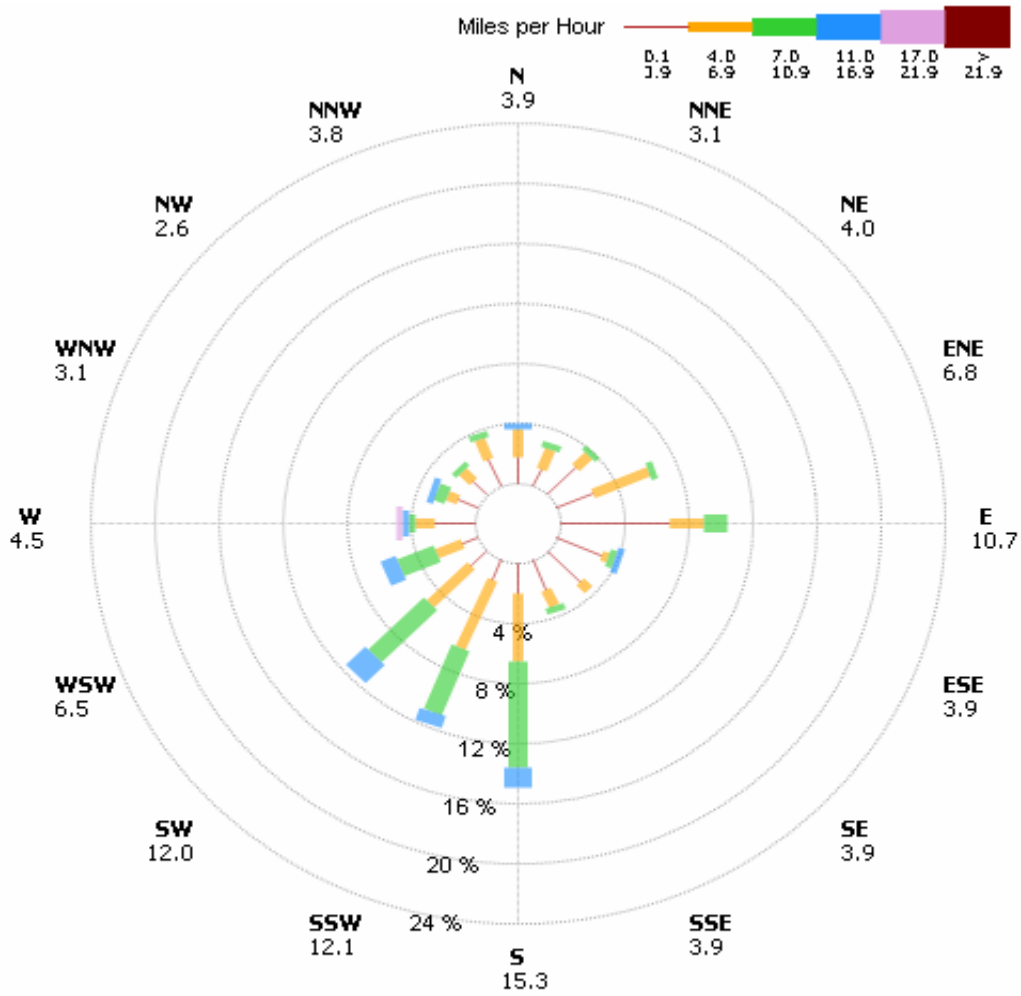


Below is a chart showing the daily maximums at Spokane's CO monitoring sites for this reporting period.

### Comparison of Maximum Daily 8 Hour Average CO Values

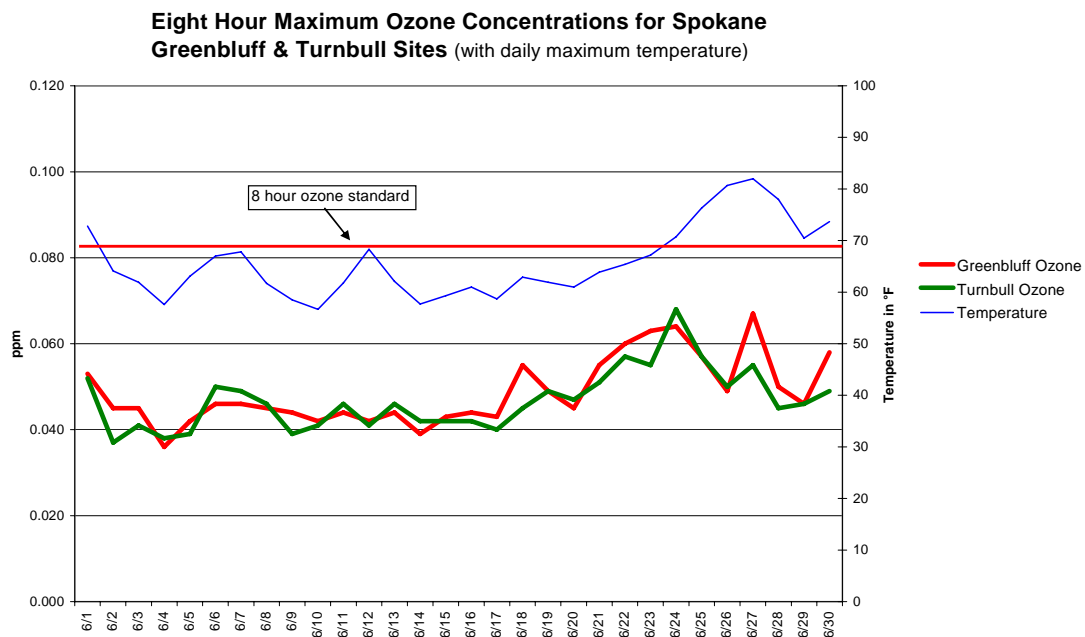


Wind data from the Freya and Ferry Site (Crown Z) for the reporting period.



**Hour Average Wind Speed**  
 Spokane E Ferry ~ 719 Observations  
 01 Jun 2006 through 30 Jun 2006

Ozone data for the two Spokane County sites, Greenbluff in the foothills of Mt. Spokane and Turnbull Wildlife Refuge southwest of the metropolitan area, are shown below. The ozone data are plotted along with the temperature data from the Crown Z site. Temperature is a good surrogate for sunlight in the photochemical reaction that forms ozone. Ozone is monitored May 1 through September 30.



A device called an Aethalometer is used to measure black carbon in  $PM_{2.5}$  particulate matter. Black carbon is used as a surrogate for diesel particulate. This is not the total impact of diesel smoke on  $PM_{2.5}$ ; there are other components that don't show up as black carbon. Below are the results from June 2006.  $PM_{2.5}$  is in the back and black carbon (BC) in front. In the middle is the ultraviolet (UV) channel of the aethalometer. The UV channel indicates the presence of other organic compounds.

