

North Idaho Air Quality Summary – March 2012

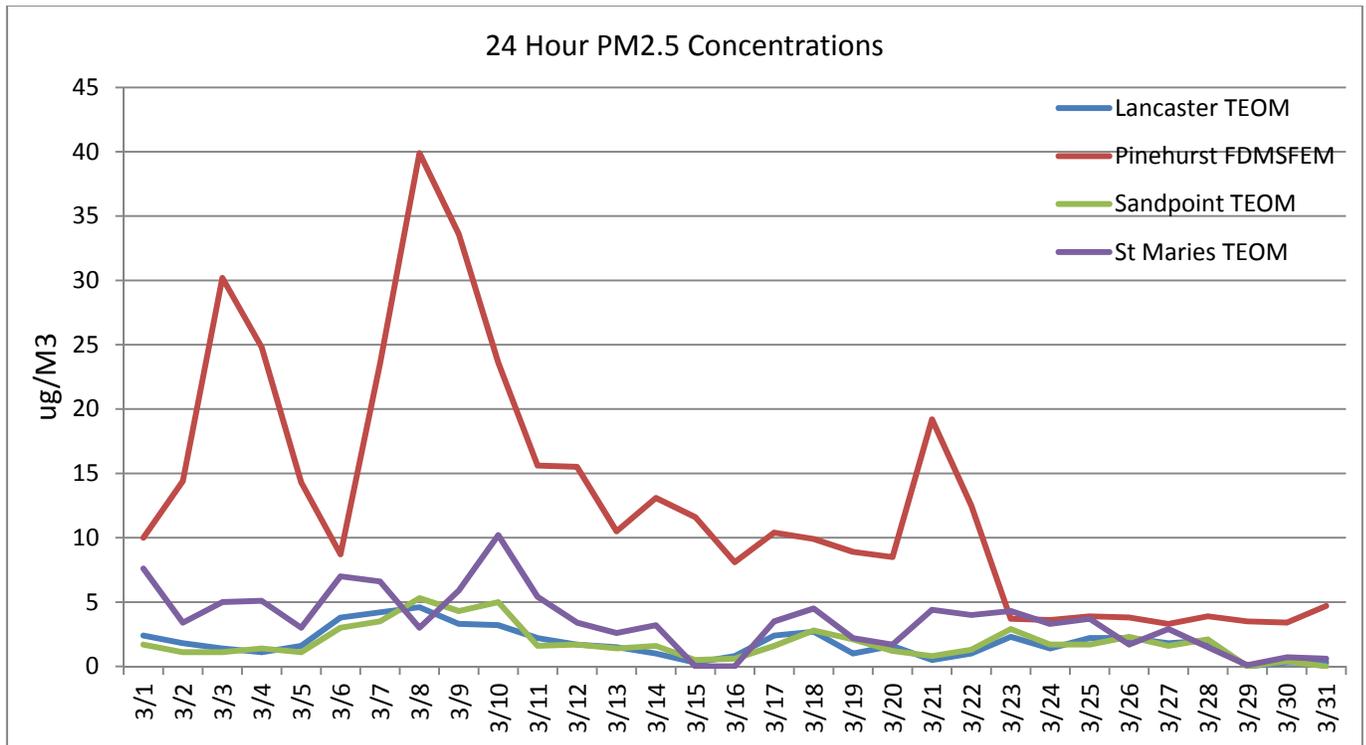
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This summary of North Idaho’s air quality is compiled from the various air quality samplers located in the Department of Environmental Quality’s Coeur d’Alene Region for the month of March 2012.

The Coeur d’Alene Regional Network encompasses the counties of Boundary, Bonner, Kootenai, Shoshone, and Benewah. The data presented in this report is considered preliminary data and has not been completely evaluated for all quality assurance requirements.

PM2.5 CONTINUOUS DATA

The graph below displays the average daily 24-hour PM_{2.5} values for the month and is expressed in micrograms per cubic meter, ($\mu\text{g}/\text{m}^3$). These values were calculated by averaging hourly values midnight to midnight from the agency’s PM_{2.5} TEOM samplers located in the Cities of Pinehurst, Sandpoint, and St. Maries and on Lancaster Road in Kootenai County.



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The table below shows the maximum 24 hour values calculated from continuous TEOM monitoring for this reporting period. The National Ambient Air Quality Standard (NAAQS) for PM_{2.5} is 35 µg/m³ for a 24 hour average. Recently, the U.S. EPA approved the TEOM-FDMS as a Federal Equivalent Method (FEM) for the collection and reporting of PM_{2.5} data. In January 2011 the Coeur d'Alene Regional Office (CRO) began using a TEOM-FDMS equivalent method for NAAQS reporting from the Pinehurst monitoring station. The CRO still uses Federal Reference Method (FRM) filter based sample measurements at the St. Maries monitoring site to determine NAAQS compliance. Depiction of preliminary continuous monitoring data in the table below is for reporting purposes only.

Region	Highest Reading	Date
Kootenai TEOM	4.6	March 8
Pinehurst TEOM-FDMS	39.9 *	March 8
Sandpoint TEOM	5.3	March 8
St. Maries TEOM	10.2	March 10

* Value is suspect.

The identified value above is suspect because the monitor experienced operational errors for 25% of the day this high reading occurred. The daily concentration resulting from the collocated filter sampler (see below) indicated the TEOM-FDMS over-reported the daily concentration by nearly 36%. This data will be flagged.

PM_{2.5} FEDERAL REFERENCE METHOD (FRM) DATA

At this time the Coeur d'Alene Regional Office of Idaho DEQ uses the Federal Reference Method Sampler (filter based) measurements for NAAQS compliance determination at the St. Maries monitoring site. This method requires that 75% of available data be collected per quarter. Other filter processing requirements are applicable to this method. The Coeur d'Alene Regional Office's collection efficiency rate for March is shown in the table below. The FRM filters at the Pinehurst site are used for quality assurance purposes.

March FRM filter recovery Efficiency

Site	Sample Days	Valid Samples	Collection Percentage
Pinehurst *	5	5	100%
Pinehurst Precision *	5	5	100%
St. Maries	5	5	100%

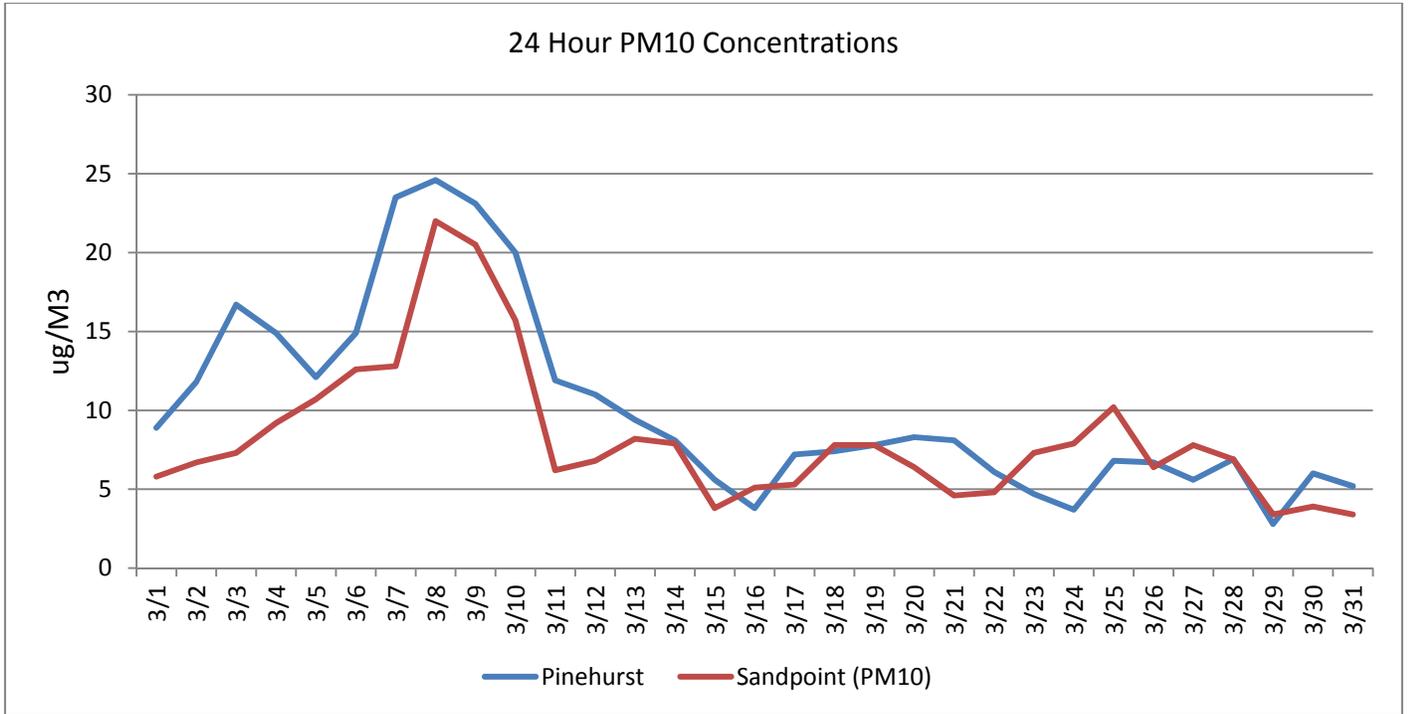
* Monitors missed the scheduled run day on 3/4/12 but operated on 3/8/12 as a makeup run day

With filter based FRMs make-up runs are allowed for missed scheduled runs as long as they occur before the next scheduled run day. In the above case the monitors were on a one in six day schedule. That means that the missed run on 3/4/12 could be made up before 3/10/12. The monitors ran on 3/8/12.

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PM10 CONTINUOUS DATA

The graph below shows the 24 hour values for PM10. No apparent exceedances of the 150 $\mu\text{g}/\text{m}^3$ for a 24 hour average standard have occurred over this reporting period.



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OZONE DATA

Ozone monitoring in the Coeur d'Alene has been discontinued starting with the 2012 season. The design values (3 year average of annual 4th highest daily value) in Kootenai County have been declining for the past 5 years with the 2011 season having a value of 0.057 ppm. Because of this trend, and the fact that last year's design value was only 76% of the NAAQS, DEQ decided to use its limited resources to focus on other, higher priority monitoring efforts. DEQ will be observing ozone concentrations in and around Spokane, Washington to determine if regional ozone levels worsen. Should conditions warrant, ozone monitoring will resume at the Lancaster site.

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NETWORK INFORMATION

The table below summarizes all active and inactive air quality samplers located within the North Idaho area during the month of March 2012.

Site	Monitor	Type	Comments	Current Status	Data Completeness
Lancaster / Rathdrum Prairie	R&P 1400A TEOM PM2.5	Continuous		Active	99%
Lancaster / Rathdrum Prairie	Meteorological Tower	Continuous		Active	99%
St. Maries	R&P 1400AB TEOM PM2.5	Continuous		Active	99%
St. Maries	Thermo Model 2025 FRM PM2.5	Filter		Active	100%
Pinehurst	R&P 8500 FDMS TEOM PM2.5	Continuous		Active	94%
Pinehurst	Thermo Model 2025 FRM PM2.5	Filter		Active	100%
Pinehurst	R & P Model 2025 FRM PM2.5	Filter	Precision	Active	100%
Pinehurst	R&P 1400AB TEOM PM10	Continuous		Active	99%
Pinehurst	Meteorological Tower	Continuous		Active	99%
Sandpoint U of I Extension Office	Meteorological Tower	Continuous		Active	99%
Sandpoint USFS	R&P 1400A TEOM PM2.5	Continuous		Active	99%
Sandpoint USFS	R&P 1400AB TEOM PM10	Continuous		Active	99%
Lakes Management Plan	Meteorological Tower	Continuous		Active	91%
Porthill International Border Site	Radianc Research Nephelometer /wind speed & direction	Continuous	CRB Seasonal	Inactive	
Athol	Radianc Research Nephelometer	Continuous	CRB Seasonal	Inactive	
Mt. Hall School	Radianc Research Nephelometer/ wind speed & direction	Continuous	CRB Seasonal	Inactive	
Garwood Elementary	Radianc Research Nephelometer	Continuous	CRB Seasonal	Inactive	

During March, 13 of 13 active samplers achieved 75% or greater data completeness.

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AIR QUALITY INDEX

The air quality index is a tool used to convey information to the public regarding local levels of air pollution and the associated health concerns. These levels are depicted in the table below.

Air Quality Index (AQI): Particle/Ozone Pollution

Index Values	Levels of Health Concern	Cautionary Statements
0-50	Good	None
51-100	Moderate	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
101-150	Unhealthy for Sensitive Groups	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion outdoors.
151-200	Unhealthy	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion outdoors. Everyone else should reduce prolonged or heavy exertion.
201-300	Very Unhealthy	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
301-500	Hazardous	People with heart or lung disease, older adults, and children should remain indoors and keep activity levels low. Everyone else should avoid all physical activity outdoors.

Below is a table showing the total weekday Air Quality Index (AQI) values for each of the reporting cities located in North Idaho for this reporting month. Differences in totals were due to sampler down time.

March 2012

Coeur d'Alene	Pinehurst	Sandpoint	St. Maries
Green = 21	Green = 15	Green = 21	Green = 21
Yellow = 0	Yellow = 5	Yellow = 0	Yellow = 0
Orange = 0	Orange = 1	Orange = 0	Orange = 0

2012 YEAR TO DATE AQI TOTALS

Coeur d'Alene	Pinehurst	Sandpoint	St. Maries
Green = 58 (100%)	Green = 34 (55%)	Green = 61 (100%)	Green = 58 (98%)
Yellow = 0	Yellow = 25 (40%)	Yellow = 0	Yellow = 1 (2%)
Orange = 0	Orange = 3 (5%)	Orange = 0	Orange = 0

For further information about air quality in Idaho and the northwest region visit the following sites on the Internet or contact Ralph Paul, Coeur d'Alene Region Airshed Coordinator, at 208-769-1422.

<http://www.deq.idaho.gov/>

<http://www.deq.idaho.gov/daily-air-quality-reports-forecasts>

www.airnow.gov/index.cfm?action=airnow.fcsummary&stateid=16