

North Idaho Air Quality Summary – December 2012

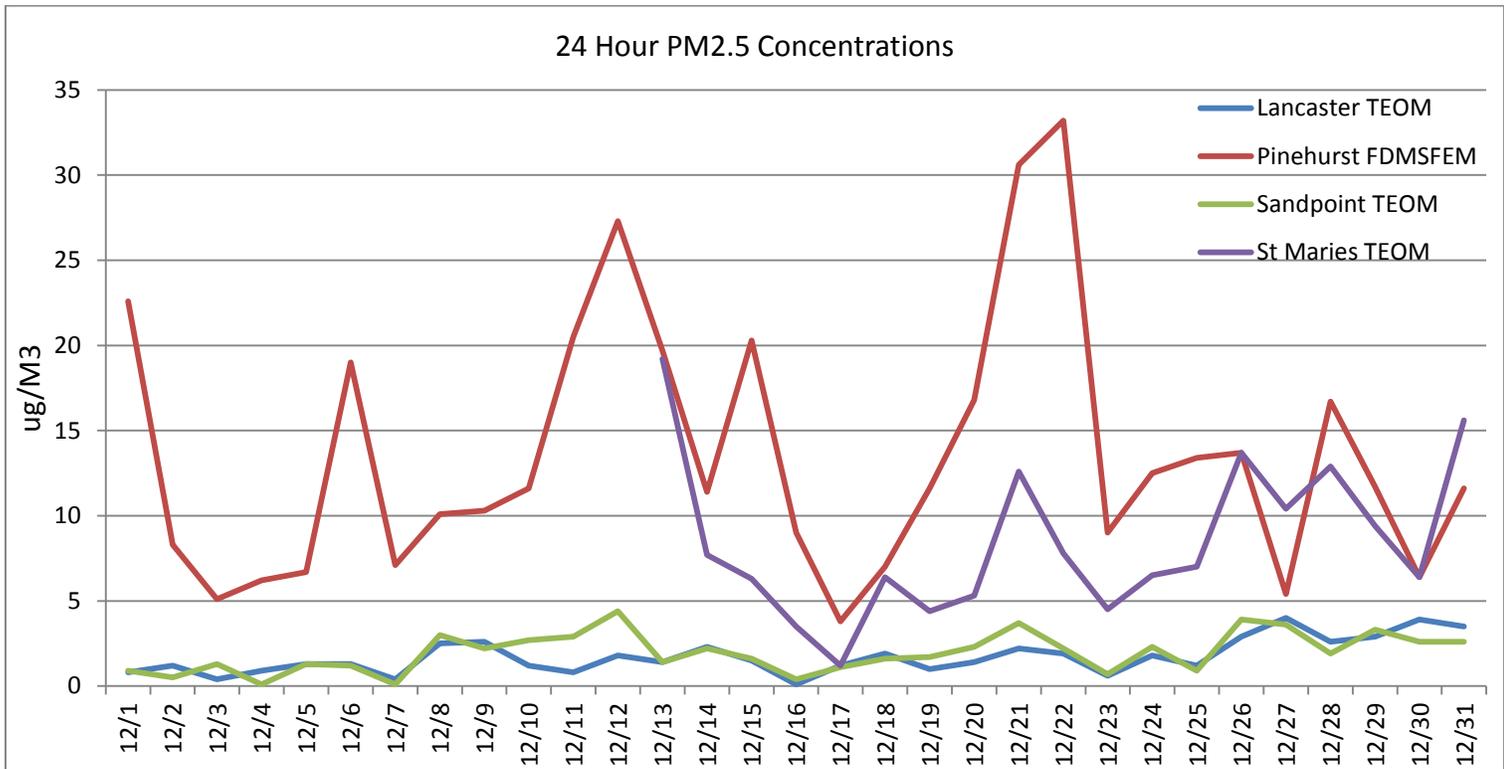
This summary of North Idaho’s air quality is compiled from the various air quality samplers located in the Department of Environmental Quality’s Coeur d’Alene Region for the month of December 2012.

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.

The St Maries TEOM was to be replaced by a new FDMS in November. The new FDMS turned out to have a problem with a circuit board and the replacement was not readily available. The replacement part for the FDMS monitor for St Maries was received in early December. After some testing in the lab, the FDMS was returned to the St Maries site and resumed data collection on 12/12/12.



North Idaho Air Quality Summary – December 2012

Page 2 of 6

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 the 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 | 3.9 | December 30 |
| Pinehurst TEOM-FDMS | 33.2 | December 22 |
| Sandpoint TEOM | 3.9 | December 26 |
| St. Maries TEOM-FDMS | 19.2 | December 13 |

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 December is shown in the table below. The FRM filters at the Pinehurst site are used for quality assurance purposes.

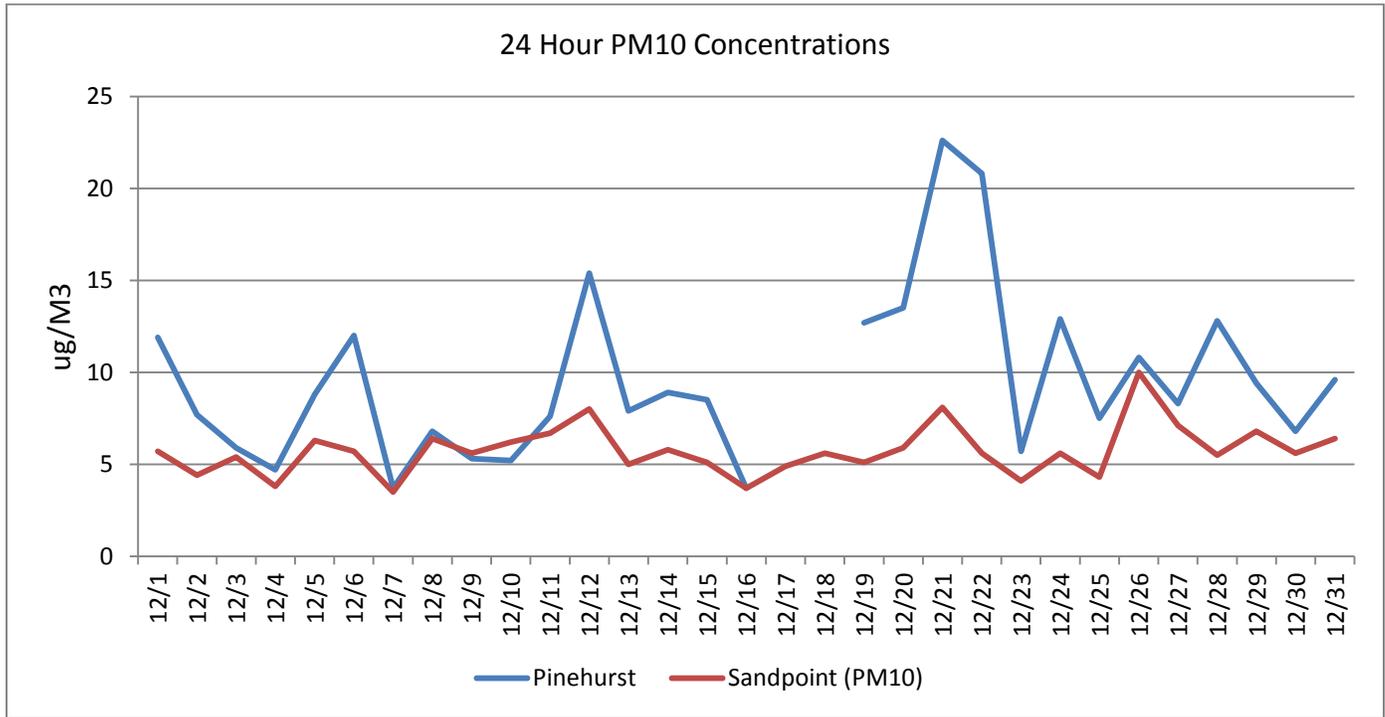
December FRM filter recovery Efficiency

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

North Idaho Air Quality Summary – December 2012

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.



North Idaho Air Quality Summary – December 2012

Page 4 of 6

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.

North Idaho Air Quality Summary – December 2012

Page 5 of 6

NETWORK INFORMATION

The table below summarizes all active and inactive air quality samplers located within the North Idaho area during the month of December 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 | 100% |
| St. Maries | Thermo 1405 FDMS PM2.5 | Continuous | | Active | 61% |
| St. Maries | Thermo Model 2025 FRM PM2.5 | Filter | | Active | 100% |
| Pinehurst | R&P 8500 FDMS TEOM PM2.5 | Continuous | | Active | 99% |
| 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 | 95% |
| Pinehurst | Meteorological Tower | Continuous | | Active | 100% |
| Sandpoint U of I Extension Office | Meteorological Tower | Continuous | | Active | 97% |
| 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 | 22% |
| 3 Meter G C Met | Meteorological Tower | Continuous | | Active | 100% |
| Porthill International Border Site | Radiance Research Nephelometer /wind speed & direction | Continuous | CRB Seasonal | Inactive | NA |
| Athol | Radiance Research Nephelometer | Continuous | CRB Seasonal | Inactive | NA |
| Mt. Hall School | Beta Attenuation Monitor PM 2.5 (BAM) | Continuous | CRB Seasonal | Inactive | NA |
| Garwood Elementary | Radiance Research Nephelometer | Continuous | CRB Seasonal | Inactive | NA |

During December, 12 of 14 active samplers achieved 75% or greater data completeness.

North Idaho Air Quality Summary – December 2012

Page 6 of 6

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.

December 2012

| Coeur d'Alene | Pinehurst | Sandpoint | St. Maries |
|---------------|------------|------------|------------|
| Green = 19 | Green = 14 | Green = 18 | Green = 9 |
| Yellow = 0 | Yellow = 5 | Yellow = 0 | Yellow = 0 |
| Orange = 0 | Orange = 0 | Orange = 0 | Orange = 0 |

2012 YEAR TO DATE AQI TOTALS

| Coeur d'Alene | Pinehurst | Sandpoint | St. Maries |
|------------------|-------------------|------------------|-------------------|
| Green = 236(97%) | Green = 174(71%) | Green = 243(98%) | Green = 210 (93%) |
| Yellow = 6 (3%) | Yellow = 66 (27%) | Yellow = 4 (2%) | Yellow = 17 (7%) |
| Orange = 0 | Orange = 4 (2%) | 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