



**HINTON PULP**  
A DIVISION OF WEST FRASER MILLS LIMITED  
Continuous Ambient Air Quality  
Monitoring Program  
Annual Summary for 2013

Operations and Data Collection by:  
West Central Airshed Society  
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:  
West Central Airshed Society  
Drayton Valley, Alberta

January 10<sup>th</sup>, 2014

Hinton Pulp  
A Division of West Fraser Mills Ltd.  
Mr. Phil Whitney  
760 Switzer Drive  
Hinton, Alberta  
T7V 1V7

Dear Mr. Whitney:

Re: Annual Ambient Air Quality Monitoring Report. January – December 2013.  
**For Hinton Pulp – A Division of West Fraser Mills Ltd.**

The West Central Airshed Society (WCAS) presents the 2013 Annual Report containing ambient air quality and meteorological information from the following site:

Network Station is                      AMS 906                      Hinton  
Identified as:

SO<sub>2</sub>, O<sub>3</sub> and NO<sub>x</sub> analyzers were added to the station in 2013. The following is a list of the reported ambient air and meteorological parameters measured at the site location:

**AMS 906 (Hinton)**

TRS, SO<sub>2</sub>, O<sub>3</sub> NO<sub>x</sub>, Particulate Matter (2.5 microns), Wind Speed and Direction, Relative Humidity, and External Temperature.

If additional information is required please contact Patrick Andersen at (780) 514-3533 or (403) 505-1041.

Sincerely,



Patrick Andersen  
Environmental Specialist

**Hinton Pulp**  
**A Division of West Fraser Mills Limited**  
**Frequency Distribution Charts**  
**Wind Speed and Direction**  
**Year 2013**

West Central Airshed Society - Hinton (AMS 906)  
 Annual Summary for 2013  
 TRS (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Exceedances**	Number 1-Hour Exceedances*	Percent of Data in each Concentration Range			
								<=3	>3-10	>10-50	>50
January	709	1.0	3.8	12.4	100.0	1	2	90.4	9.0	0.6	0.0
February	619	1.4	3.6	26.6	96.6	1	5	87.9	11.2	1.0	0.0
March	708	1.2	5.0	26.2	100.0	3	16	89.8	7.6	2.5	0.0
April	661	0.6	2.4	12.7	96.7	0	1	95.3	4.5	0.2	0.0
May	708	1.1	2.2	11.3	100.0	0	1	92.5	7.3	0.1	0.0
June	684	1.1	2.6	18.4	99.7	0	3	92.1	7.5	0.4	0.0
July	707	1.3	2.8	16.8	100.0	0	7	88.4	10.3	1.3	0.0
August	709	1.2	2.7	26.1	100.0	0	2	91.7	7.9	0.4	0.0
September	624	1.4	3.1	11.5	91.7	0	2	86.9	12.8	0.3	0.0
October	703	1.6	5.1	32.3	99.7	2	8	87.2	11.4	1.4	0.0
November	683	1.1	2.4	8.4	100.0	0	0	95.6	4.4	0.0	0.0
December	706	1.3	3.0	12.8	100.0	0	3	90.8	8.8	0.4	0.0
Annual	8221	1.2	5.1	32.3	98.7	7	50	90.7	8.5	0.7	0.0

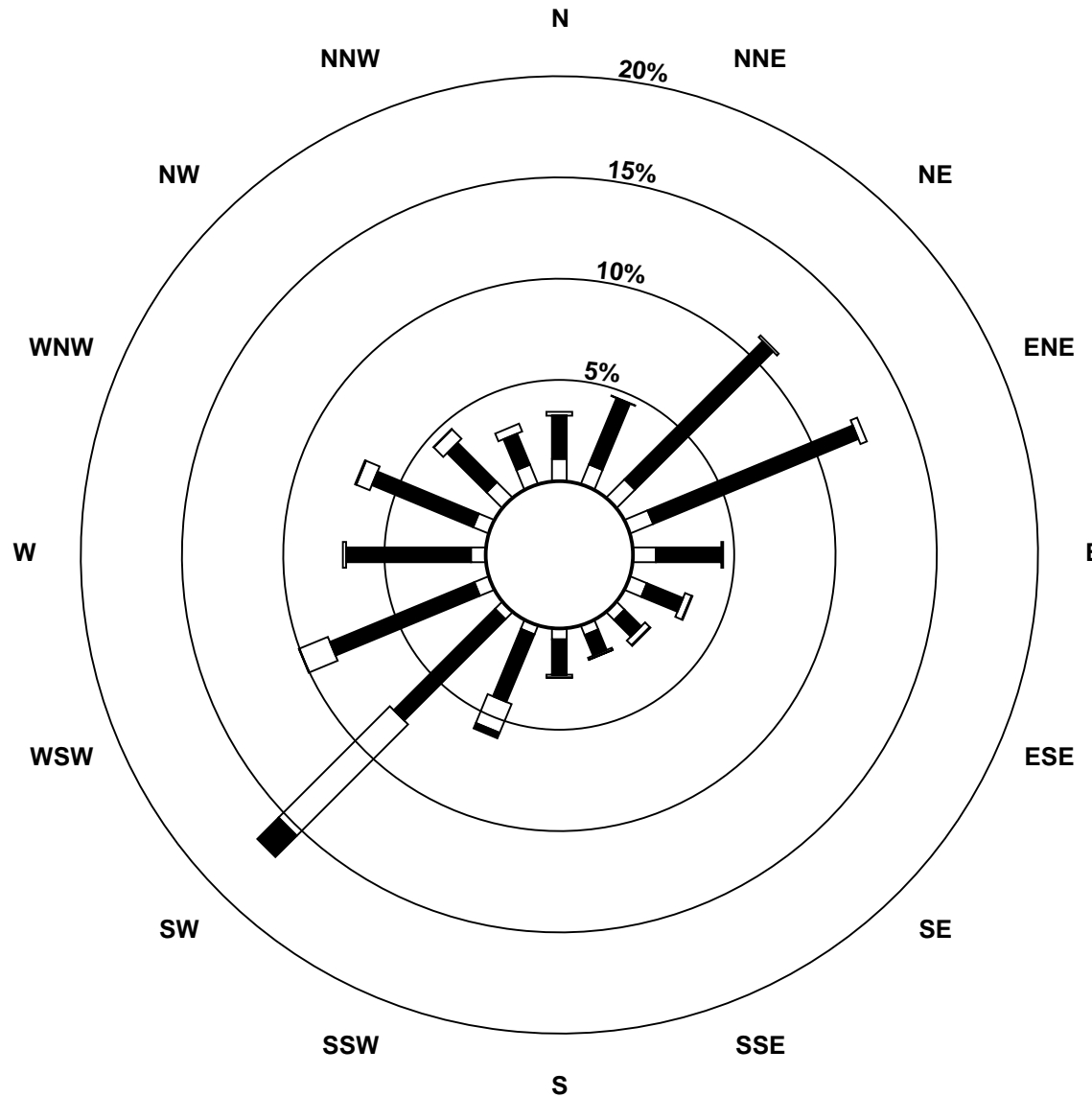
\* Hours of TRS above 10 ppb H<sub>2</sub>S Hourly Average Guideline.

\*\*Hours of TRS above 3 ppb H<sub>2</sub>S Daily Average Guideline.

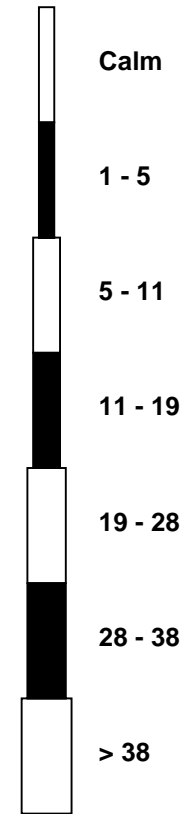
WCAS - Hinton  
Wind Speed Rose



Wind Speed (WS) - kph  
2013



Wind Frequency (kph)



**Hinton Pulp**  
**A Division of West Fraser Mills Limited**  
**Frequency Distribution Charts**  
**Monthly Averages**  
**Year 2013**

West Central Airshed Society - Hinton (AMS 906)  
 Annual Summary for 2013  
 SO2 (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Violations	Number 1-Hour Violations	Percent of Data in each Concentration Range					
								<=0.02	>0.02-0.06	>0.06-0.11	>0.11-0.17	>0.17-0.34	>0.34
January	-	-	-	-	-	-	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-	-	-	-	-	-
September	-	-	-	-	-	-	-	-	-	-	-	-	-
October	675	0.458	3.074	14.608	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
November	673	1.264	8.577	21.706	100.0	0	0	99.55	0.45	0.00	0.00	0.00	0.00
December	678	0.964	5.535	18.513	96.6	0	0	100.00	0.00	0.00	0.00	0.00	0.00
Annual	2026	0.895	8.577	21.706	98.9	0	0	99.85	0.15	0.00	0.00	0.00	0.00

West Central Airshed Society - Hinton (AMS 906)  
 Annual Summary for 2013  
 O3 (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 1-Hour Violations
January	-	-	-	-	-	-
February	-	-	-	-	-	-
March	-	-	-	-	-	-
April	-	-	-	-	-	-
May	-	-	-	-	-	-
June	-	-	-	-	-	-
July	-	-	-	-	-	-
August	-	-	-	-	-	-
September	-	-	-	-	-	-
October	705	18.6	30.7	44.5	100.0	0
November	685	11.0	18.7	79.5	100.0	0
December	706	22.9	41.4	48.9	100.0	0
Annual	2096	17.5	41.4	79.5	100.0	0



West Central Airshed Society - Hinton (AMS 906)  
 Annual Summary for 2013  
 NO2 (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Violations	Number 1-Hour Violations	Percent of Data in each Concentration Range			
								<=0.05	>0.05-0.11	>0.11-0.21	>0.21
January	-	-	-	-	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-	-	-	-
September	-	-	-	-	-	-	-	-	-	-	-
October	705	6.315	12.220	33.791	100.0	0	0	100.00	0	0	0
November	685	10.828	18.551	38.260	100.0	0	0	100.00	0	0	0
December	704	10.591	22.787	44.802	100.0	0	0	100.00	0	0	0
Annual	2094	9.229	22.787	44.802	100.0	0	0	100.00	0	0	0

West Central Airshed Society - Hinton (AMS 906)  
 Annual Summary for 2013  
 PM<sub>2.5</sub> (µg/m<sup>3</sup>)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Violations	Number 1-Hour Violations
January	740	7.0	20.7	33.0	100.0	0	0
February	648	7.6	17.2	45.9	96.4	0	0
March	744	7.6	11.2	51.9	100.0	0	0
April	693	7.6	17.0	43.3	96.4	0	0
May	739	7.4	13.6	53.5	99.3	0	0
June	716	7.9	27.6	110.3	99.4	0	3
July	736	8.4	25.4	91.9	99.3	0	1
August	725	7.7	13.7	41.6	98.3	0	0
September	652	10.8	22.5	50.4	91.9	0	0
October	744	10.3	22.7	126.1	100.0	0	1
November	720	7.8	11.6	42.9	100.0	0	0
December	742	6.5	10.9	22.2	99.7	0	0
Annual	8599	8.0	27.6	126.1	98.44	0	5

West Central Airshed Society - Hinton (AMS 906)  
 Annual Summary for 2013  
 Percentage Frequency Distribution of Wind

Speed (kph)							
Direction	>1 to 5	>5 to 11	>11 to 19	>19 to 28	>28 to 38	>38	Totals
N	2.14	0.19	0.00	0.00	0.00	0.00	2.33
NNE	3.54	0.02	0.00	0.00	0.00	0.00	3.56
NE	9.65	0.13	0.00	0.00	0.00	0.00	9.78
ENE	10.97	0.35	0.00	0.00	0.00	0.00	11.32
E	3.23	0.09	0.00	0.00	0.00	0.00	3.32
ESE	1.93	0.35	0.05	0.00	0.00	0.00	2.33
SE	1.17	0.32	0.05	0.00	0.00	0.00	1.54
SSE	1.10	0.10	0.01	0.00	0.00	0.00	1.21
S	1.75	0.14	0.01	0.00	0.00	0.00	1.90
SSW	3.61	1.54	0.29	0.00	0.00	0.00	5.44
SW	7.07	7.77	1.49	0.00	0.00	0.00	16.33
WSW	7.72	1.53	0.02	0.00	0.00	0.00	9.27
W	6.17	0.16	0.00	0.00	0.00	0.00	6.33
WNW	5.41	0.73	0.06	0.00	0.00	0.00	6.20
NW	2.75	0.66	0.02	0.00	0.00	0.00	3.43
NNW	1.65	0.42	0.00	0.00	0.00	0.00	2.07
Totals	68.21	14.08	2.00	0.00	0.00	0.00	84.29

Percent Calm	15.71
Number of Data Values	8654
Hours in Time Period	8760