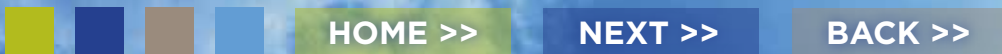




# WBEA@Work

AN UPDATE ON WBEA'S LATEST WORK  
VOLUME 4 ISSUE 2, AUGUST 2014



## Executive Director's Report

Dr. Kevin Percy

### WBEA Governance Committee

WBEA's new Governance Committee, elected at our June AGM, is now in place. We welcome our new representatives and thank our continuing members for their ongoing commitment to WBEA. The 2014-2015 GC is comprised of representatives from Aboriginal, Environmental Non-Government, Government and Industry sectors. The guidance and advice of the GC will be vital as WBEA continues to align with the **Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA)** and fulfill our commitments under the **Joint Canada/Alberta Implementation Plan for Oil Sands Monitoring (JOSM)**.

### Enhanced Deposition

In collaboration with federal and provincial governments, WBEA is moving forward this summer with extensive work in support of JOSM Enhanced Deposition Monitoring. In 2014, the fenced compound at WBEA's Bertha Ganter-Fort McKay Air Monitoring Station (AMS 1) was increased in size and two additional sampling decks, pictured, were installed to hold new analyzers for this work. A new station, Wapasu (AMS 17), that meets both compliance and enhanced deposition needs was installed on the Husky lease.

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In support of Enhanced Deposition, WBEA is putting in place one new air monitoring station and upgrading another in 2014/15:

- In the southern portion of the air shed, near Conklin, a new enhanced deposition station (AMS 18) is being installed. Work is progressing well on an improved roadway and land clearing, prior to installation of this station.
- At our Buffalo Viewpoint Air Monitoring Station (AMS 4), a larger compound will be constructed, adjacent to the present site, to support enhanced deposition monitoring work.

By 2015 four enhanced deposition stations will be operating in our region.

#### Southern Monitoring Plan

A sub-committee of the Ambient Air Technical Committee, The Southern Operators Sub-Committee, has been working since 2013 to thoroughly examine current and future air quality monitoring needs in the southern portion of our air shed. The sub-committee, currently chaired by Erin Davies, StatOil Canada Ltd., has finalized a detailed report. This report outlines a staged plan for meeting air monitoring requirements and WBEA stakeholder needs in the south. The plan focuses on a cost-effective and appropriate mix of fixed/portable stations and meteorological towers in an area of increasing development. If you haven't already had a chance to read The Southern Operators Sub-Committee Report, I encourage you to do so.

The Report is posted on the Member's side of the WBEA website under the Committee Information & Meeting Materials tab.

#### In Other News....

- WBEA's Q1 2014 audit was successful and reported to the AGM.
- WBEA's operations are now based on the fiscal year of April 1 to March 31.
- Our new **Firebag Air Monitoring Station, AMS 19**, located north east of Fort McMurray, is now operational and hourly raw data are publically available on the WBEA website.
- Planning and implementation of a small pilot project for Polycyclic Aromatic Hydrocarbon (PAH) chemical analysis in lichens, which were collected in the region in June, is now complete. This initial work will facilitate the field collection phase of the PAH Receptor Modeling Project, at over 100 regional sites, this fall.
- The second year of the **Community Odour Monitoring Project** is off to a successful start! Fort McMurray volunteers are once again monitoring and reporting odours in the community. This project is an initiative of the Human Exposure Monitoring Program. **The 2013/14 COMP Annual Report** is now available on the WBEA website.

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- The Fort McKay Berry Focus Group has made several field trips to five regional berry patches to observe berry development, prior to the harvest. Air pollutant data and continuous weather data continue to be collected at the berry patches.
- WBEA committee meetings will be resuming in the fall.
- A WBEA Member's Open House will be held on September 18th, 2014. Please contact Cynthia Rose Hagan ([crosehagan@wbea.org](mailto:crosehagan@wbea.org)), Executive Assistant, WBEA, for details and to confirm your attendance!
- The GC continues to meet monthly, but will be alternating locations between Fort McMurray, Edmonton and Calgary in the future.

On behalf of WBEA staff and contractors, I wish you a safe and enjoyable summer and fall!   

*Right: WBEA staff and contractors at the Field Operations Centre.*



*Above: Blueberries are beginning to ripen at one of the patches being monitoring by the Fort McKay Berry Focus Group.*



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## WBEA's New Governance Committee

*Jane Percy, WBEA Communications*

**On June 11th, during the 16th Annual General Meeting, WBEA Members elected new Directors to the Governance Committee (GC).**

The GC is a group of seven individuals elected by the Association Board Members. The GC constitutes the Officers of the Association and ensures quality leadership in management of the Association. The GC meets monthly and works to ensure that bylaws, policies and procedures adopted by the Board are followed.

In 2014/15, Diane Phillips will continue as President and Michael Aiton as a Director. Peter Fortna, formerly a Director, was elected Vice-President. Four new Member representatives were elected to join Diane, Michael and Peter. The full GC includes:

**Diane Phillips**, Syncrude Canada Ltd., President

**Peter Fortna**, Conklin Resource Development Advisory Board, Vice President

**Doug Johnston**, Athabasca Oil Corp., Secretary-Treasurer

**Michael Aiton**, Alberta Environment & Sustainable Resource Development, Director

**Natasha Rowden**, MEG Energy, Director

**Andrew Read**, Pembina Institute for Appropriate Development, Director

**Linda Aidnell**, Chipewyan Prairie Dene First Nation, Director

WBEA's new Governance Committee includes representatives from Aboriginal, Environmental Non-Government, Government and Industry sectors, thus ensuring a voice for all regional stakeholders in the planning and execution of environmental monitoring in the Athabasca Oil Sands Region. ■ ■ ■ ■



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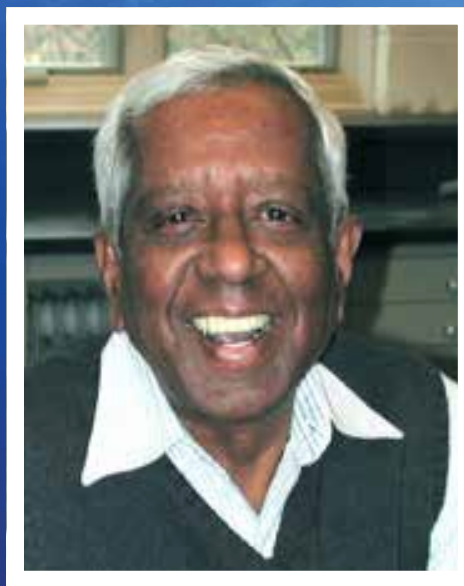
# Professor Sagar V. Krupa – WBEA's Science Advisor and Friend

On May 12th, Sagar Krupa, Professor Emeritus, University of Minnesota (UMN) and a WBEA-contracted Research Scientist passed away in Minneapolis. He is survived by his wife of 46 years, Nancy, two brothers and other family members.

Sagar earned his PhD at the University of Uppsala, Sweden, and continued on to earn their highest degree of Docent. He taught and conducted research at the UMN for 35 years and was appointed Professor Emeritus in 2009, after which he continued his work as a private consultant. His research was directed towards coupling air pollution and climate change to food production and conservation of natural resources. He taught in Mexico at post-graduate agricultural colleges for many summers, on a pro-bono basis. Sagar published some 150 scientific articles and 11 books. He was the chief editor of the Elsevier book series *Developments in Environmental Science*, editor of *Environmental Pollution*, and was one of the editors of the electronic journal *The Scientific World*.

Among his appointments were Chair & Science Advisor to the Albertan and Canadian Government - Industry Acid Deposition Research Program, the Science Committee of the German Parliament and the USDA National Agricultural Air Quality Task Force.

Sagar had a passion for science that was truly incredible. He was internationally recognized as a brilliant scientist with a mind that never stopped. He travelled the world and challenged everyone all of the time. As a teacher and educator he had a love for students and always encouraged everyone to make a difference.



*Professor Sagar Krupa was the architect of WBEA's source apportionment project which continues to contribute important practical knowledge about the sources and distribution of pollution in the Alberta Oil Sands Region. Sagar was a passionate WBEA advocate and advisor.*

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[Professor Sagar V. Krupa – WBEA's Science Advisor and Friend](#)



*Left: Professor Sagar Krupa, front row, second from right, with scientific colleagues at the Suncor big tire during the 2011 Air Pollution Workshop. From left to right, front row: Dr. J. Graney, Binghamton University; Dr. R.K.M. Jayanty, Research Triangle International (RTI); Dr. R. Stevens, USEPA-retired; Dr. Krupa, University of Minnesota; Mervyn Davies, Stantec. Back row, left to right, Dr. W. Studabaker, RTI; Dr. J. Blum, University of Michigan; Dr. M. Landis, USEPA; Dr. Kevin Percy, WBEA.*

Foremost among Dr. Krupa's contributions to WBEA was his visioning, through problem identification, and execution of the source apportionment project from 2010 to 2012. This "real-world" project employed receptor-modeling tools to attribute concentrations of forty-two inorganic elements, measured across the Athabasca Oil Sands Region, back to emission sources. The multi-disciplinary team of distinguished scientists that Sagar assembled to complete the project is now continuing his legacy by completing a second apportionment project, focused on polycyclic aromatic compounds. Both projects are examples of Sagar's passion for practical science that makes a difference to environmental management, while also addressing WBEA's Mission.

Dr. Krupa will be remembered as a driving force for good science, built upon the appropriate context; his bigger than life personality; his probing scientific mind; his incredible memory and for his many acts of kindness, especially in helping others achieve their educational goals. He leaves behind a body of work that WBEA members and others now rely upon.

*Editor's Note: This article is composed of portions of Professor Sagar Krupa's Obituary, which included contributions from Dr. Allan Legge, as well as the personal recollections of Dr. Kevin Percy.*

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# Accessing WBEA Air Monitoring Data

*Sanjay Prasad, Air Quality Scientist*

WBEA often receives data inquiries from WBEA Members and the general public.

There are two types of data in the WBEA Data Management System. Level 1 (L1) data are raw data. These data set have not yet undergone processing and validation which must be completed prior to reporting. Level 1 data are available from the WBEA website in near real time at <http://www.wbea.org/monitoring-stations-aamp-data>

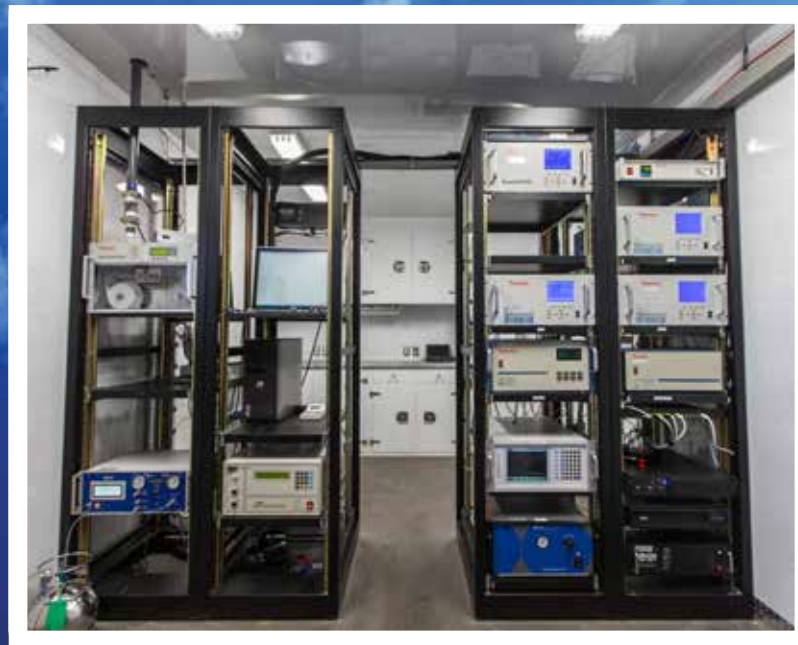
The second set of data, Level 2 (L2) data, have been processed and validated and are considered quality assured and quality controlled data. These are WBEA's final data. They are usually available 30 days after the end of the calendar month in which they were collected. Both Level 1 and 2 data sets have 5-min and 1-hour data intervals.

The following has been prepared to summarize access to WBEA's short-term and historical data.

### 1. Short-term Data:

Raw data, in near real time and for the previous 3 months, may be viewed on the WBEA website at the following link.

<http://wbea.org/monitoring-stations-aamp-data/historical-monitoring-data-mainmenu-224>



*Air analyzers, pictured on racks at a WBEA Air Monitoring Station, provide the raw air quality data that is streamed to WBEA's website.*

These Level 1 data, which are publically accessible, are available in 1-hour data intervals. Please note that these are raw data (Level 1) and the data sets have not gone through processing and validation for reporting.

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### 2. Public Access to WBEA Data:

The public may access WBEA historical data (Level 2) from the provincial **Clean Air Strategic Alliance (CASA) Data Warehouse**.

WBEA submits Level 2, 1-hour data averages to the CASA Data Warehouse 30 days after the end of the calendar month in which they were collected.

### 3. Historical Data:

Monitoring data obtained immediately prior to the past month are considered Historical Data.

WBEA supplies Historical Data to our Members; however, the public may access this data through the CASA Data Warehouse, <http://www.casadata.org/Reports/SelectCategory.asp>

WBEA Members may download WBEA historical air monitoring data from the following link:

<http://wbea.org/monitoring-stations-aamp-data/members-data-exporter-mainmenu-262>

Access to this link requires a username and password. To register for access to WBEA data, Members are required to fill out a **form** which is available on the WBEA website. Once the registration form is filled out and submitted, a data base administrator will confirm access.

A feature of this webpage allows WBEA Members to create tables or graphs comparing one or more air quality parameters for one or more WBEA air monitoring stations. ■ ■ ■ ■



*At WBEA Air Monitoring Stations, outside air is drawn in through a glass manifold, pictured. The air passes through a series of dust filters before being delivered through tubing for analysis by air quality analyzers.*

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## HEMP Community Odour Monitoring Project Reports First Year of Results

*Jane Percy, WBEA Communications*

The **Community Odour Monitoring Project (COMP)**, an initiative of WBEA's Human Exposure Monitoring Program (HEMP), has completed the first full year of operation. The COMP is a community-based odour monitoring approach which involves the public in identifying and monitoring odours in the air in order to determine their impact upon residents. Thirty-five Fort McMurray residents volunteered to track odours in their community during the first year of operation.

Odours have become a prominent issue in some communities in the Wood Buffalo region. To address public odour concerns, in 2009 the HEMP committee decided to focus on monitoring, detecting and chemically characterizing regional odours. Since that time, HEMP has deployed specialized analyzers to detect and distinguish odour causing compounds in regional air. In 2013, HEMP initiated the COMP to gather data on the human perception of odours in Fort McMurray.

WBEA is managing the Community Odour Monitoring Project and has contracted Odotech Inc. to carry out the work and provide data reports. For the first year of the project, HEMP recruited volunteers and Odotech provided training in odour intensity and appreciation. Participants were trained to detect a variety of common regional



*Cynthia Rose Hagan takes part in odour identification and intensity training for the WBEA Community Odour Monitoring Project.*

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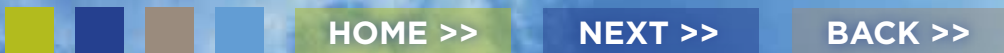
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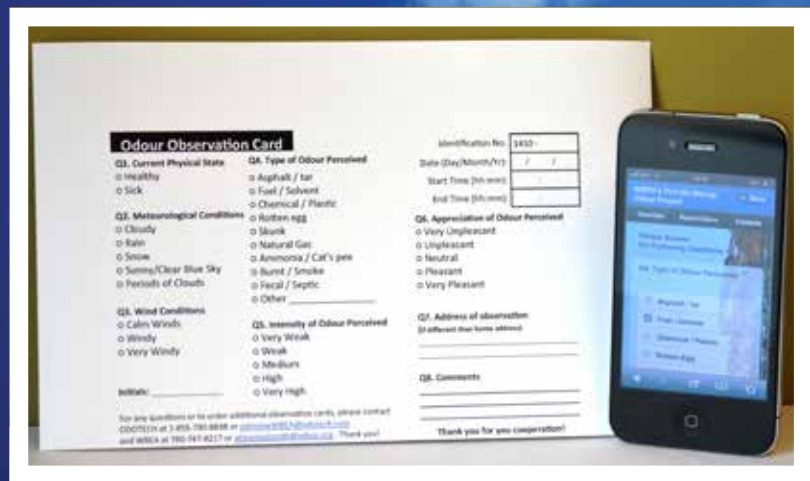


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### HEMP Community Odour Monitoring Project Reports First Year of Results



Volunteers have multiple odour tracking options including an observation card and a mobile app, pictured, as well as a dedicated phone line and a website.

odours, identify odour intensity and track the data. Odour tracking was facilitated by a smart phone application, postage paid observation response cards, a website and a dedicated phone line. Volunteers tracked odours in Fort McMurray, as they perceived them, during the course of their normal activities. The COMP volunteers met with WBEA on a quarterly basis to review the results of their combined odour observations.

Prior to the start of COMP, Odotech Inc. identified ten odours most frequently found in the Fort McMurray area. These odours originate from a variety of regional sources.

The number of reported observations, by odour type, in 2013-2014 includes:

- Ammonia/Cat Pee - 10
- Asphalt/Tar - 38
- Burnt/Smoke - 24
- Chemical/Plastic - 4
- Fecal/Septic - 23
- Fuel/Solvent - 41
- Natural Gas - 1
- Rotten Egg - 5
- Skunk - 0
- Other - 10

In year one of the COMP, from June 2013 until May 31, 2014, 156 individual odour observations were reported by volunteers. In the following graph the bars show the results for each quarter, as well as the entire year. The odours of Fuel/Solvent (41 reports), Asphalt/Tar (38 reports), and Burnt/Smoke (24 reports) were the most frequently reported of the 10 odour categories.

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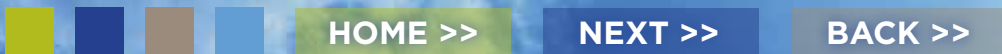
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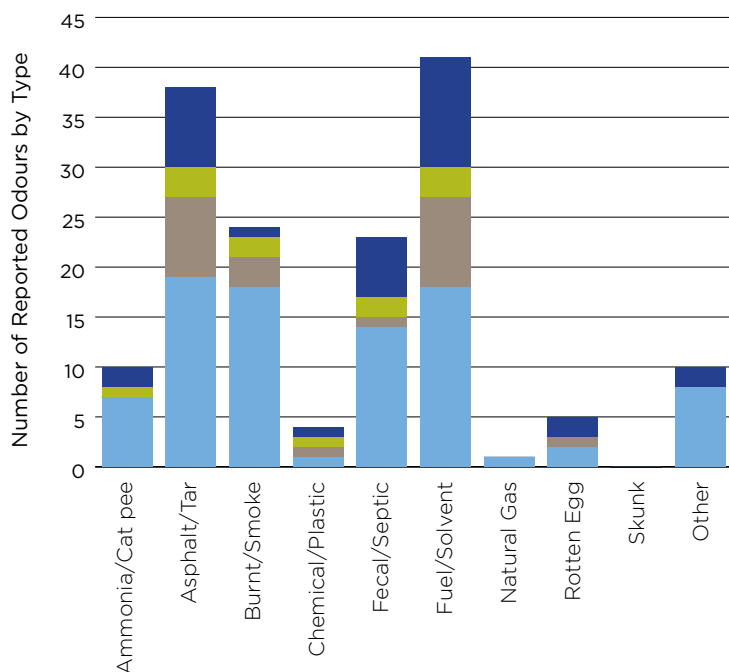
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**Odours Reported by Type in each of the Four Quarters of the 2013-2014 COMP**



- Period 1 - June - August 2013
- Period 2 - September - November 2013
- Period 3 - December 2013 - February 2014
- Period 4 - March - June 2014

As well as the type of odour observed, the following data were also collected:

- Time and duration of observation
- Odour intensity and appreciation
- Wind and weather conditions
- Geographic distribution of odour reports, by area of Fort McMurray
- Odour episodes - when 3 or more observations were reported in one day.
- Reporting method
- Observations by month
- Odours with a duration of 60 minutes or more

As the graph on the following page illustrates, more odours (56% of the total odour reports) were observed in the first quarter of the project - June 1, 2013 to August 31, 2013 - than in the subsequent quarters.

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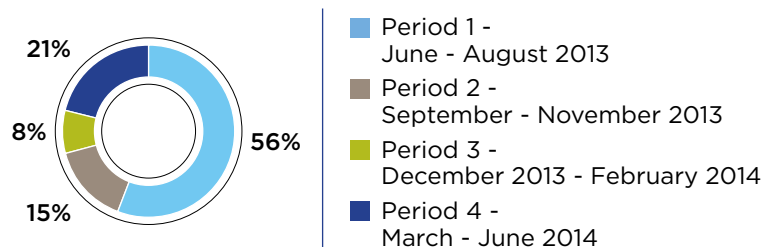
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### Odour Reports by Observation Period (%)



WBEA will use the data collected to better understand the odour patterns impacting the community of Fort McMurray. WBEA will communicate the project conclusions and will continue to use our existing odour measurement methods to share a wider picture of the state of odours in the region. The final [Community Odour Monitoring Project Report for 2013/2014](#) has been presented to COMP volunteers and is available on the WBEA website.

HEMP is operating the Community Odour Monitoring Project for a second year in Fort McMurray in 2014/2015. Volunteer recruitment is underway. Residents of Fort McMurray who would like to participate may contact the HEMP Program Manager, Abena Twumasi-Smith, at [atwumasismith@wbea.org](mailto:atwumasismith@wbea.org), 780-747-8217, for more information. ■ ■ ■

*The odours recorded in Fort McMurray by COMP volunteers originate from a variety of sources.*



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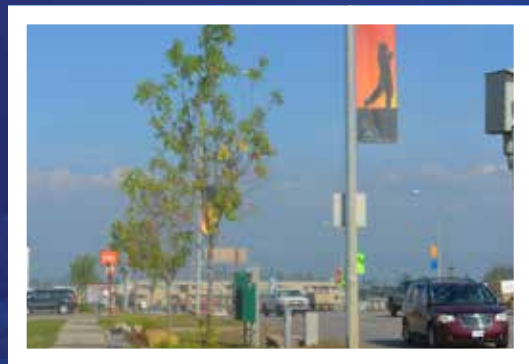
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## Annual AQHI Values for WBEA Community Air Monitoring Stations in 2013

Dr. Kevin Percy

The Air Quality Health Index (AQHI) provides the public with an easily accessible guide to regional air quality and any possible health effects, based upon data for a mixture of common pollutants. The AQHI was developed by Environment Canada and Health Canada. It has been adopted by all provinces. WBEA, in partnership with Alberta Environment and Sustainable Resource Development (AESRD), began reporting the AQHI for our community air monitoring stations in 2011. In January 2013, the AQHI for our Anzac station became available. A forecast component predicts the AQHI at each station for the following day.



*Left: WBEA streams data for air pollutants such as fine Particulate Matter (PM<sub>2.5</sub>), seen in the air during a forest fire, to AESRD for calculation of the Air Quality Health Index.*

The AQHI reports air quality in terms of Low, Moderate, High and Very High Health Risks. The 2013 hourly AQHI values in this article were provided by AESRD, and the percentage of values within each of the four risk categories were calculated for participating WBEA stations. WBEA is grateful to Andrew Clayton, Ambient Air Specialist, AESRD, for providing the annual AQHI summaries. The AQHI is now available in over 20 communities across Alberta. View the current and forecasted provincial AQHI on the AESRD website at: <http://www.environment.alberta.ca/apps/aqhi/aqhi.aspx>

WBEA's continuous air analyzers provide hourly data for nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>) and fine particulate matter (PM<sub>2.5</sub>). Alberta's AQHI values are calculated using a formula which combines the readings of these three pollutants. However, because of Alberta's energy based economy, additional pollutants - sulphur dioxide (SO<sub>2</sub>), hydrogen sulphide (H<sub>2</sub>S), total reduced sulphur (TRS) and carbon monoxide (CO) - are considered in the AQHI calculation, but only when their concentrations exceed set thresholds. For example, if established pollutant thresholds for PM<sub>2.5</sub>, O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, H<sub>2</sub>S/TRS or CO are exceeded when the AQHI value is at a Low or Moderate Risk, then the AQHI value is immediately replaced with the appropriate High or Very High Risk value.

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**Annual AQHI Values for WBEA Community Air Monitoring Stations in 2013**

Once calculated by AESRD, AQHI values are streamed to WBEA's website, mobile AQHI app, regional message centers including at the luggage carousel of the new Fort McMurray International Airport and our headquarters electronic sign, pictured, in Fort McMurray.

Four WBEA air monitoring stations - Anzac (AMS 14), Fort McMurray - Athabasca Valley (AMS 7), Fort McKay South (AMS 13) and Fort Chipewyan (AMS 8) - automatically stream hourly data to AESRD for calculation of the AQHI. The percentage hourly average measurements (maximum 8,760 hours/year/AMS) calculated as Low, Moderate or High Risk to human health at each station in 2013 are shown in the following graph. No AQHI values were recorded in the Very High Health Risk category in the Regional Municipality of Wood Buffalo in 2013. Percentages for each station have been rounded.



Table 1. Percentage of Hours each AQHI Health Risk Level was recorded at a WBEA Community Air Monitoring Station in 2013.

**2013 Air Quality Health Index (AQHI) Values,  
 as a Percentage of the Year**

WBEA Community Air Monitoring Station

WBEA Community Air Monitoring Station	Low Health Risk	Moderate Health Risk	High Health Risk	Very High Health Risk
Anzac (AMS 14)	99.1%	0.8%	0.1%	0 %
Fort McMurray - Athabasca Valley (AMS 7)	97.8%	2.0%	0.2%	0 %
Fort McKay South (AMS 13)	98.2%	1.7%	0.1%	0 %
Fort Chipewyan (AMS 8)	99.3%	0.6%	0.1%	0 %

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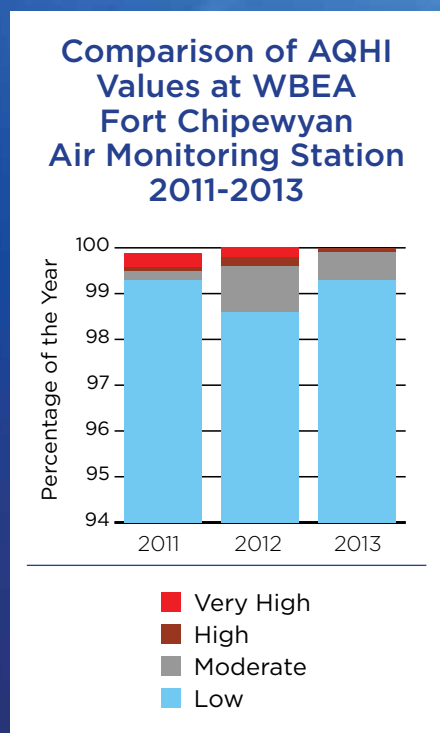
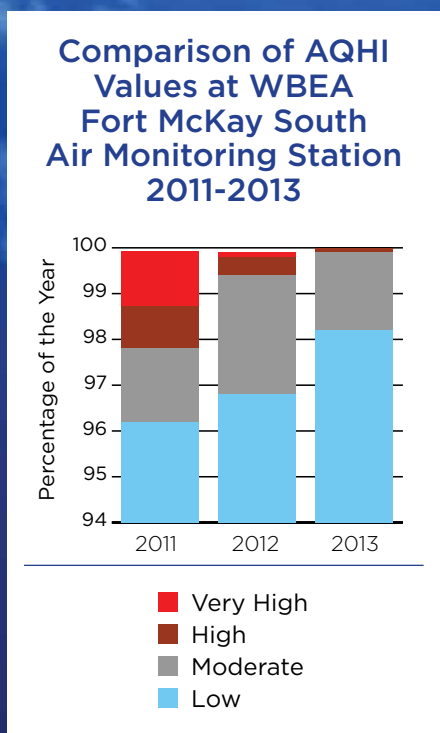
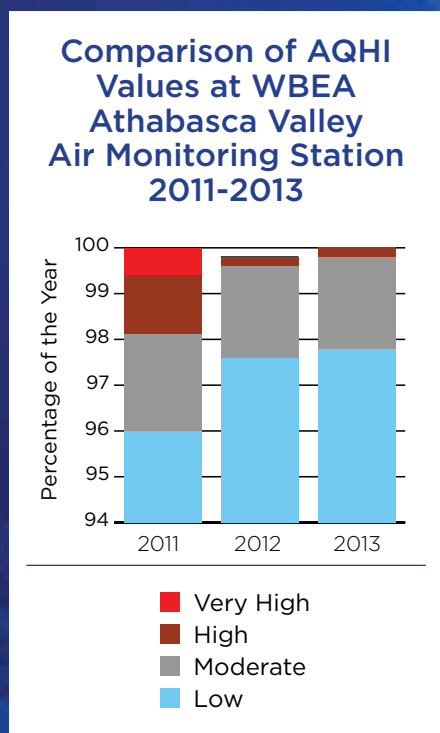
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**Annual AQHI Values for WBEA Community Air Monitoring Stations in 2013**

The following three graphs compare the AQHI values at three community Air Monitoring Stations in 2011, 2012 and 2013.



It is important to note that the pollutants (NO<sub>2</sub>, O<sub>3</sub>, and PM<sub>2.5</sub>) measured to calculate the AQHI do not include the reduced sulphur compounds and volatile organic compounds that WBEA's specialized odour compound measurements have identified as contributing to odour episodes experienced in communities within the region. Public notice, however, is given if concentrations of hydrogen sulphide and total reduced sulphur exceed the **Alberta Ambient Air Quality Objectives**. Therefore, the AQHI should not be used to evaluate the potential health risk from odours. ■ ■ ■ ■

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## Quick Updates

### Association News

- WBEA recently welcomed two new Members:

**Conklin Resource Development Advisory Board  
Connacher Oil and Gas Ltd.**

- WBEA welcomes new staff:

**Randy Visser** – Operations Manager

**Abigale Glashoerster** – Office Administrator

**Kendra Thomas** – Sampling Technician

**Devin Russell** – Instrumentation Technician

**Asad Hidayat** – Summer Student

**Ian Curry** – Summer Student

- Executive Director, Dr. Kevin Percy, gave the keynote address at the *Air in Saskatchewan Symposium*, held in Saskatoon in early 2014 about the practice and application of integrated air and land monitoring in a consensus-based, multi-stakeholder setting.

- Dennis Bevington, the MP for the Western Arctic, and Lori McDaniel, NDP candidate for Fort McMurray-Athabasca, visited WBEA to meet with Executive Director, Dr. Kevin Percy, and Lead Scientist, Dr. Tom Clair,



*From left to right, Sanjay Prasad, Lori McDaniel, Dennis Bevington MP and Kevin Percy at AMS 6.*

in March. At AMS 6 in Timberlea, Sanjay Prasad, Air Quality Scientist, provided an explanation of the air monitoring equipment and WBEA's Data Management System.

- The Executive Director has been appointed to the **Council of Canadian Academies (CCA) Expert Panel** assessing *The Potential for New and Emerging Technologies to Reduce the Environmental Impacts of Oil Sands Development*. The CCA held their third board meeting in Fort McMurray, July 28th - 30th and toured WBEA's Patricia McInnes Air Monitoring Station during a field trip.

- Brad Pickering, Chief Executive Officer of the **Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA)** (center right), and Bob Myrick, Manager Air Policy Evaluation, AESRD, (right) visited WBEA and met with WBEA President, Diane Phillips (left), and Dr. Kevin Percy (center left), on April 24th. The group is shown with a portable ozone monitoring system which was undergoing testing prior to deployment to remote field locations.



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- WBEA Members have approved our application for the **Certificate of Recognition (COR™)** program, a Canada-wide program which assesses and develops health and safety management systems. Also at WBEA, health and safety procedures, including Field Level Hazard Assessments, are now in place and a Health and Safety Manual is complete. An external COR™ audit will be conducted in 2014.

- On May 10th, WBEA welcomed a group of MBA students and professors from the Tuck School of Business at Dartmouth College, Hanover, NH, USA, for a presentation with Dr. Tom Clair and Dr. Kevin Percy, followed by a tour of an Air Monitoring Station, pictured.



- The Executive Director presented *Relating Air Quality and Climate Change to Plant Growth, Productivity, Biodiversity and Ecosystems: An Integrative Analysis*, at the **46th International Annual Air Pollution Workshop**, held in Guadalajara, México, in May.
- Representatives of the **World Presidents' Organization (WPO)** visited WBEA's Patricia McInnes Air Monitoring Station in Timberlea for a tour, refreshments and informal presentations by staff on May 22nd.

- The Executive Director presented *Ambient Air Quality in the Athabasca Oil Sands* at the **97th Canadian Chemistry Conference**, Vancouver, BC, on June 4th.

- The WBEA Headquarters building on Thickwood Blvd. has been nominated by the **Wood Buffalo Communities in Bloom Program** for our outdoor summer floral displays!

- WBEA welcomed visitors from the Northern Alberta Institute of Technology (NAIT) on July 25th, for discussions on future collaboration. From left to right: Randy Visser, WBEA Operations Manager; Chris Dambrowitz, Associate VP, Research and Innovation, NAIT; Neil Fassina, Provost and VP Academic, NAIT; and Dr. Kevin Percy.



- Richard Smith, Acting Associate Regional Director General, West & North, Environment Canada, visited WBEA on July 28th, met with Operation's Manager Randy Visser and toured the Patricia McInnes Air Monitoring Station with Air Quality Scientist, Sanjay Prasad.

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### Human Exposure Monitoring Program News

- WBEA's first Community Odour Monitoring Panel (COMP), composed of 35 volunteers from Fort McMurray, has completed a full year of odour monitoring. Quarterly meetings were held to update participants on results throughout the year. The **COMP Annual Report 2013-2014** was presented to the group in June. A new COMP volunteer cohort began monitoring odours in June 2014.

*WBEA's Odour Project mobile app is one odour tracking option for Community Odour Monitoring Project volunteers.*



- The **Human Exposure Monitoring Program's Portable Air Monitoring Station** is now streaming data for odour-causing compounds to our website from its location at the site of WBEA's Mildred Lake Air Monitoring Station-AMS 2.

### Terrestrial Environmental Effects Monitoring News

- Members of the joint WBEA-Fort McKay Berry Focus Group met to review and verify the results of the 2013 field season during which the group made several trips to berry patches to observe plant condition, share Traditional Environmental Knowledge and pick berries. Data from passive air pollution monitors, deployed at the patches in 2013,

as well as results of the analysis of berry quality were shared with the group and plans for the 2014 field season were drawn up. In addition to passive air pollution samplers, in 2014 meteorological stations will monitor climate at the berry patches. 2014 field trips are currently ongoing.



*Members of the WBEA-Fort McKay Berry Focus Group met to verify 2013 monitoring data. Front row (l to r) Andrew Bouchier, Janelle Baker, Celina Harpe, Walter Orr Jr., Clara Bouchier and Bori Arrobo. Back row (l to r) Kevin Percy, Walter Orr, Evan Magill and Jane Percy.*

- The **State of the Forest Report** is being compiled from forest health data for three WBEA sampling cycles in 1998, 2004 and 2011. This report will incorporate meteorological and pollution data and is being compiled by WBEA's science team, coordinated by Dr. Tom Clair. The Report is scheduled to be completed in Q4 of 2014.

### Ambient Air Monitoring Committee News

- All WBEA **Standard Operating Protocols (SOP's)** associated with our air monitoring network are publically available on our website. These are operating procedures for air analyzers, sampling

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and calibration techniques and standard field procedures, and are built upon the existing best practices of WBEA, the U.S. Environmental Protection Agency and Environment Canada.

- Overall network performance refers to the availability of quality-assured data from all analyzers and stations. In 2013, for WBEA's 15 air monitoring stations (AMS 17 was not operational until mid-December), overall network performance averaged 98.5%, with many months being above 99%. This level of performance has continued into 2014.
- Improvements at Bertha Ganter-Fort McKay-AMS 1 include a larger fenced compound and additional decks to accommodate new Environment Canada enhanced deposition instrumentation.
- Work is now underway to install a new enhanced deposition air monitoring station near Conklin, in cooperation with Environment Canada and Alberta Environment and Sustainable Resource Development.
- WBEA's existing air monitoring station at Buffalo Viewpoint-AMS 4 will be expanded to accommodate new Environment Canada equipment, in support of the *Joint Canada/Alberta Implementation Plan for Oil Sands Monitoring*.
- Data is now streaming to WBEA's website from the new Air Monitoring Station, **AMS 19 - Firebag**, located to the north east of Fort McMurray.

### Communications News

- The WBEA Air Monitoring Network is showcased in a **new video** which provides an insider's look at our air monitoring network. Copies of the video, which has been translated into Cree and Dené, have been sent to local schools.
- WBEA Communications hosted a booth at **GLOBE 2014**, North America's largest international environmental business summit in late March.
- WBEA sponsored the **Wood Buffalo Regional Science Fair** and hosted an information booth during the Fair Awards Ceremony. WBEA President, Diane Phillips, presented three WBEA Crystal Clean Environment awards to student scientists.



*Communications Advisors Jane Percy (left) and Melissa Pennell (right) speak to visitors to the WBEA booth at GLOBE 2014, held in Vancouver in March.*

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*Dr. Kevin Percy speaks with a visitor to WBEA's booth at the Fort McMurray Métis Festival about WBEA's monitoring programs, including the Community Odour Monitoring Project.*

- WBEA Communications has hosted information booths or made presentations at the following local events recently:

Earth Day presentation to seniors at the Fort McMurray Public Library, April 22nd

Fort McMurray Trade Show, April 25th-27th

Fort McMurray Métis Festival on May 23rd

Fort McMurray International Air Show, May 31st and June 1st

Fort McKay Trade Show on June 5th

Girls Inc. Summer Camp, Fort McMurray, on July 28th

Mad Science Summer Camp, Fort McMurray, on July 31st

- WBEA staff hosted Grade 7 science students from Father Mercredi School at an Air Monitoring Station, pictured, and the Field Operations Centre for tours and interactive science activities on May 7th.



- The **WBEA Summer 2014 Community Report** was mailed to 28,000 regional addresses in July.



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