

# CASA

2015 ANNUAL REPORT



CLEAN  
AIR  
STRATEGIC  
ALLIANCE

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# ABOUT US

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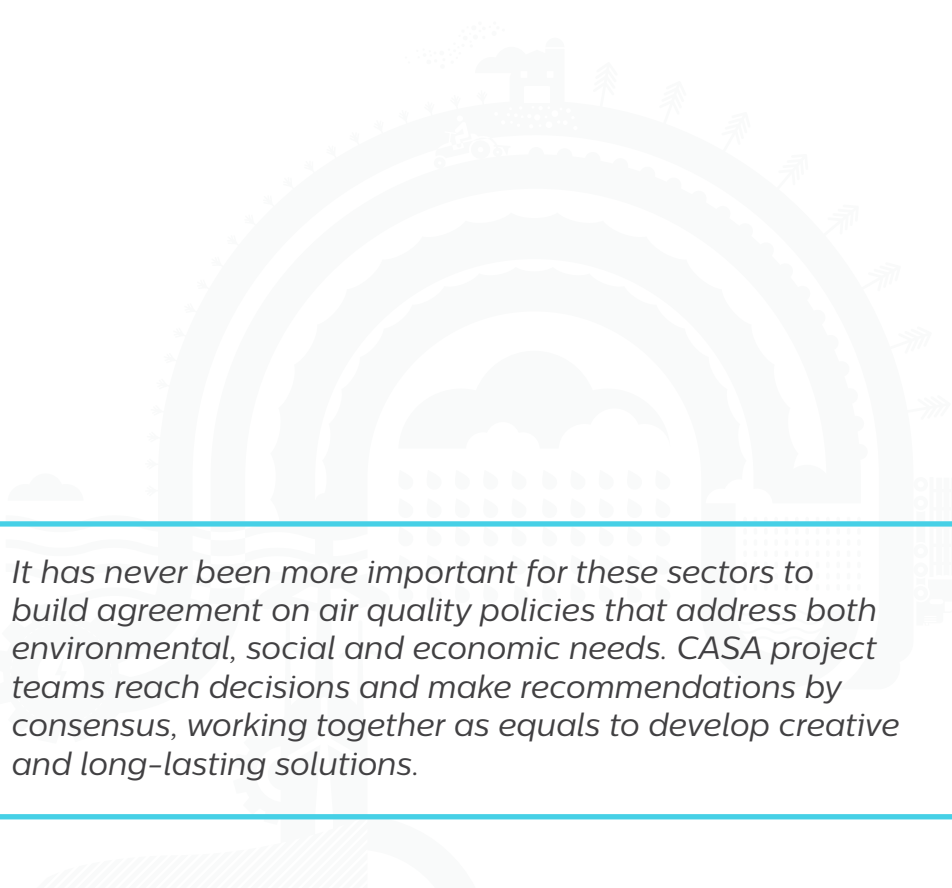
## MISSION

The air will have no adverse odour, taste or visual impact and have no measurable “short-or long-term” adverse effects on people, animals or the environment.

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## VISION

The Clean Air Strategic Alliance (CASA) is a multi-stakeholder alliance composed of representatives selected by industry, government and non-government organizations to develop strategies that improve air quality for Albertans, using a collaborative process.

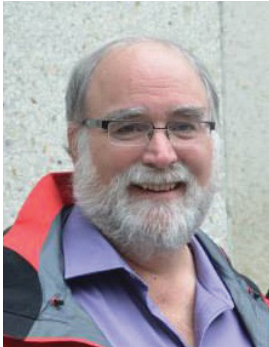


*It has never been more important for these sectors to build agreement on air quality policies that address both environmental, social and economic needs. CASA project teams reach decisions and make recommendations by consensus, working together as equals to develop creative and long-lasting solutions.*



## EXECUTIVE DIRECTOR'S MESSAGE

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I joined CASA as Executive Director at the end of March 2015. I couldn't have chosen a more interesting time to make the move. 2015 was a busy and interesting year for CASA, with the wrap up of both the Electricity Framework Review and the Odour Management Team, the kick off of the Non-Point Source team, changes in CASA's staff, changes in governments at both the federal and provincial level, and big changes in Alberta's economy as the price of oil dropped throughout the year. Throughout all of it the staff and stakeholders produced excellent work that will benefit Albertans and the environment. The CASA model of working with multi-stakeholder groups to find creative and effective ways of managing air quality issues has proven time and again to be robust and credible, and is needed all the more in a fragile economy as we seek efficient and effective solutions to managing the environmental impacts of activity on the landscape.

Among the challenges CASA faces at the moment is working with fewer financial resources for project team work than has been the case in the past. The "external" budgets for project work have been provided by government and industry, both of which are under financial stress at the moment. Teams have often relied on consultants to provide technical information and analysis. There will be an increased focus on the expertise that can be found at the team level for much of this work. An example of this is the way in which the Health Task Group of the Odour Management Team reviewed and summarized a great deal of technical information in its report. The Non-Point Source Team may be looking at a similar approach as it tackles the available data and information. While the timelines and the level of detail may shift with fewer resources, CASA has shown that it can deliver its work in challenging times.

None of the products that CASA delivers would be possible without the hard work of many people: Board members, project team members, Secretariat staff, funders, and the many people who work behind the scenes to provide advice and technical support to CASA teams. One of the basic assumptions we make at CASA is that all of us together are smarter than any one of us – the work we have completed in 2015 has proven this once again. Thank you to all who have participated in CASA's work this year.

The CASA approach is most effective when there is clear direction on the environmental outcomes desired but lots of flexibility on how to achieve them. As the new provincial government finds its feet and outlines the priorities for the environment CASA looks forward to new opportunities to assist in developing sound and sustainable policies.

**Keith Denman**  
Executive Director

A handwritten signature in black ink, appearing to read "Keith Denman". The signature is fluid and cursive, with a long horizontal line extending to the right.

# HIGHLIGHTS

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## INTEREST-BASED NEGOTIATION TRAINING

In order to assist our stakeholders in their participation in the CASA process by building their understanding and skills for interest-based negotiation, CASA provides training for our members. In 2015, numerous stakeholders attended a two-day Interest-Based Negotiation workshop led by Ian Montgomerie. The group included representatives from airsheds, industry, government and the non-profit sector. The secretariat is looking to schedule further training sessions in 2016.

## NON-POINT SOURCE KICKOFF

The announcement in September that significant areas of Alberta are facing exceedances of the Canadian Ambient Air Quality Standards (CAAQS) has lent some urgency to the work of the Non-Point Source Project Team. The team will be looking to identify those non-point sources that are relevant to the current and potential exceedances of the CAAQS and identify options to reduce them. The team began its work with a two-day kick-off in Red Deer in November.

The group was led through interest-based negotiation training by the CASA secretariat, and then proceeded to review the project charter and discuss next steps. Following the strong start in November, the team is looking forward to working throughout 2016.

## ODOUR MANAGEMENT GUIDE

CASA's Odour Management Team wrapped up its work and presented its report and products at the September Board meeting. The project team is particularly proud of the Good Practices Guide, which will serve as a reference on odour issues and their management. The guide is available electronically on our website and also in hard copy. The Secretariat will be happy to provide information on the process and on the guide to anyone who is interested.

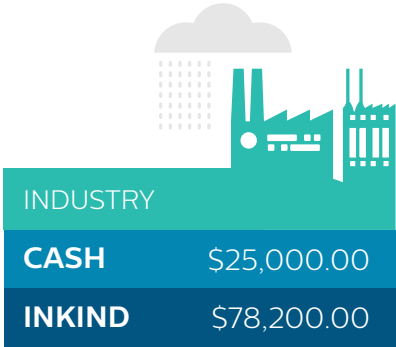


# CASH & IN KIND CONTRIBUTIONS



Note that CASA's core funding for 2015 was provided in 2014 by the Government of Alberta.

## 2015 CASH + INKIND BY SECTOR



**\$103,200.00**



**\$73,925.00**

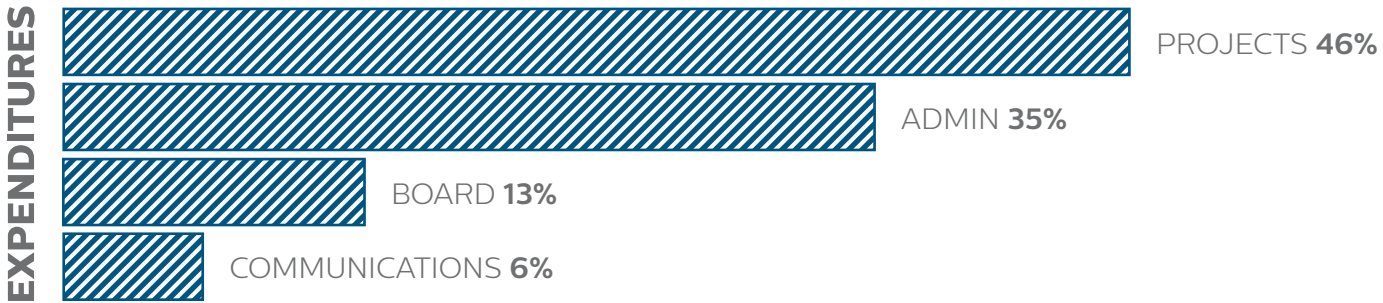


**\$87,275.00**

## 2015 TOTAL CASH AND INKIND CONTRIBUTIONS



**\$264,400**



# BOARD COMMITTEES

## PERFORMANCE MEASURES COMMITTEE (PMC)

The Performance Measures Committee (PMC) is charged with developing and maintaining a process for calculating and assessing CASA's performance. The committee also oversees the calculation of performance indicators related to those measures. In 2015, the PMC recommended six adjustments to the Performance Measures Strategy based on feedback provided by CASA's Board

## PERFORMANCE MEASURES REVIEW WORKING GROUP (PMRWG)

A review of the Performance Measures Strategy has been directed to be conducted every three years by the PMC, with reviews scheduled to occur in 2015, 2018, 2021, etc.

## COMMUNICATIONS COMMITTEE

Following CASA's 20th Anniversary, the Communications Committee became inactive due to the absence of a communications coordinator. The committee was revived in the fall of 2015 and created a new communications plan for the 2016 year.

The revised communications plan was created to strengthen relationships with:

- The CASA Board of Directors
- Stakeholders
- Members of Legislative Assembly (MLAs)

## BOARD PROFILE

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CASA STAFF WERE ABLE TO CATCH UP WITH A COUPLE OF BOARD MEMBERS TO ASK ABOUT THEIR EXPERIENCES WITH CASA, AND TO SEE WHAT THEY ARE EXCITED ABOUT GOING FORWARD.



### David Spink

From the development of the Clean Air Strategy in 1991 to CASA's recent publication of the Good Practices Guide for Odour Management in Alberta, David has seen the genesis and evolution of CASA and is eager to explain the benefits of multi-stakeholder collaborative processes.

"The advantage of CASA is that it brings stakeholders together to develop common understandings and to work collaboratively on solutions to air quality issues," said David. "The early years of CASA were not without challenges as moving from "positional-based" to "interest-based" negotiations and establishing trust relationships between stakeholders didn't happen overnight. I see CASA now as being a very effective forum for establishing air quality management priorities and working collaboratively and cordially to tackle these priorities. The many successes of CASA are a clear demonstration that CASA works."

Going forward, David says there is an immense need to manage air quality emissions effectively and responsibly. "People recognize that in our current society some air quality impacts are inevitable but they also rightly expect that all reasonable measures will be taken to reduce those impacts. CASA, being a multi-stakeholder forum, can play an important role in this area as CASA developed air emission management frameworks, like the electricity framework, have a high level of public credibility. Also, currently there are expectations that in the future there will be a more integrated and comprehensive provincial air quality monitoring system, and CASA can help identify and recommend ways to enhance provincial air quality monitoring, evaluation and reporting."

"CASA came into existence out of a recognized need to find a better approach to managing air quality than through confrontation and argument. With the ongoing commitment of its members CASA will continue to be a success and significantly contribute to air quality management in Alberta."





### Terry Rowat

Terry joined CASA's board in 2015, but is not new to multi-stakeholder collaboration. For the last 15 years, Terry has been involved in the development of air quality policy on behalf of the chemical industry, and currently is the Manager of Responsible Care at Methanex Corporation.

Over the last several years, the chemical industry has accomplished numerous agreements alongside partners in government. "The value of multi-stakeholder collaboration is that it creates lasting value for all parties involved," said Terry. "You create a network of mutual respect, so when an issue arises, you already have those relationships in place."

"Driving innovation and the reduction of emissions has been the goal of industry, as well as the provincial and federal government. We need all parties at the table to ensure there is buy-in, especially when it comes to data collection and analysis. We want to create mutually agreeable solutions, and I consider the development of the Air Quality Management System, Base-Level Industrial Emissions Requirements and Alberta permits for NOx as a major accomplishment in the recent years."

"The Non-Point Sources Project team is completing valuable work that is needed in the province right now. We need a clear understanding of the causes and effects of those particular contaminants," said Terry. "I am looking forward to seeing the development of the Climate Leadership Plan, and the potential development of pragmatic performance standards for industry, especially the value-added production in Alberta."



# EVALUATING + MEASURING CASA'S PERFORMANCE

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Every year, CASA ensures that performance is measured to reflect the work completed, and to make adjustments so that we can keep improving.

## PERFORMANCE MEASURES AND INDICATORS

The CASA Board approved the new CASA Performance Measurement Strategy, which defines metrics where CASA has a high degree of control, and areas where CASA has a lower degree of control over results.

All performance measures and their calculated results were approved by the CASA Board as part of the 2015 CASA Performance Measures Review.

*Performance measures look at where CASA has a high degree of control over the results and compares them to a desired target. They look at CASA's direct performance.*

*Performance indicators focus on areas where CASA has a lower degree of control or indirect control over the results. They help to place CASA within the bigger picture and help us, indirectly, to understand the impact of our activities on society.*



# PERFORMANCE MEASURES

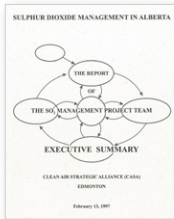
	OBJECTIVE	PERFORMANCE MEASURE	TARGET	ACTUAL	NOTES						
Performance Measure 4.a	Provide support to CASA stakeholders.	Degree of CASA stakeholders' satisfaction with CASA.	<table border="1"> <tr> <td>Awareness</td> <td>See Appendices of Annual PMC Report</td> </tr> <tr> <td>Value</td> <td>Maintain or Increase</td> </tr> <tr> <td>Relevance</td> <td>Maintain or Increase</td> </tr> </table>	Awareness	See Appendices of Annual PMC Report	Value	Maintain or Increase	Relevance	Maintain or Increase	N/A	No data collected for this measure as it was developed during the recent review of CASA's Performance Measurement Strategy.
Awareness	See Appendices of Annual PMC Report										
Value	Maintain or Increase										
Relevance	Maintain or Increase										
Performance Measure 5.a	Encourage Board member participation in CASA.	Percentage of Board attendance at Board meetings by sector.	75%	Government – 52% Industry – 92% NGO – 100%	The target for government was not met. The government caucus consists of federal, provincial, municipal, First Nations, and Métis representatives.  2014 Results: Government – 53.1% Industry – 83.3% NGO – 85%						
Performance Measure 6	Develop reports and recommendations adhering to CASA's managing collaborative process guide	Degree of satisfaction with project team work by team: <ul style="list-style-type: none"> <li>The Project Charter was completed.</li> <li>The process was collaborative.</li> <li>The team developed recommendations using the SMART (Specific, Measurable, Actionable, Realistic, Time-bound) model.</li> </ul>	75% 75% 100%	85% 77% 71%	CASA Project Team Exit Survey used for EFR and OMT Project Teams. Statistic does not reflect recent review of CASA's Performance Measurement Strategy.						
Performance Measure 8.a	Increase awareness of CASA, CASA projects and managing collaborative processes guide.	Speaking engagements and meetings undertaken by CASA's Executive Director	Maintain or increase	20	Includes 16 meetings with external stakeholders, and 3 speaking engagements between March and December 2015.						

# PERFORMANCE INDICATORS

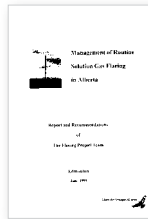
	OBJECTIVE	PERFORMANCE INDICATORS	ACTUAL	NOTES
Performance Indicator 1	Implement CASA recommendations	Percentage of substantive recommendations from 4 years prior that have been implemented	100%	See "Additional Information" in Appendix 1 of the 2015 Performance Measures Committee Annual Report
Performance Indicator 2	Measure impact of completed project team work.	Each completed project team comes up with one specific metric to measure success of team 5 years in the future.	N/A	No team metrics were scheduled for reporting in 2015.

*Note that some performance measures and indicators are measured annually, while some are only measured on a three-year cycle. Please refer to the Performance Measures Strategy for more information.*

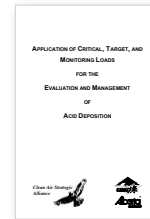
# A LOOK BACK AT SOME PAST PROJECTS



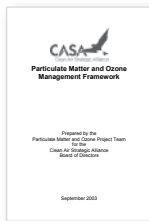
SO2 Management project, 1997



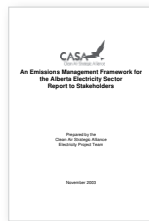
Flaring & Venting project, 1998  
(winner of the 1999 Alberta Emerald Foundation's Emerald Award for Environmental Excellence)



Target Loading Report, 2000  
(winner of the Premier's Award of Excellence)



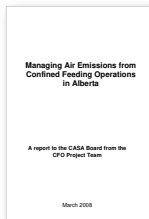
Particulate Matter and Ozone project, 2003  
(winner of the 2001 Premier's Award for Excellence)



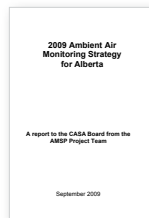
Electricity project, 2004  
(winner of Alberta Emerald Foundation's Emerald Award for Environmental Excellence)



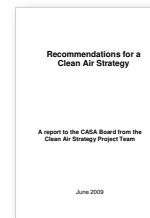
Consensus process, 2005  
(winner of Carleton University's Arthur Kroeger Award for Policy Leadership)



Managing Air Emissions from Confined Feeding Operations in Alberta, 2008



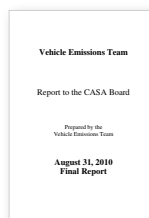
Ambient Monitoring Strategic Plan, 2009



Recommendations for a Clean Air Strategy, 2009



Flaring & Venting project, 2010  
(winner of the 2005 Canadian Council of Ministers of the Environment (CCME) Pollution Prevention Award)



Vehicle Emissions Team, 2010



Odour Management Team, 2015

# ELECTRICITY FRAMEWORK REVIEW

In March 2013, the CASA Board approved a project charter and established a multi-stakeholder project team to conduct the second five-year review of the framework. To maintain consistency and continuity, the project team used the same definitions as in the 2003 Framework.

To ensure a thorough review, the team established several task groups to consider specific aspects of its project charter in more detail. These were:

- The Implementation Assessment Task Group
- The Base Case Working Group
- The Control Technologies and Reduction Strategies Task Group
- The Health and Environmental Assessment Task Group
- The Communications Task Group
- The Particulate Matter Management Task Group

The team presented their final report to the Board at their March meeting. The Board accepted the consensus recommendations and directed the team to continue working for one more month to resolve the nonconsensus issues. The final reports for both the Particulate Matter Management Task Group and the Control Technologies and Reductions Strategies (CTRS) Task Group were forwarded to the Board for approval on April 28, 2015 and May 21, 2015 respectively.

The PM group had considerable discussion on the general intent of the Framework in terms of PM management. The issue was whether or not, in the absence of a specific PM Management Plan, PM was to be treated similar to SO<sub>2</sub> and NO<sub>x</sub> in terms of end of design life BATEA requirements. No consensus could be reached on this issue. The final report from the PM Management Task Group summarizes each sector's perspectives on the issue.

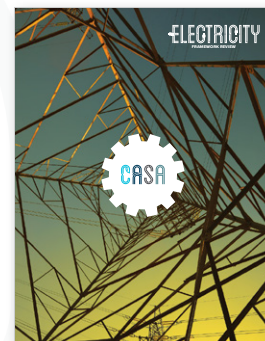
The CTRS task group was able to reach agreement on:

- Two recommendations regarding source standards and credit generation thresholds for new coal-fired thermal generation units.
- One recommendation on source standards for new reciprocating engines.
- One recommendation on biomass-fired generation (which was subsequently amended during the March 12, 2015 Board member discussion).

The CTRS Task Group could not agree on source standards for new gas fired thermal generation units. The group discussed standards based on either dry low-NO<sub>x</sub> (DLN), ultra-dry low NO<sub>x</sub> (UDLN) or selective catalytic reduction (SCR). The key area of disagreement was when DLN, UDLN or SCR should be applied, based on size and type of unit. Each sector provided their perspectives on the non-consensus issue. Additionally, ENGOs and industry submitted proposals regarding NO<sub>x</sub> emission limits for gas-fired generation units that are presented in the appendices of the report.

It is important to note that since the team did not reach a consensus on the need to review and/or adjust the Alberta Framework, the matter was referred to the Government of Alberta to provide guidance advice, as appropriate.

The CASA Board approved 13 consensus recommendations from the Electricity Framework Review Project Team in March 2015.



# ODOUR MANAGEMENT

In January 2013, the Odour Management Team was formed to engage in a focused discussion directed at advancing odour management in Alberta. The project goal is to create a good practice guide for assessing and managing odour in Alberta. Throughout 2014 and 2015, the Odour Management Team and five related subgroups worked collaboratively to meet the objectives of the following focus areas including:

- Odour Assessments
- Complaints Management
- Health
- Prevention & Mitigation
- Enforcement & Role of Regulation
- Education/Communication/Awareness
- Continuous Improvement

At the September 2015 CASA Board Meeting, the Odour Management Team submitted their final report with recommendations and their main deliverable, the Good Practices Guide for Odour Management in Alberta for approval by the board. The Board unanimously agreed by consensus to accept the team's recommendations and promoted the distribution of the Good Practices Guide during the Fall of 2015.

The Good Practices Guide for Odour Management in Alberta, developed by the Clean Air Strategic Alliance (CASA), explains some of the most common tools and practices used in assessing, preventing and managing odours. The guide brings together a wealth of information that industry, regulators and government can use to develop odour management plans or requirements.

The guide covers the following topics:

## UNDERSTANDING ODOUR

An important step in managing odour is developing an understanding of its properties, frequency and duration of occurrence, sources, and impact on health and well-being.

## ODOUR PREVENTION AND MITIGATION

Prevention and mitigation can be described as a suite of tools used to prevent or lower odorant emissions or reduce the occurrence of adverse odour effects.

## ODOUR ASSESSMENTS

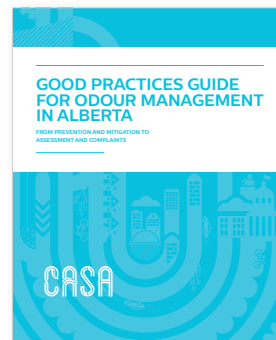
Odour assessments are conducted for a variety of reasons, and there are a wide variety of odour assessment tools and approaches available.

## ODOUR MANAGEMENT

Odour management involves the application of the appropriate tools to understand and effectively manage odour.

## ODOUR COMPLAINTS

Receiving, understanding and effectively addressing odour complaints is a very important part of odour management.



# NON POINT SOURCES

A project to help address Non-Point Source (NPS) air emissions aligns with the CASA goals of providing strategic advice and contributing to the development and implementation of effective air quality management in Alberta.

After a 2-month convening period, project work began in November 2015. The project charter anticipates that the project will take approximately 22 months, with a completion date of September 2017. The work of the project team will be limited to NPS emissions of primary PM2.5, and precursors of secondary PM2.5 and O3 (SOx, NOx, VOCs, and NH3), although work to reduce these substances is likely to have the co-benefit of reducing other emissions. Limiting the scope in this manner creates a manageable piece of work, with the potential to complement existing initiatives. There are six major categories of sources of NPS emissions in Alberta (agriculture, transportation, construction, biogenic, road dust, and forest fires) and the project work will focus on anthropogenics. The NPS project charter was presented to the CASA Board at their September 2014 Board meeting and the NPS Project Team convened in November 2015 as funding was secured.

The NPS project charter outlines the following goals and objectives:

## Project Goal

To help address non-point source air emissions contributing to non-achievement of ambient fine particulate matter and ozone standards in Alberta.

### OBJECTIVE 1

Compile and review information and agree on a common understanding of non-point source air emissions in Alberta.

### OBJECTIVE 2

Identify non-point source air emissions reduction opportunities in Alberta, where CASA's multi-stakeholder approach could add the most value.

### OBJECTIVE 3

Identify and recommend management actions, which could include recommending policy change, to address the highest value non-point source air emissions reduction opportunities in Alberta (from Objective 2).

### OBJECTIVE 4

Develop and implement a strategy and action plan for communicating with and engaging stakeholders and the public.

This work should result in a list of recommended management actions and advice for implementors to address NPS of interest in targeted areas or province-wide.

The CASA secretariat enlisted members for the Non-Point Source Project Team through board nomination and organized and executed the project team's kick-off meeting in November 2015. The team is working diligently throughout 2016 to progress their project work.



# AIRSHED ZONES

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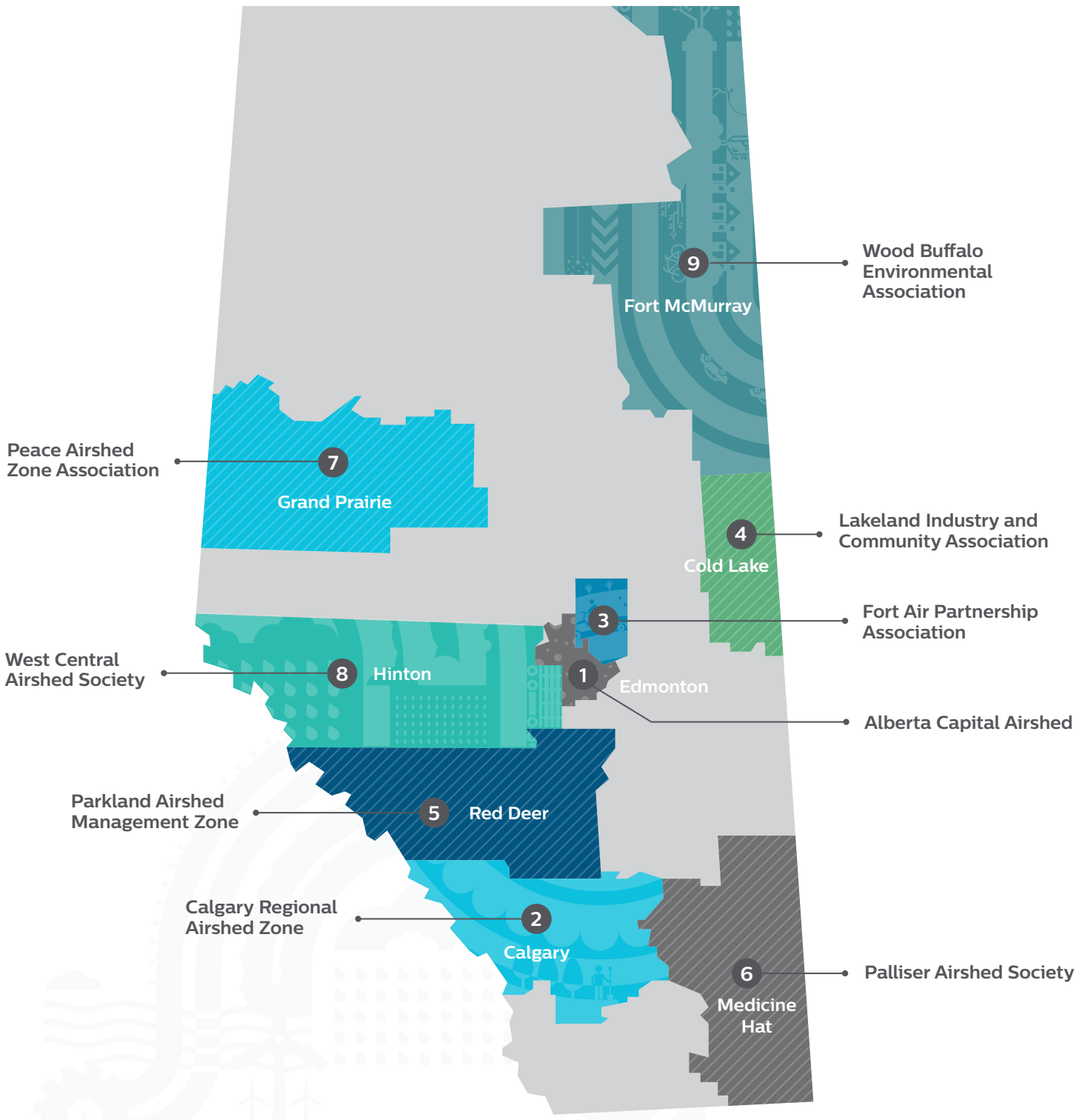
In Alberta, not-for-profit societies conduct ambient air quality monitoring as well as regional education and outreach.

Airsheds bring together regional stakeholders using CASA guidelines for consensus decision-making.

The Alberta Airsheds Council is the voice of Alberta's airsheds facilitating communication and cooperation between airsheds and their stakeholders.

- 1 Alberta Capital Airshed
- 2 Calgary Region Airshed Zone
- 3 Fort Air Partnership Association
- 4 Lakeland Industry & Community Association
- 5 Parkland Airshed Management Zone
- 6 Palliser Airshed Society
- 7 Peace Airshed Zone Association
- 8 West Central Airshed Society
- 9 Wood Buffalo Environmental Association





## ALBERTA AIRSHEDS COUNCIL

The Alberta Airsheds Council (AAC) provides a forum to identify and advocate for the common interests of the nine established airsheds in Alberta. The Council also facilitates communication and cooperation between the airsheds, and between airsheds and stakeholders.

The AAC has been working with Alberta's Environmental Monitoring, Evaluation and Reporting Agency (AEMERA) to develop a Memorandum of Understanding (MOU) as a formal commitment to work together to strengthen and better integrate province-wide and regional air quality monitoring, evaluation and reporting going forward.

In 2016, the AAC will concentrate on making the organization more robust, further strengthening its relationships with partner organizations including: the Alberta Environmental Monitoring, Evaluation and Reporting Agency; the Clean Air Strategic Alliance; Alberta Environment and Parks; and, the Alberta Energy Regulator. There will also be an increased focus on the implementation of the MOU Work Plan objectives, in collaboration with AEMERA, to support the development of an air monitoring system for the province.

## ALBERTA CAPITAL AIRSHED

The Alberta Capital Airshed (ACA) welcomed the Pembina Institute and Inside Education into its NGO caucus. Working with their municipal caucus, the ACA developed a strategy to encourage remaining municipalities in the region to join the ACA, and connect with industry members to identify additional prospective members.

The ACA was once again active in community events – including Clean Air Day events, community energy forum and a variety of other local events interested in clean air. The ACA launched citizen science initiatives alongside the City of Edmonton and Inside Education using new AirBeam technology. This technology connects with in-school education programs in order to plant the seeds of awareness of clean air for future generations. The ACA is hopeful that they will be able to offer easy citizen science opportunities for all interested parties in the future.

The first regional monitoring plan for the Alberta Capital Region was developed by the ACA over the past two years and approved by Alberta Environment & Parks in 2015. This plan paves the way for additional monitoring by bringing stakeholders together within one strategic direction.

This past year, the ACA proudly participated in the opening of a new station in Ardrossan. Reporting on the Air Quality Health Index, this station is part of the Strathcona Industrial Association's air quality monitoring network and includes support from Strathcona County. The location addresses one of the notable gaps in monitoring within the ACA region. Another gap in monitoring will be addressed soon. The first station in St. Albert, which is part of AEMERA's air quality monitoring network, is in place and expected to be operational in early 2016. The ACA will be looking to address additional monitoring gaps in the region – notably west and south of Edmonton – in 2016.

ACA also continues to actively participate in the Capital Region Oversight Advisory Committee in the implementation of a Particulate Matter Response Plan.

## CALGARY REGION AIRSHED ZONE

In April 2015, the Calgary Regional Airshed Zone (CRAZ) relocated the Calgary Central continuous monitoring station from the downtown location to a site approximately 100 metres northeast of the Inglewood Bird Sanctuary. Meteorological sensors for wind speed/direction and ambient temperature were installed at this station that had never been monitored at the downtown location. Additionally, this monitoring site hosts five educational display stations providing information and interesting facts about air pollution. In partnership with Inglewood Bird Sanctuary, CRAZ will promote various educational programs where students will get to visit the station and learn about air pollution. CRAZ hosted a Grand Opening of this air monitoring station in October 2015.

Passive air monitoring network was reviewed, which resulted in seven passive sites (SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>) being removed and three passive sites (SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>) relocated in October 2015, as per the CRAZ Network Assessment recommendations. In addition, five new passive sites were established in Calgary southeast quadrant to provide passive saturation monitoring for H<sub>2</sub>S.

In 2015, CRAZ collaborated with Inside Education to develop a pilot project, Clean Air Responsible Schools (CARS) with 10 schools in Calgary, for grade 5 students. The CARS program aims to develop understanding of air quality with the students and encourages community stewardship.

Under the PM & O<sub>3</sub> Management Plan, a Community Based Social Marketing program called Commuter Connect was developed to respond to single occupant vehicles in the region. This toolkit was developed to help organizations foster a more efficient, healthy, and environmentally responsible way to travel to work. Commuter Connect will launch with our new website in Spring 2016.

## FORT AIR PARTNERSHIP

A major project that the Fort Air Partnership (FAP) focused on in 2015 was the building and placement of a new monitoring station in the Town of Gibbons. The site will be active in February, 2016. The location for the new station was chosen based on one of FAP's primary monitoring objectives, which is to monitor for air quality where people live, as well as to fulfill recommendations made in network assessments done for both the FAP region and the larger Capital Region. Data collected at this station will enable the calculation of the Air Quality Health Index (AQHI).

Also in 2015, FAP was made aware that its monitoring station in Bruderheim would have to be moved to accommodate new development by the town. The move, about 300 metres from its existing location, was scheduled for the Spring of 2016. Several pieces of major equipment were replaced during 2015 as part of our capital equipment replacement plan, including non-methane hydrocarbon, ozone, ethylene and PM<sub>2.5</sub> analyzers in various stations, as well as a new temperature system and wind tower.

As a public organization, FAP understands it has a responsibility to be transparent about its work and inform the community about the air that they breathe. To raise awareness and community understanding, FAP increased the frequency of their e-newsletter and educational advertising, and continued to provide near real-time data through their website.

FAP continues to be an active partner in the Life in the Heartland organization, which is committed to enhancing communications with the community regarding industrial development. FAP also continues to actively participate in the Capital Region Oversight Advisory Committee in the implementation of a Particulate Matter Response Plan.

## LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION

In 2015, Lakeland Industry and Community Association (LICA) continued to operate a regional network consisting of passive, continuous, integrated, and soil acidification monitoring programs.

LICA's 27 passive stations are sampled every two months and follow a three-by-three township grid pattern. LICA's continuous monitoring network includes permanent stations in Cold Lake (Cold Lake station), southwest of St. Lina (St. Lina station), and near oil sands operations, southwest of Marie Lake (Maskwa station); a portable air monitoring system (PAMS) was dispatched to communities throughout the region. Integrated sampling of volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons is conducted at the Cold Lake and PAMS stations; special equipment can now automatically collect additional VOC samples at PAMS (during odour events for example). Sampled on a staggered four-year cycle, LICA's soil acidification monitoring plots at Moose Lake Provincial Park, Whitney Lakes Provincial Park, and Southwest of Tucker Lake.

LICA's monitoring network has evolved over time to meet changing regulatory and local stakeholder needs, while maintaining a high degree of scientific rigor. LICA will adopt new methods and deploy new, proven monitoring technologies when needed. This ensures the highest quality of data is collected to meet the needs of our partners and members.

In 2015 LICA took steps to refine and improve sampling and monitoring methods and standard operating procedures, particularly in the integrated monitoring programs. LICA also began the process of securing a site for the PAMS in the Town of Bonnyville for a one to two year monitoring project; the town is the second largest population centre in the region and a major service area for the oil and gas industry. Lastly, LICA developed its Air Quality DNA presentation tool which incorporates nearly 100,000 multi-year air quality measurements into colourful, easy to understand visualizations.

## PALLISER AIRSHED SOCIETY

In 2015, the Palliser Airshed Society (PAS) maintained its existing network of air quality monitoring stations, including a continuous monitoring installation located within the municipal boundaries of Medicine Hat, and 22 passive monitoring sites distributed throughout SE Alberta. For the calendar year, all AHQI parameters remained below threshold AAAQO levels with the exception of PM<sub>2.5</sub> for which exceedances were recorded on three separate occasions in June, July and August. All were attributed to smoke from wildfires originating outside of the region serviced by PAS rather than from sources within the airshed boundaries. The passive network monitors SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub>, for which samples are collected on a monthly basis. The sites are strategically placed with respect to air modelling indicators as well as in deference to potential concentration of emissions. At all sites, monthly and annual aggregate values were well below threshold.

In addition to the existing network pre 2015, capability for continuous air quality monitoring was expanded with the introduction of an airpointer+PMTM monitoring station. The airpointer is highly scalable, accommodating up to six analyzer modules in a comparatively portable format. The airpointer operated by PAS monitors NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, and PM<sub>2.5</sub> as well as a slate of meteorological parameters. All parameters monitored by the airpointer remained below threshold AAHQO with the exception of PM<sub>2.5</sub>, which spiked on the same temporal pattern, attributed to wildfire smoke permeating the airshed, as at the Crescent Heights location.

The airpointer installation allows portability and was purchased with the intent to cover a range of strategic sites on a rationalized schedule and/or an as-needed basis. The airpointer will continue to operate at the Brooks site, recording a full calendar year of data. In the meantime, plans to relocate in late summer or early fall 2016 are to be based on defined priorities derived by PAS with the input of stakeholder partners with the airshed. Commissioning a reliable portable air monitor such as the airpointer represents action on a PAS commitment to provide wider and flexible air monitoring services to the residents of SE Alberta.

2015 saw a number of advances with the hiring of an Executive Director and revitalization of the Technical Advisory Committee as well as plans to structure a Communications Committee. PAS finalized a 5-year Air Monitoring Plan based on extensive airshed monitoring and incorporated upgrades at Crescent Heights to comply with updates to the Air Monitoring Directive, working with and appreciating the input of the regulators involved. Financial pressures with lower revenues from volunteer contributors, both corporate and municipal were issues. Judicious use of available funding allowed for a balanced budget to year end; however limited funding does impact the ability to launch comprehensive educational and outreach programs as well as applied research initiatives; possible action to manage particulate matter one example. Repair and replacement of aging equipment is an ongoing concern under such circumstances. Overall, PAS is dedicated to maintain a reliable and credible ambient air quality monitoring network to the benefit of all stakeholders in the airshed, most significantly the residents who work and live therein.

## PARKLAND AIRSHED MANAGEMENT ZONE

2015 marked the eighteenth anniversary of the Parkland Airshed Management Zone (PAMZ) and the sixteenth year of operation for its Air Quality Monitoring (AQM) Program.

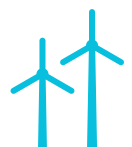
In December 2014, a second permanent air quality monitoring site was established in Red Deer at the Lancaster Reservoir. Data collection and reporting at the new site commenced January 1, 2015 and is helping provide a more comprehensive understanding of Red Deer's air quality.

As per new Air Monitoring Directive requirements, PAMZ submitted its updated AQM Plan to Environment and Parks (AEP) in March and it was accepted. The plan included the removal of two passive monitoring sites in Banff National Park and the decommissioning of one of PAMZ's two portable air monitoring trailers. The two passive sites were decommissioned July 1. The one remaining trailer, the Dr. Martha Kostuch AQM Station, is now being used for both issues response and population centre monitoring.

On May 13, PAMZ held its Annual Issues Identification Meeting in Big Valley. This town is located east of PAMZ's current boundaries in a region under consideration for future expansion. PAMZ plans to conduct air quality monitoring in the region in 2016.

PAMZ celebrated Clean Air Day 2015 on June 3 by hosting an eco-fair for local environmental organizations, a presentation ceremony and luncheon for its five 2015 Action HERO (Helping the Environment by Reducing Ozone) Award recipients, and a vehicle emission testing clinic, all at the Sheraton Hotel in Red Deer. PAMZ's 18th Annual General Meeting was held June 17 in Sylvan Lake.

Throughout, PAMZ continued its extensive involvement in the development of AEP's PM2.5 Response including the development of the associated Education and Engagement Strategy by the PAMZ Communication Committee. The release of the Response Plan is scheduled for the first quarter of 2016. With the September 2015 announcement that Red Deer had exceeded the Canadian Ambient Air Quality Standards (CAAQS) for Fine Particulate Matter in the 2011-13 Assessment, assistance in the implementation of the PM2.5 Response will be of paramount importance to PAMZ in future years.



## PEACE AIRSHED ZONE ASSOCIATION

2015 began with the purchase of a new semi-portable continuous monitoring station for the Peace Airshed Zone Association (PAZA). In 2013, PAZA partnered with Long Run Exploration Ltd. to maintain and operate a voluntary industry initiated trailer in the Falher, AB area. Ownership of this trailer has since been transferred to PAZA and they now operate seven continuous stations and 46 passive air quality monitoring sites.

Funding for the Airshed has stabilized in recent years since PAZA initiated a sustainable funding model to ensure continued operation. PAZA's membership consists of regulatory approval holders and voluntary industry members, public, municipalities, government and NGOs.

Mid-year 2015, PAZA experienced an internal reorganization to better align PAZA's direction and future sustainability with the implementation of the Alberta Environmental Monitoring, Evaluation and Reporting Agency. PAZA has continued to work closely with the AAC to promote the value and contributions made by Airsheds to maintain regional representation in the provincial framework.

Throughout 2015, PAZA's monitoring network has seen multiple improvements. Wind instruments have been replaced to offer more reliability and consistency. PM2.5 analyzers have been upgraded at two stations, and some of our older SO2 and total reduced sulphur (TRS) analyzers have been refurbished to extend operating life.

PAZA's new monitoring plan was completed and submitted to AEP. The fall of 2015 saw the completion of a 3 year quality assurance program audit which concluded that our program required only minor updates. PAZA has also been involved in providing feedback on the revisions to the Air Monitoring Directive initiated by Alberta Environment and Parks, as well as working closely with the AAC Technical Working Group to provide integrated feedback on behalf of all Airsheds

## WEST CENTRAL AIRSHED SOCIETY

The West Central Airshed (WCAS) celebrated its twentieth anniversary in September 2015. A number of stakeholders, old and new, provided their perspectives on the success of the airshed and the airshed model.

WCAS continues to grow the monitoring program. In 2015 a monitoring station was put into service in Fox Creek. WCAS, AEMERA, Fox Creek Operators Group and the Town of Fox Creek worked together to establish and operate the station for a one year period. For WCAS this is a first step in expanding WCAS boundaries to the north. WCAS is working with AEP and AEMERA to conduct an emission inventory in the area between the current WCAS northern boundary and the Peace Airshed southern boundary. The emission inventory will provide information needed to develop a draft monitoring plan. WCAS will use the plan to move the zone expansion plan forward.

WCAS in concert with AEP Upper Athabasca Region and AEMERA have agreed to commission the WCAS portable air monitoring station in Hinton. The Hinton region has been identified as an area of concern for pm or particulate. The second air monitoring station in Hinton will help verify regional air quality. February 2016 is targeted for commissioning the portable station.

WCAS continues active participation in the Capital Region Oversight Committee, CASA Non-Point Source project team, and AAC.



## WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

During 2015, Wood Buffalo Environmental Association (WBEA) was funded by AEMERA. The WBEA Board comprises 38 members representing Aboriginal, industry, ENGO, and government sectors.

Throughout the year, WBEA operated 18 fixed air monitoring stations using continuous and semi-continuous measurement techniques for a wide range of air pollutants. Each station reported continuous meteorology. The network measured 202 parameters using 102 analyzers, two tall meteorological towers, and an acoustic sounder at air monitoring station (AMS) 17 for continuous upper atmosphere meteorology at 100 metre levels to a height of 3,000 metres above ground. WBEA operated three portable air monitoring stations for compliance or community purposes. Shelters were installed for AMS 21 (Conklin Community) and WBEA initiated work on a new station at Janvier (AMS 22).

In terrestrial monitoring, 25 permanent jack pine forest health plots out to 150 km from the operations were assessed by Agriculture and Agri-Food Canada for tree condition (including insects and diseases). Six 30 m. tall, solar-powered forest health plot towers continued to stream hourly meteorology data from four levels. Passive sampling for SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, NH<sub>3</sub>, HNO<sub>3</sub> was completed on a bimonthly cycle at 23 forest/wetland plots, and five air monitoring stations. The low-flow/power denuder system for N (NH<sub>3</sub>, HNO<sub>3</sub>, fine PM) operating at four towers was validated for year-round measurement. The regional 23 site bulk/throughfall ion exchange resin network was operated and seasonal deposition data cation/anion data were produced.

For human exposure purposes, WBEA operated specialized odour measurement equipment at AMS 1 Fort McKay-Berta Ganter and in the AMS 104 portable station located in Anzac. The Community Odour Monitoring Project (COMP) was initiated in Anzac. WBEA initiated validation work on triggered, cartridge-based systems for quantitative, time-stamped remote sampling of short-duration odour events.

At the end of 2015, WBEA staff and data processing/management systems will be handling some 550 million air-related data points annually.

## BOARD OF DIRECTORS

STAKEHOLDER GROUP	SECTOR	DIRECTOR, ASSOCIATION/ AFFILIATION	ALTERNATE DIRECTOR, ASSOCIATION/AFFILIATION
NGO	Industrial	<b>Chris Severson-Baker</b> , Managing Director – Pembina Institute	<b>Ruth Yanor</b> , Mewassin Community Council
	Health	<b>Leigh Allard</b> , President & CEO, The Lung Association – Alberta & NWT	<b>Vacant</b>
	Rural	<b>Ann Baran</b> , Southern Alberta Group for the Environment	<b>Vacant</b>
	Urban	<b>David Spink</b> , Prairie Acid Rain Coalition	<b>Bill Calder</b> , Prairie Acid Rain Coalition
	Consumer Transportation	<b>Scott Wilson</b> , Senior Policy Analyst – Alberta Motor Association	<b>Vacant</b>
Industry	Petroleum Products	<b>Brian Ahearn</b> , Vice President – Western Division Canadian Fuels Association	<b>Peter Noble</b> , Senior Regulatory Affairs Manager – Imperial Oil
	Oil & Gas – Large Producers	<b>Claude Chamberland</b> , Canadian Association of Petroleum Producers	<b>Koray Onder</b> , Canadian Association of Petroleum Producers
	Forestry	<b>Brian Gilliland</b> , Manager International Environmental Affairs Weyerhaeuser Co. Ltd.	<b>Keith Murray</b> , Director Environmental Affairs – Alberta Forest Products Association
	Mining	<b>Rob Beleutz</b> , Environmental, Health and Safety Manager Graymont Western Canada Inc.	<b>Dan Thillman</b> , Plant Manager – Lehigh Cement
	Alternate Energy	<b>David Lawlor</b> , Director Environmental Affairs – ENMAX	<b>Vacant</b>
	Chemical Manufacturers	<b>Terry Rowat</b> , Manager, Responsible Care at Methanex Corporation	<b>Dan Hall</b> , Regional Director – Chemistry Industry Association of Canada (CIAC)
	Agriculture	<b>Rich Smith</b> , Executive Director – Alberta Beef Producers	<b>Humphrey Banack</b> , Vice- President, Alberta Federation of Agriculture
	Utilities	<b>Jim Hackett</b> , Director, Health & Safety, Environment – ATCO Group, Utilities	<b>Ahmed Idriss</b> , Senior Advisor, Environment Policy – Capital Power Corporation
	Oil & Gas – Small Producers	<b>Vacant</b>	<b>Vacant</b>



STAKEHOLDER GROUP	SECTOR	DIRECTOR, ASSOCIATION/ AFFILIATION	ALTERNATE DIRECTOR, ASSOCIATION/AFFILIATION
Government	Federal	<b>Cheryl Baraniecki</b> , Associate Regional Director General, West & North – Environment and Climate Change Canada	<b>Martin Van Olst</b> , Senior Analyst – Environment and Climate Change Canada
	Provincial Government – Energy	<b>Al Sanderson</b> , Chief Assistant Deputy Minister Alberta Energy	<b>Audrey Murray</b> , Branch Head – Environment and Resource Services Alberta Energy
	Provincial Government – Health	<b>Linda Mattern</b> , Assistant Deputy Minister Acute Care & Population Health Division – Alberta Health	<b>Dawn Friesen</b> , Executive Director Health Protection Alberta Health
	Local Government – Rural	<b>Al Kemmere</b> , President - AAMDC	<b>Vacant</b>
	Local Government – Urban	<b>Vacant</b>	<b>Vacant</b>
	Provincial Government – Environment	<b>Bill Werry</b> , Deputy Minister – Alberta Environment and Parks	<b>Rick Blackwood</b> , Assistant Deputy Minister – Alberta Environment and Parks
Aboriginal Government	First Nations	<b>Holly Johnson Rattlesnake</b> , Samson Cree Nation	<b>Vacant</b>
	Métis	<b>Mary Onukem</b> , Environmental Coordinator – Métis Settlements General Council	<b>Vacant</b>



## PAST MEMBERS + SECRETARIAT

NAME	MEMBER	DURATION ON BOARD	POSITION	SECTOR
<b>Christine Best</b>	Environment and Climate Change Canada	1 year	Alternate	Government
<b>Martin Chamberlain</b>	Alberta Energy	2 years	Director	Government
<b>Tim Whitford</b>	Alberta Urban Municipalities Association	2 years	Director	Government
<b>Yolanta Leszczynski</b>	Shell Scotford Manufacturing	4 years	Director	Industry
<b>Don Wharton</b>	TransAlta Corporation	5 years	Director	Industry

**Keith Denman**, Executive Director

**Wendy Boje (until March)**, Interim Executive Director

**Cara McInnis**, Executive Assistant & Communications Advisor

**Sarah Hanlon**, Executive Assistant

**Karen Bielech**, Financial Administrator

**Robyn-Leigh Jacobsen (until September)**, Senior Manager

**Amanda Stuparyk**, Project Manager

**Warren Greeves**, Project Manager



# ORGANIZATIONS

CASA could not operate without the help of the many organizations who support those sitting at the board table and/or project teams. Thanks to these organizations for providing financial and in-kind contributions of time and expertise, ensuring CASA's continuing success.

AEMERA	Friends of Chain Lakes
Alberta Agriculture and Forestry	Graymont Western Canada Inc.
Alberta Association of Municipal Districts & Counties	Health Canada Alberta Region
Alberta Beef Producers	Hinton Pulp, A Division of West Fraser Mills Ltd.
Alberta Capital Airshed	Imperial Oil
Alberta Energy	Intensive Livestock Working Group
Alberta Energy Regulator	Lakeland Industrial and Community Association
Alberta Environment and Parks	Lehigh Cement
Alberta Federation of Agriculture	Maxim Power Corporation
Alberta Forest Products Association	Methanex Corporation
Alberta Health	Metis Settlements General Council
Alberta Health Services	Mewassin Community Council
Alberta Motor Association	Mother Rosalie Health Services Centre
Alberta Urban Municipalities Association	Natural Resources Conservation Board
Alta Gas	NOVA Chemicals Corporation
ATCO Power Canada Ltd.	Palliser Airshed Society
Calgary Region Airshed Zone	Parkland Airshed Management Zone
Canadian Association of Petroleum Producers	Peace Airshed Zone Association
Canadian Fuels Association	Pembina Institute
Canadian Natural Resources Limited	Petroleum Services Association of Canada
Canadian Society of Environmental Biologists	Prairie Acid Rain Coalition
Canadian Wind Energy Association	Saddle Hills Awareness Committee
Capital Power Corporation	Samson Cree Nation
Cenovus Energy Inc.	Shell Canada Ltd.
Chemistry Industry Association of Canada	Shell Scotford Manufacturing
City of Edmonton	Slave Lake Pulp
City of Lethbridge	Southern Alberta Group for the Environment
City of St. Albert	The Lung Association AB & NWT
COPD and Asthma Network	TransAlta Corporation
Devon Energy Corporation	TransCanada
Encana Corporation	University of Alberta
ENMAX	West Central Airshed Society
Environment and Climate Change Canada	Weyerhaeuser Company Ltd.
Fort Air Partnership	Wood Buffalo Environmental Association





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