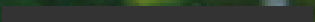




Annual Report 2021



About CRAZ



Established in 2007, the Calgary Region Airshed Zone (CRAZ) provides comprehensive air quality services and representation to more than 30 municipalities, 200 industry members, and all provincial government agencies within a region of south-central Alberta that is home to more than 1.8 million Albertans.

Our vision is that the region's air quality supports and fosters a healthy and vibrant population, ecosystem, and economy.

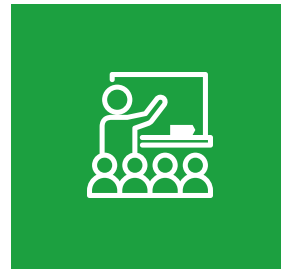
CRAZ members join various committees and guide the organization's focus, and prioritize action that benefits the airshed. Two new committees were formed in 2020/2021 - Smoke Working Group and Strategic Implementation; to complement the following committees:



Monitoring &
Analyzing Data



Policy & Research



Engagement



Air Quality
Management
Planning





Chairs Message



What a year - 2021 has been eventful again, the year has been a continuation of 2020 with lockdowns, restrictions and virtual meetings, renter issues, and an added dose of revenue challenges. Even with these challenges, I am proud of the staff and organization who carried on and handled every challenge collaboratively.

The only event held was the AGM which was virtual. CRAZ still had wonderful participation with the meetings being online, unfortunately there was no food.

2021 saw the continued deployment of Purple Air micro-sensors throughout the region. These sensors were welcomed by our municipal members. These sensors complemented the data CRAZ already collects, reviews, and publishes. For 2022, we want to be even more strategic, gain more memberships and continue to support air quality initiatives in the region.

We want to thank everyone associated with CRAZ, we have kept to our mandate, during a stressful economic time and during the largest global health crisis in over 100 years. It's taken the dedication of members, governments, industry, and our staff to have such a successful year.

David Lawlor
CRAZ Board Chair



Jill Bloor
CRAZ Executive Director



Air Quality Monitoring



CRAZ operates three continuous ambient air quality monitoring stations in the City of Calgary since 2008 on behalf of the Province of Alberta. These stations are a part of the National Air Pollution Surveillance (NAPS) network across Canada. In addition, CRAZ's Portable Air Monitoring Laboratory (PAML) was deployed at three different locations for a 6-month period. The Air Quality Health Index (AQHI) is produced from data from all four stations. The AQHI is available on the CRAZ website, www.craz.ca or through the AQHI Canada app.

Parameter	Calgary Inglewood	Calgary Southeast	Calgary Varsity	PAML
Sulphur dioxide (SO ₂)		•		
Oxides of nitrogen (NO _x)	•	•	•	•
Nitric oxide (NO)	•	•	•	•
Nitrogen dioxide (NO ₂)	•	•	•	•
Respirable particulates (PM _{2.5})	•	•	•	•
Ozone (O ₃)	•	•	•	•
Non-methane hydrocarbons (NMHC)	•	•	•	
Methane (CH ₄)	•	•	•	
Hydrogen sulphide (H ₂ S)		•		
Total hydrocarbons (THC)	•	•	•	
Carbon monoxide (CO)	•	•	•	
Wind speed and direction	•	•	•	•
Air temperature	•	•	•	•
Relative humidity	•	•	•	

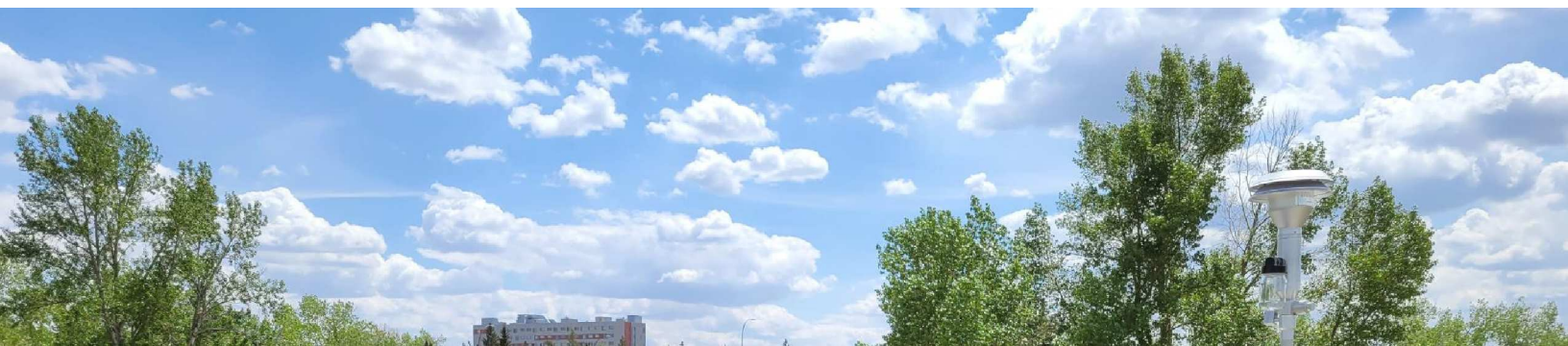
Air Quality Monitoring



CRAZ continued to monitor the air quality at the three permanent continuous monitoring stations: Calgary Inglewood; Calgary Southeast; and Calgary Varsity. The PAML monitored the air quality at: Elk Run Park in Canmore; Sunset Park in Chestermere; and the Field House in Aldersyde. CRAZ completed one full year air quality data collection through two 6-month periods at Elk Run Park in Canmore. Implementation of the CRAZ portable air monitoring program achieved the following objectives through the PAML deployments in the CRAZ region:

- Provide real-time information about air quality impacts on health based on the AQHI.
- Support CRAZ's long-term strategy for ambient air quality monitoring in its region.
- Help CRAZ stakeholders and members better understand air quality in CRAZ and what they can do to improve it.
- Provide transparent, open data for public use and scientific studies.
- Measure air quality in the areas that have little or no previous monitoring to address technical or geographical data gaps.
- Address some of the monitoring gaps identified by the regional network analysis that identified smaller urban centers should have continuous monitoring to assess emissions in relation to Alberta's Ambient Air Quality Objectives and to that in Calgary.

CRAZ as a third-party, provides more transparency to the system as all data is reviewed by its Technical Committee comprised of experienced, knowledgeable trained personnel from CRAZ's three sectors (government, industry, public/non-governmental agencies). Monthly data is reviewed by the Technical Committee at their meetings, posted on the CRAZ website and submitted to the Alberta's Air Data Warehouse. The stations undergo an audit yearly which is conducted by personnel from Alberta Environment & Parks (AEP). This separation from the operation & management of the stations increased the validity and credibility of the data.



Finance



The Finance committee keeps a close watch on the organization's financial health. We do a quarterly review of our cash flow and will report any concerns to the Board. The 2021 Audit was conducted by the Federation of Calgary Communities and was a clean Audit. 2021 continued to challenge the organization as our largest Municipal member reduced the membership fee paid to CRAZ by 40%. This continued to impact our programs and services.

The Finance committee, Executive Director, and the Board kept expenses as low as possible while still delivering programs and services.

The Provincial Government provided funds to year 3 of the 4-year operational grant. The certainty of this amount provides CRAZ with the ability to plan for future years.

The organization continues to focus on sustainability which includes increasing our membership as well as securing additional funding for programs. This work is continuous, but the support of the current members, staff, and board is evident.

Contracts	\$257,198
Grants	\$146,733
Membership Fees	\$112,046
Bay Rent	\$8,963
Sponsorship	\$7,000
Interest	\$285
Community Support	\$3,578
Total Revenue	\$535,803
Air Quality Monitoring	\$256,225
Engagement/Education/Outreach	\$9,121
Staffing	\$254,730
Governance	\$25,595
Administration	\$53,185
Total Expenses	\$598,856

Press Release



2021 Emerald Award Winner Calgary, Alberta, June 4th, 2021

The Calgary Region Airshed Zone (CRAZ) is honored to be the recipient of the 2021 Emerald Awards in the air category; recognizing projects and initiatives that improve air quality.

“Showcasing the Albertan environmental projects and initiatives that have addressed and mitigated the effects of local, regional, and global environmental issues by achieving excellence aligned to certain environmental priorities.”

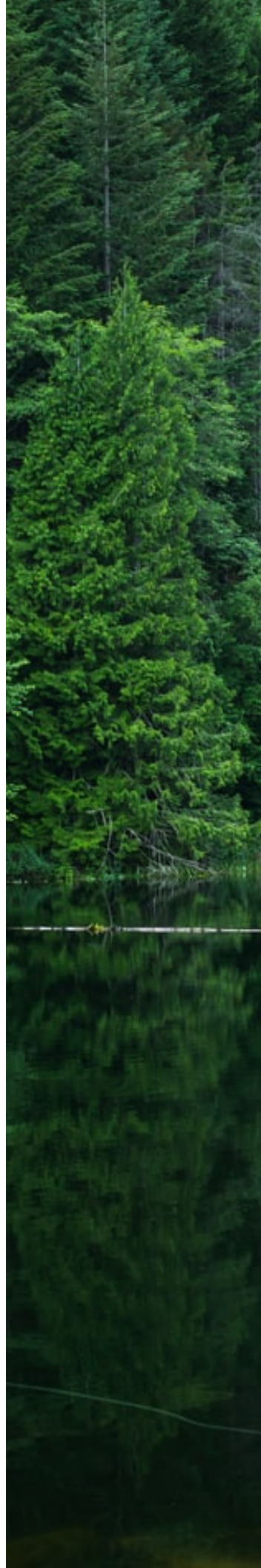
Alberta Emerald Foundation

The Emerald Awards were presented on June 1st, during Environment Week. On top of all the excitement of winning this award, CRAZ hosted the Annual General Meeting with representatives from industry, government, NGO's and the public all attending to learn about trending air quality data, future CRAZ initiatives and learning more about the air. On June 2nd, CRAZ represented Clean Air Day at the City of Calgary Mayors Environment Expo. We were given the opportunity to welcome thousands of students and teach about air quality in Calgary and the region.

The word is out, that air quality is important, and what we all can do matters to our air and to our health.

“It is an honor to be recognized for the hard work that all the members, volunteers and staff undertake to ensure the air we breathe is not harmful to us.”

Jill Bloor, CRAZ Executive Director



Board



CRAZ Board of Directors consists of 5 Industry members, 5 NGO/Public, and 5 Government bodies (AEP, AHS, AER, City of Calgary, and a rural/small urban rep). Directors hold a two-year position, and each sector agrees as a group to put a representative forward for voting at the Annual General Meeting. Being a member of the Board allows members to shape the strategic direction of CRAZ and advance action on priorities in air quality management.

David Lawlor, Chair, Public member

Dick Ebersohn, Vice Chair City of Calgary

Ted Sutton, Secretary, Public member

Paul Ryan, Treasurer Public, member

Brian Hills, Alberta Environment and Parks

Janice Gallwey, AGAT

Cailee Ellis, Lafarge Canada Ltd. (June 2021 - present)

Darcy Coombs, BVCAS

Jason Forth, Pieridae Energy (till June 2021)

Leighanne Mohr, Pieridae Energy (June 2021 - 2022)

Lynn Que, Alberta Health Services

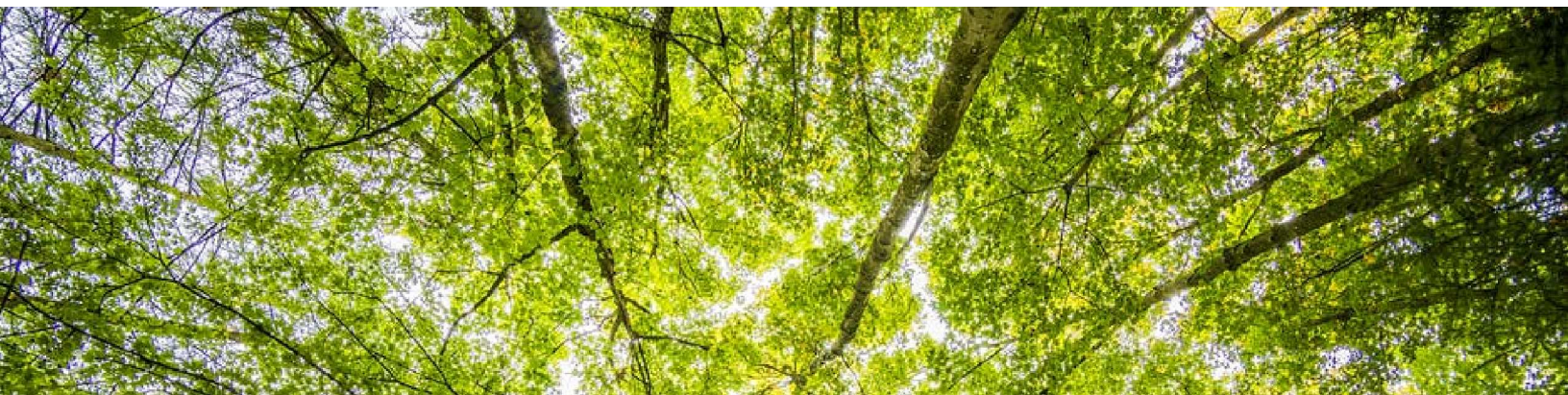
Nicole Thomas, Lehigh Hanson

Sean Dawson, Public member

Shane Adam, ENMAX

Judy Stewart, Public member (till June 2021)

Ruth Goodwin, Town of Black Diamond



Committees

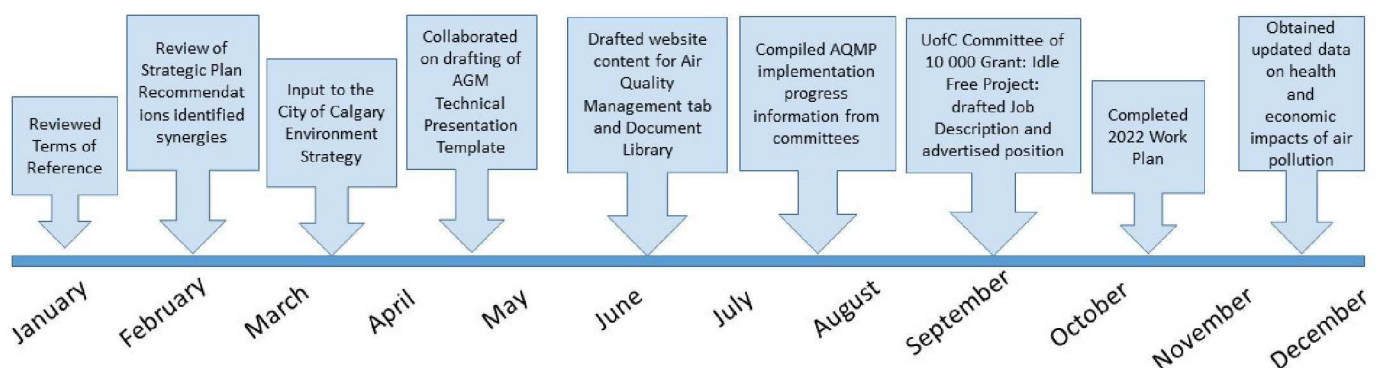


Members join various CRAZ committees and guide the organization's focus and prioritize action that benefits the airshed. The networking, goal setting, data analysis, education, and outreach planning are just a small section of what our committees accomplish in air quality management. Each committee outlined below is made up of representatives from government, industry, NGOs, and the public.



Air Quality Management Planning

In 2021, the Air Quality Management Planning (AQMP) Committee moved forward on many key items in their workplan. One key accomplishment included applying for a grant through the University of Calgary Committee of 10,000 Student's Union. CRAZ was awarded the grant for the purposes of undertaking an "Idle Free Project" on the University of Calgary campus. The project will aim to identify idling hot spots and initiate an engagement campaign to encourage a reduction of needless idling on campus. The project has been initiated and is scheduled for completion in Fall 2022. Another key project of the AQMP Committee was supporting an update of the CRAZ website. Content was drafted for a new AQMP tab on the CRAZ website. The Committee also reviewed previous reports contracted by CRAZ and developed short synopses for inclusion in an online "Document Library". The CRAZ AQMP Committee also supported CRAZ staff to develop a presentation template for the Annual General Meeting and provided input into the City of Calgary Environment Strategy. Finally, the AQMP Committee compiled a progress update on the implementation of the CRAZ Air Quality Management Plan and shared the results with the CRAZ Board.



Committees



Technical

1. Generation of AQHI for temporary sites monitored by Portable Air Monitoring Laboratory (PAML)
2. Completion of one full year air quality data collection at Elk Run, Canmore Report for annual general meeting

The Technical Committee continued to provide oversight to four continuous air quality monitoring stations that CRAZ operates.

CRAZ worked with the Town of Canmore, Chestermere, and the Aldersyde Field House for the deployments of the PAML, and appreciated all the efforts the staff contributed to this project. The PAML monitored the air quality at: Elk Run Park in Canmore; Sunset Park in Chestermere, and Regional Field House in Aldersyde. Parameters measured by the PAML included: NO_x, NO₂, NO, O₃, PM_{2.5}, Ambient Temperature, and Wind Speed and Wind Direction. Mandeep Dhaliwal, Air Quality Program Manager worked with Alberta Environment & Parks to be able to generate the Air Quality Health Index (AQHI) for all three sites from the data that the PAML's equipment generated. The AQHI was available through Canada's AQHI app.

The committee has many members that bring a wealth of experience, knowledge, skills, and resources to the table. The time they give to CRAZ is very much appreciated.

Thank you to our volunteers, corporations, municipalities, and government departments for supporting and encouraging involvement of their employees in our organization

**771 In-Kind
Hours
\$82,975.00**

Committees



Policy & Research

The committee had the task of completing the "Air Quality Management Toolkit: For Municipalities." This was an endeavor that took committee members many hours of research, and reviews. The end document is something to be very proud of and the Policy & Research committee will be proud to present the finalized document in 2022.

The Toolkit was created in response to municipal feedback from a 2020 survey created by the CRAZ Policy and Research Committee to identify municipal concerns with respect to air quality in the CRAZ region. The Toolkit has the following sections:

- Background
- Municipal responsibilities under the SSRP
- Current status of air quality in the CRAZ region.
- Tools for municipalities including examples of how they are used.
- Appendices: Best management practices from Alberta and other jurisdictions

The Toolkit supports municipalities in the CRAZ region by:

- Helping municipalities develop local air quality management plans and take actions aligned with provincial and federal policies, laws, regulations and standards to address local air quality issues;
- Illustrating the known and potential social, economic and ecological benefits of air quality management; and
- Providing examples of local air quality management policies, bylaws and activities.



Committees



Engagement

Education and outreach are an important part of the Engagement committee. Even if the presentations were made online, CRAZ had a positive impact on teaching students in 2021.

583

Students attended the CRAZ Air Quality Presentation at the Mayors Environment Expo. A Clean Air Day video was shown at each presentation on June 2nd, 2021.

6

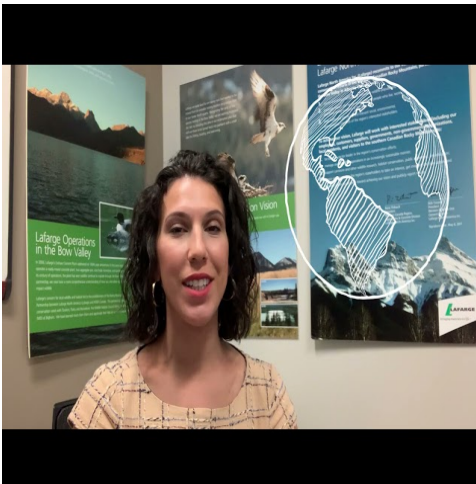
Schools that received the Eco-Schools certification and received CRAZ Idle Free Traffic Signs for their schools.

4

Presentations to City of Airdrie Environmental Advisory Committee, Medicine Hat College, Town of Crossfield

3

Videos produced:



Contact Details



We are happy to hear from you. You can easily reach us using the following contact details.



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