

A young girl with her hair in a bun, wearing a red dress over a green shirt and red shoes, is running joyfully across a vast, green grassy field. She is holding a large, colorful rainbow kite that is flying high in the sky. The kite has long, flowing orange and red tails. The background features a line of trees under a bright blue sky with scattered white clouds.

# Spruce Grove

June 19, 2023 Presentation  
Governance and Priorities Committee

# Presentation Outline

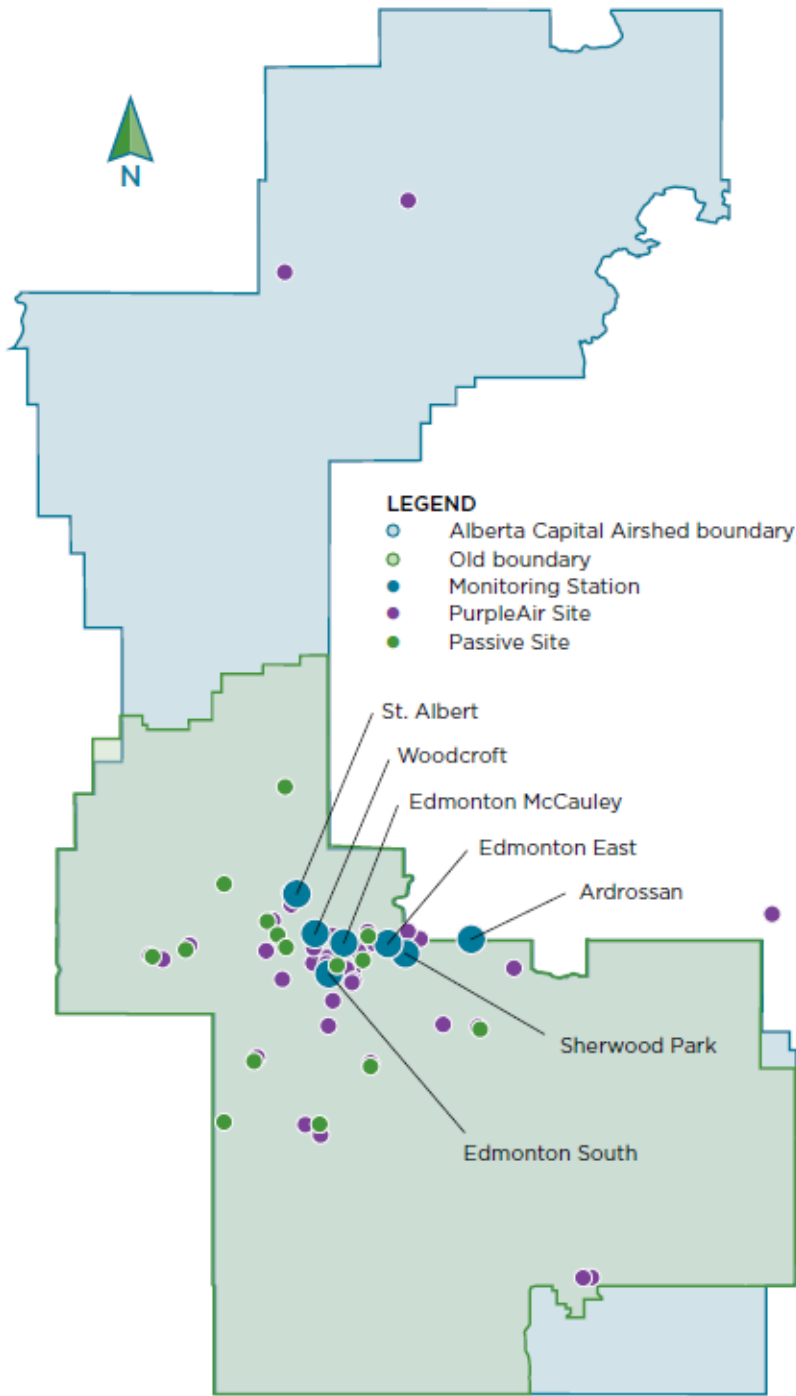
- About Alberta Capital Airshed (ACA)
- Air Quality in Spruce Grove
  - Current monitoring
  - Gaps in monitoring
- Current and potential partnerships - ACA & Spruce Grove
  - Monitoring
  - Climate adaptation/mitigation linkages

# Alberta Capital Airshed 101

- One of ten Airsheds in Alberta
- Multi-stakeholder not for profit
- Responsible for collecting and reporting air quality data
- Operate several types of air quality monitoring stations
- Education and awareness
- Airshed network of data informs AQHI & government monitoring plans



# Alberta Capital Airshed 101



# Alberta Capital Airshed 101

- **Community Collaboration Committee**
  - Spruce Grove's Senior Environmental Advisor sits as a member of this committee
  - Brings together municipal, government and not-for-profit members to identify and collaborate on issues related to air quality
  - (more on potential opportunities later in the presentation)



# Air Quality in Spruce Grove

- Current monitoring
- Gaps
- Future considerations in monitoring



# Air Quality in Spruce Grove Current Monitoring

- Passive Monitoring & Particulate Sensors

Live Air Data Map



# Air Quality in Spruce Grove

## Current Monitoring

- Passive monitor
- Located at Aspenglen Park
- Monitors for SO<sub>2</sub> and NO<sub>2</sub>
- Samples collected monthly
- Background data





# Air Quality in Spruce Grove

## Current Monitoring

- Fine particulate sensors
- Three in Spruce Grove
- Live data reported to web
- Local context during wildfire season
- Part of network



# Air Quality in Spruce Grove

## Gaps & Opportunities

**A five-year air quality  
and deposition  
monitoring, evaluation  
and reporting plan**

2021–2025 | Supplementary Information



*Alberta*

**GAP:**  
No continuous  
monitoring in  
Spruce Grove

AQHI for Spruce Grove comes  
from Parkland County

Spruce Grove ranks 17<sup>th</sup> in  
provincial priority to fill gap in  
continuous monitoring



# Shameless plug...

Check out our recorded Clean Air Webinar!



[About](#) - [Monitoring](#) - [Education & Outreach](#) - [Issues Management](#) - [News & Events](#) - [Contact](#)

Clean Air Webinar: Alberta's Air Monitoring Plan – The Next Five Years

Clean Air Webinar

## Alberta's Air Monitoring Plan: The Next Five Years

Thursday, March 17, 2022  
12:00-1:00 PM



**Station Classification**

- Background
- Near Industrial Facility
- Hot Spot
- Impacted Community
- Intermediate
- Large Population Centre
- Local Issues
- Small Community
- Airsheds



Watch on  YouTube



# Air Quality in Spruce Grove

## Monitoring Opportunities – Continuous



# Air Quality in Spruce Grove

## Continuous Monitoring Opportunities

WHEN?

HOW?



# Partnerships – ACA & Spruce Grove

- Current
  - Benefits of Membership
  - Hosting passive and fine particulate sites
- Proposed
  - Climate Change Implementation Plan
  - Continuous monitoring options



# We value your membership. Thank you!



Working closely with the community and other stakeholders through the Alberta Capital Airshed gives us an invaluable opportunity to maintain and grow our connection within the community on air quality concerns and play a role in local solutions.

Brent Korobanik, Lehigh Cement

Alberta Capital Airshed provides a forum for us to connect with other municipalities, governments, industry and local residents so that we all have the same information and can work toward ensuring the air we breathe is clean.

Jocelyn Thrasher-Haug,  
Strathcona County

## MUNICIPAL MEMBERS

Urban and rural municipalities participate in ACA voluntarily. Annual membership fees range from \$2,500 for towns and small cities to \$10,000 for Edmonton.

### BENEFITS OF ACA MEMBERSHIP

- Support for effective public engagement on air quality and odour issues.
- Cost effective solutions for meeting environmental responsibilities.
- Access to air quality expertise, especially important for municipalities with limited resources.
- Consistent messaging to all residents in the region regarding air quality.
- An important connection between air quality and land use planning.
- Forum to work with other stakeholders and neighbouring municipalities on air quality issues.
- Another connection with regulatory and legislative bodies.

# Proposed Partnerships

## Climate Change Implementation Plan

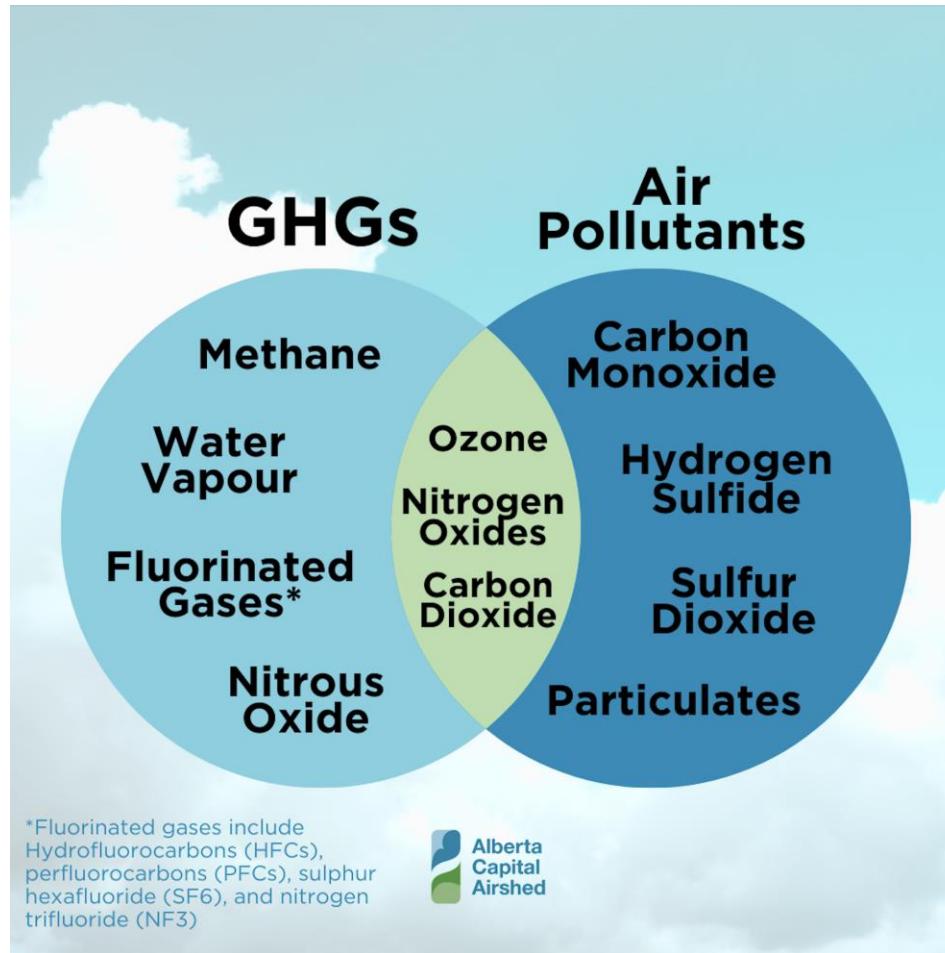
City of Spruce Grove  
**Climate Change  
Implementation Plan:**  
**Phase 1**  
2022-2025 Actions

Contact: Avelyn Nicol, Senior Environmental Advisor  
May, 2023





# Air Quality Linkages to GHGs



# Air Quality Linkages to GHGs

Mesosphere  
Stratosphere  
Protective ozone layer  
Troposphere

**Impacts of Ozone on Air Quality**

Ozone can cause the muscles in our airways to constrict, which can lead to shortness of breath and coughing. Children and elderly people, or folks with pre-existing respiratory conditions can be more sensitive to the presence of ozone.

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**Sources of Nitrogen Oxides Emissions**

- Transportation
- Oil, gas, and power production sources
- Natural sources (e.g. forest fires, lightning, biological decay)
- Combustion sources (e.g. home and commercial heating)

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**Carbon Dioxide Sources**

"The majority of CO<sub>2</sub> from human activities is from the burning of fossil fuels."

Other sources of CO<sub>2</sub>:

- Ocean Outgassing
- Volcanic Eruptions
- Wildfires
- Decomposition
- Deforestation
- Industrial Processes

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# Potential Partnerships

City of Spruce Grove  
**Climate Change  
Implementation Plan:  
Phase 1**  
2022-2025 Actions



Contact: Avelyn Nicol, Senior Environmental Advisor  
May, 2023



# How Alberta Capital Airshed might Support



**Action 1: Develop a formal strategy for the City's approach to electric vehicles....**

*Alberta Capital Airshed is available for advice and information related to air quality considerations of EVs*



# Potential Partnership!



## Action 9: Support data management...building air quality monitoring...

*Leduc pilot – review results in partnership*

*Discuss with AEPA - AQHI station in Spruce Grove*



# Potential Partnership!

## Action 11: Reduce community idling



*Work together:*

- *educational messaging for idling signage*
- *supporting adaptation-related education programs*



# How Alberta Capital Airshed might Support



## Action 12: Tree/Shrub Giveaway....

*Community Collaboration Committee discussion – Tomorrow Foundation for a Sustainable Future project related to impact of trees for improved air quality and other climate supports*



# Continued Partnership!



## General Action: Support partnerships regionally

*Identifying and collaborating on issues of joint interest such as:*

- *Wildfire smoke collaboration and communications*
- *Exploring air quality informed bylaws*
- *Exploring clean air shelters*





# ACA Website Public Resources

- Live Data Map
- Clean Air Webinar Series
- Teacher Corner
- Annual Report to the Community

Find us on all your  
social media channels!

[@yegairshed](#)



# Questions, Feedback, Ideas?

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