

LIFE IN THE HEARTLAND WEBINAR

Fort Air Partnership

February 22, 2024



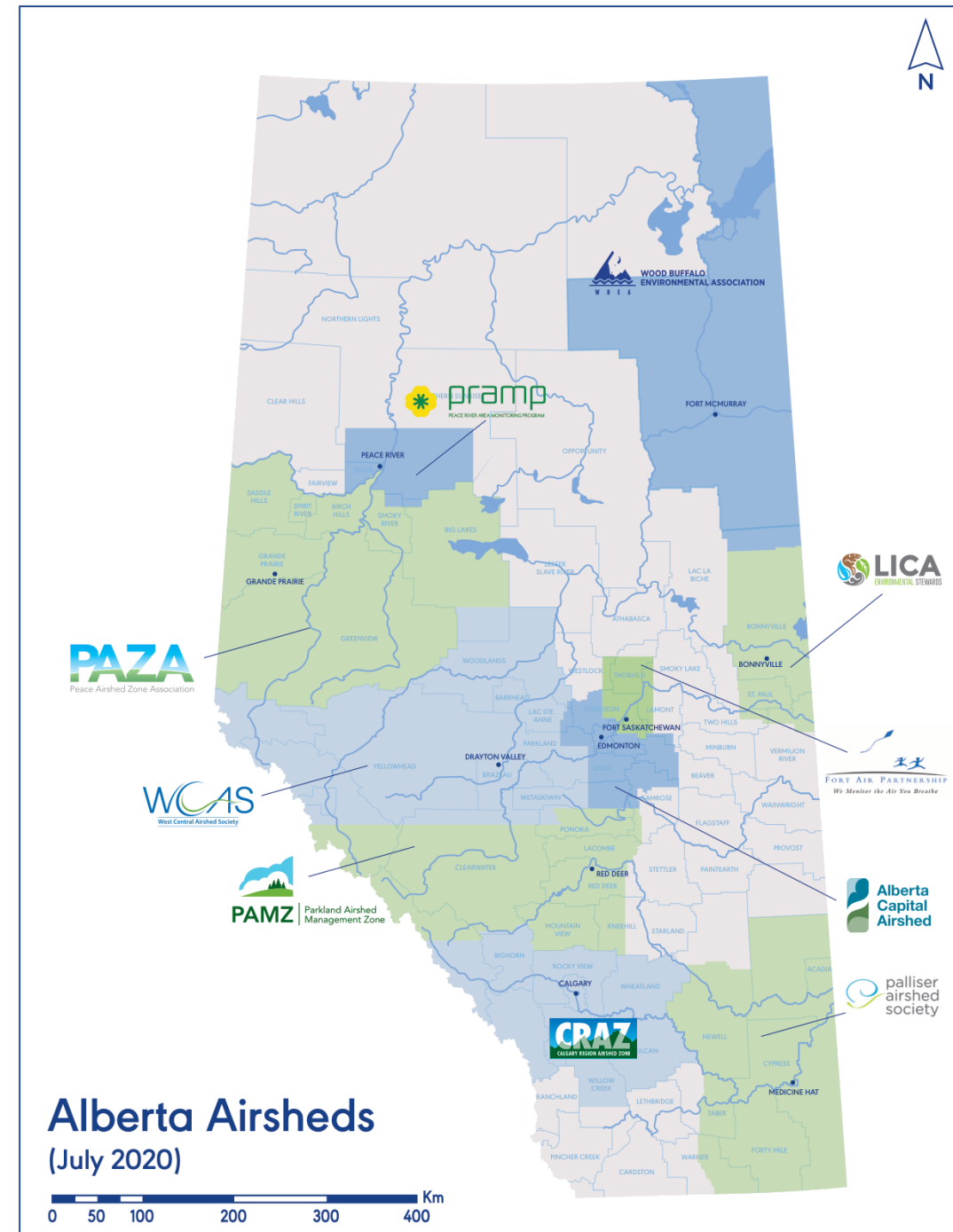
FORT AIR PARTNERSHIP

We Monitor the Air You Breathe

Alberta Air Quality Monitoring:

10 Airsheds:

- 88 continuous air monitoring stations
- 100s of small sensor monitors



Alberta Airshed model

- Place-based = local oversight over air quality monitoring and reporting.
- Scientific advisory committee composed of highly skilled and experienced people oversee implementation of monitoring activities.
- Collaborative, multi-stakeholder engagement and consensus-based decision making.
- Open and transparent engagement with the community.
- Responsive to local public, government and industry needs.
- Sustainable, committed funding.



FAP Structure

- Independent, not-for-profit, multi-stakeholder organization, began monitoring in 2000.
- Public, government and industry participation.
- Mission: Operate a regional network to monitor and report credible and comprehensive ambient air quality information.



FAP Network

Boundary: 4500 km²

Monitoring Sites:

- 10 continuous stations
 - Monitor for 18 different substances and meteorological conditions
 - Hourly data provided 24/7
- 16 passive monitoring sites
 - Hydrogen Sulphide
 - Sulphur Dioxide
- 5 PurpleAir Sensors
 - Fine Particulate Matter

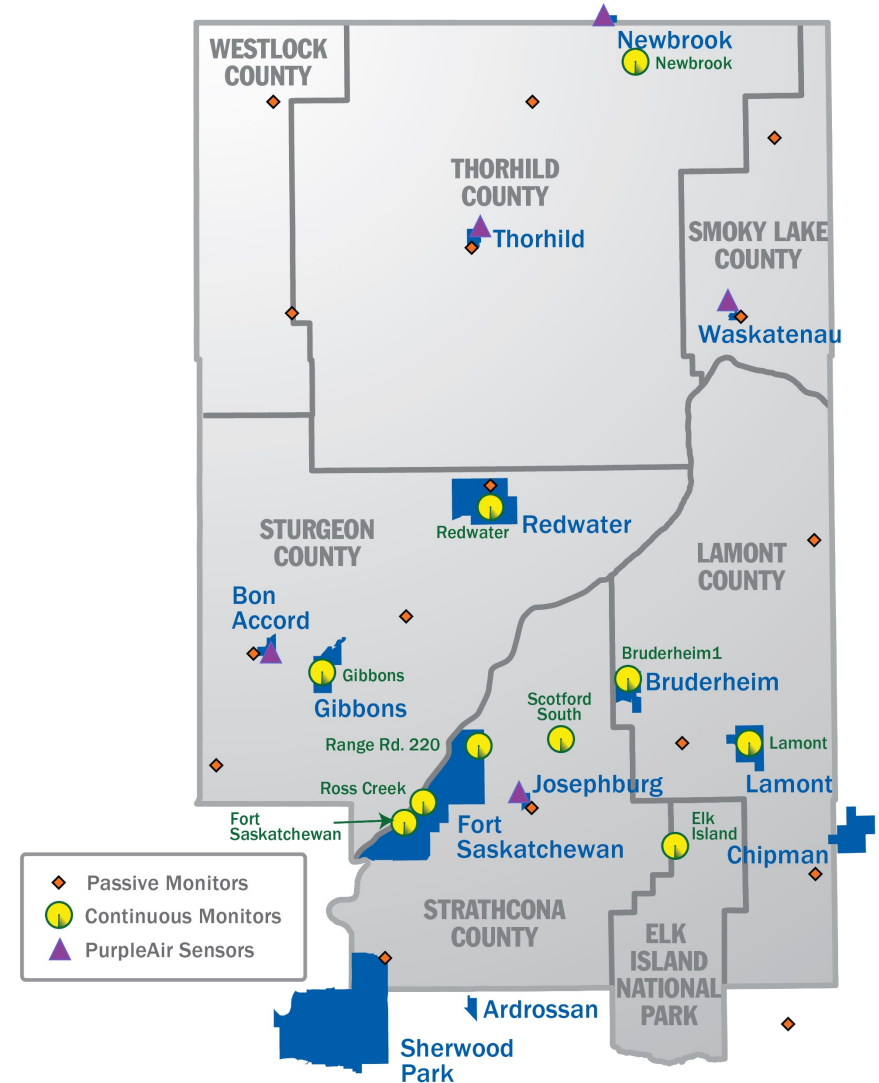
AIR MONITORING NETWORK

OCTOBER 2022



FORT AIR PARTNERSHIP

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Continuous Monitoring

- Measure 18 substances and meteorological conditions
- Operate 24 hours a day, 7 days a week
- Provide real time data
 - FAP live data: www.fortair.org/monitoring/live-air-quality-data/
 - Validated data: <https://www.alberta.ca/alberta-air-data-warehouse>
- Compare to provincial and federal air quality objectives
- Provides data for Air Quality Health Index calculation



Passive Monitoring



- Measures and provides monthly averages for hydrogen sulphide and sulphur dioxide.
- Qualitative indicator to determine trends and need for future monitoring.



PurpleAir Monitors

- Measure fine particulate matter (PM_{2.5}).
- PM_{2.5} is an important component of the Air Quality Health Index.
- Sensors placed in communities without continuous monitoring stations, especially useful during wildfire season.
- Qualitative measurement of PM_{2.5}.
- Does not meet government standards for regulatory decision making or issuing air quality advisories.

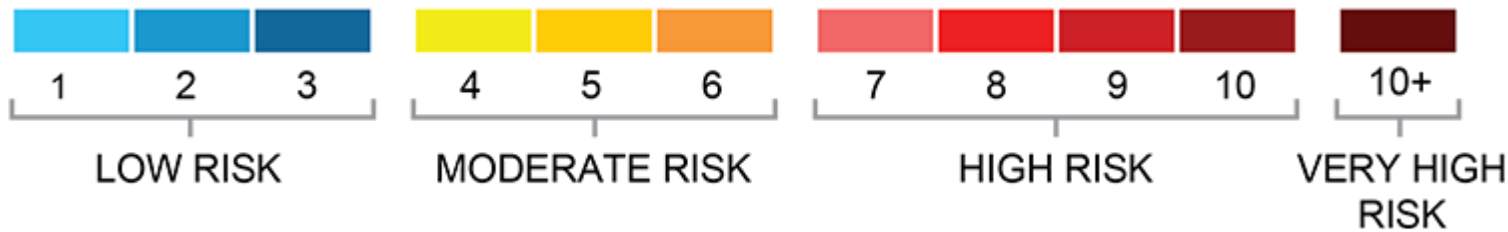


Air Quality Health Index (AQHI)

- Informs the public about current or predicted air quality conditions.
- Includes substances known to affect health: Ozone (O_3), Fine Particulate Matter ($PM_{2.5}$), Nitrogen Dioxide (NO_2), Carbon Monoxide (CO), Sulphur Dioxide (SO_2), Hydrogen Sulphide (H_2S).



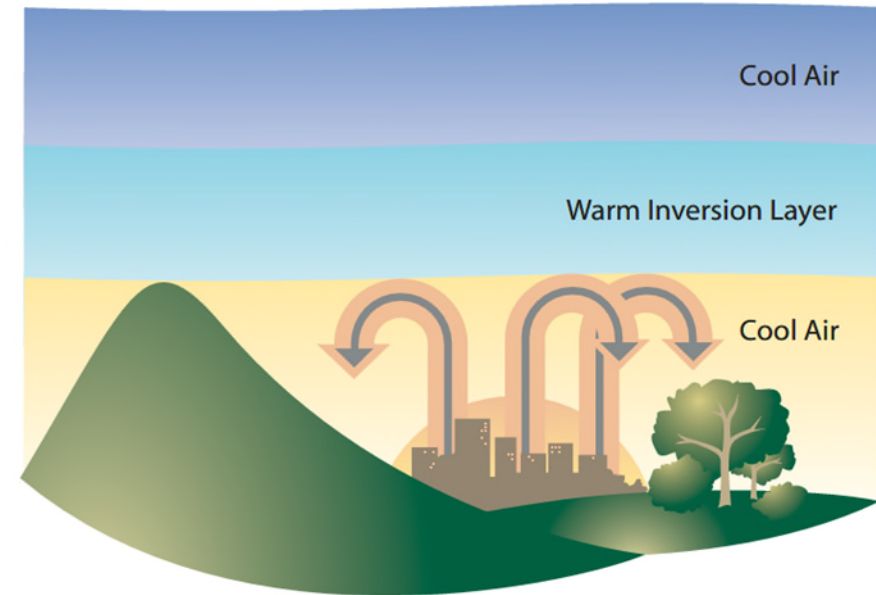
fortair.org



2023 Air Quality Health Index Results

FAP – 2023		Risk Level (% of time in each)			
Station Name	Hours Monitored	Low	Moderate	High	Very High
Bruderheim	8486	83.93%	13.30%	1.89%	0.88%
Elk Island	8526	86.03%	10.22%	2.78%	0.97%
Fort Saskatchewan	8406	76.21%	19.47%	3.06%	1.26%
Gibbons	8361	81.90%	14.40%	3.03%	0.67%
Lamont	8523	84.96%	11.76%	2.71%	0.57%
Redwater	8315	85.35%	10.73%	2.65%	1.27%
Thorhild County*	6624	86.22%	9.28%	2.40%	2.10%
Total Hours	57241	47760	7350	1517	614

*The Keith Purves Portable station was installed in Thorhild County near Newbrook and began reporting the AQHI in late March 2023.



2024 Projects

Keith Purves

Portable Air

Monitoring Station

- Monitoring project in Newbrook completed January 31st. A summary report will be released this spring.
- Station will be moved to Thorhild and will start operating in March, for a one year long monitoring project.



2024 Projects

School Program

- Partnering with Inside Education to deliver air quality sessions to Grade 5 classes in the FAP region.
- Promoting PurpleAir sensor monitoring on school property as an ongoing education tool.



2024 Projects

Data Trending and Comparison Report

- Provides a summary of annual average trends of five key substances that affect air quality.
- Fine particulate matter, nitrogen dioxide, sulphur dioxide, carbon monoxide and ozone.
- Compares annual averages of these substances at the Fort Saskatchewan station with locations across Canada and internationally.



2024 Projects

Fresh Air Experience

- Annual photo contest for FAP residents.
- Facebook and Instagram.
- Promotes residents sharing photos of themselves, friends and family enjoying a clean air outdoor experience in the Airshed.
- Raises awareness of FAP and local air quality.



Additional Information:



fortair.org:

- Air quality monitoring news and information
- Live data feed
- Sign up for FAP's e-newsletter
- Facebook, Twitter and Instagram
- Download the WeatherCAN app

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