

2022 Q4 (October-December) Air Quality Monitoring Results



Air Quality Health Index (AQHI) Ratings

The AQHI is calculated by the Government of Alberta using data collected at FAP air monitoring stations. The AQHI is a measure of air quality as it pertains to human health. AQHI levels are low, moderate, high or very high. Risk to health increases as the index level rises. Go to [our website's AQHI page](#) for more information. Seven of FAP's ten continuous air monitoring stations measure the substances required to calculate the AQHI.

FAP – 2022 Q4		Risk Level (% of time in each)			
Station Name	Hours Monitored	Low	Moderate	High	Very High
Bruderheim	2156	92.44%	7.33%	0.23%	0.00%
Elk Island	2134	94.61%	4.69%	0.19%	0.52%
Fort Saskatchewan	2066	84.85%	15.15%	0.00%	0.00%
Gibbons	2171	87.38%	12.57%	0.05%	0.00%
Lamont County*	708	93.64%	6.07%	0.28%	0.00%
Redwater	2157	93.83%	5.80%	0.37%	0.00%
Town of Lamont	1205	86.14%	13.86%	0.00%	0.00%
Total hours	12597	11387	1179	20	11

*The Lamont County station was decommissioned October 31 and moved to the Town of Lamont.

Note: Percentages are rounded and may not add up to 100% for any given row of the table.

Hours with a High or Very High Risk AQHI Rating

Event Dates	FAP Continuous Air Quality Monitoring Station														Total Hours	Attributed Cause	
	Bruderheim		Elk Island		Fort Sask.		Gibbons		Lamont County		Redwater		Town of Lamont				
	High Risk	Very High Risk	High Risk	Very High Risk	High Risk	Very High Risk	High Risk	Very High Risk	High Risk	Very High Risk	High Risk	Very High Risk	High Risk	Very High Risk			
Oct 9															1	Local campfire	
Oct 19	1		2	11					2						7	23	Regional meteorological conditions and controlled burn at Elk Island Park
Nov 11							1									1	Wintertime inversion

Dec 31	4		2											6	Wintertime inversion
	5		4	11			1		2		8			31	

Summary of Exceedances

Air quality measurements are compared continuously to both 1 and 24-hour [Alberta Ambient Air Quality Objectives](#) (AAAQO). Any exceedance of an AAAQO is reported to the Alberta Government and the likely cause of the exceedance investigated. The following table details what substances exceeded an AAAQO, when they occurred and if it can be determined, the likely cause.

One Hour Exceedances			
Parameter	Exceedances	Date	Attributed Cause
H ₂ S	1	October 3	Natural, due to wetlands
PM _{2.5}	3	October 8,18	Local fire pit
PM _{2.5}	12	October 18,19	Regional meteorological conditions and controlled burn at Elk Island Park
PM _{2.5}	3	October 19	Regional meteorological conditions
PM _{2.5}	3	November 11	Wintertime inversion
PM _{2.5}	1	December 15	Brush burning
PM _{2.5}	4	December 30, 31	Wintertime inversion

24-Hour Exceedances			
Parameter	Exceedances	Date	Attributed Cause
PM _{2.5}	1	October 18	Local fire pit
PM _{2.5}	2	October 18,19	Regional meteorological conditions and controlled burn at Elk Island Park
PM _{2.5}	8	October 18,19	Regional meteorological conditions
PM _{2.5}	5	November 10,11	Wintertime inversion
PM _{2.5}	1	November 14	Undetermined

PM_{2.5}	1	December 15	Brush burning
PM_{2.5}	7	December 30, 31	Wintertime inversion