

2022 Q3 (July-September) 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 10 continuous air monitoring stations monitor substances whereby the AQHI can be calculated.

FAP - 2022 Q3		Risk Level (% of time in each)			
Station Name	Hours Monitored	Low	Moderate	High	Very High
Bruderheim	2123	94.77%	5.09%	0.14%	0.00%
Elk Island	2155	95.18%	4.08%	0.74%	0.00%
Fort Saskatchewan	2003	91.91%	6.94%	1.15%	0.00%
Gibbons	2141	93.32%	4.44%	2.10%	0.14%
Lamont County	2144	95.10%	4.81%	0.09%	0.00%
Redwater	2045	93.98%	5.53%	0.49%	0.00%
Town of Lamont	1599	96.19%	3.81%	0.00%	0.00%
Total hours	14210	13401	707	99	3

Hours with a High or Very High Risk AQHI Rating

FAP Continuous Air Quality Monitoring Station																
Event Dates	Bruderheim		Elk Island		Fort Sask.		Gibbons		Lamont County		Redwater		Town of Lamont		Total Hours	Attributed Cause*
	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		
Aug 20-22			5		4		4		1		2				16	Wildfire smoke
Sep 2-5			1		4		18				8				31	Wildfire smoke
Sep 10-11	3		10		15		23	3	1						58	Wildfire smoke
Total Hours	3	-	16	-	23	-	48	3	2	-	10	-	-	-	102	-

**All High and Very High Risk episodes were due to particulate matter from wildfire smoke originating outside the FAP Airshed.*

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	2	July 14, 18	Natural, due to wetlands
H ₂ S	1	July 23	Industry responsible
H ₂ S	13	August 3, 16, 18, 22, 23, 24, & 31 September 18	Natural, due to wetlands
H ₂ S	1	August 25	Undetermined
O ₃	3	August 20	Summertime smog
PM _{2.5}	14	August 22	Wildfire smoke
PM _{2.5}	1	September 1	Harvest dust
PM _{2.5}	31	September 4, 5	Wildfire smoke
PM _{2.5}	45	September 10, 11	Wildfire smoke

24-Hour Exceedances			
Parameter	Exceedances	Date	Attributed Cause
PM _{2.5}	9	August 22, 23	Wildfire smoke
H ₂ S	1	August 23	Natural, due to wetlands
PM _{2.5}	8	September 3, 4	Wildfire smoke
PM _{2.5}	11	September 10, 11	Wildfire smoke