

2020 Q2 (April-June) 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 – 2020 Q2		Risk Level (% of time)			
Station Name	Hours Monitored	Low	Moderate	High	Very High
Bruderheim	2,148	97.53%	2.47%	-	-
Chipman*	1,470	99.05%	0.95%	-	-
Elk Island	2,148	99.12%	0.88%	-	-
Fort Saskatchewan	1,964	99.34%	0.66%	-	-
Gibbons	2,143	95.80%	4.11%	0.09%	-
Lamont County	2,115	98.77%	1.23%	-	-
Redwater	2,136	99.02%	0.98%	-	-
Total hours	14,124	13,888	234	2	-

**The monitoring project at Chipman ended May 30, 2020*

A cursory assessment of air quality data at our Fort Saskatchewan station was conducted to determine if the COVID-19 pandemic restrictions had any impact on air quality. The comparison looked at daily averages, which were then averaged out over each of the months of March, April and May. They were then compared to 2013-2019 historical averages for each month for key substances used in the Air Quality Health Index calculation.

The following was observed:

- Nitrogen Dioxide (NO₂) - 2020 daily averages were quite a bit lower than historical averages. March levels were 27% below the historical average, April levels were 29% below the historical average, and May levels were 47% below the historical average. The significant difference is likely due to a decrease in traffic after March 15 when COVID-19 restrictions came into effect.
- Fine Particulate Matter (PM_{2.5}) - 2020 data is slightly lower but tracks more closely to the historical average.
- Sulphur Dioxide (SO₂) - 2020 data compares to historical values. Daily averages are very similar to any previous year.
- Ozone (O₃) - 2020 data is similar to historical averages.

A more complete assessment for the province is planned to be released later on this year.

Hours with a High or Very High Risk AQHI Rating

FAP Continuous Air Quality Monitoring Station																
Event Dates	Bruderheim		Chipman		Elk Island		Fort Sask.		Gibbons		Lamont County		Redwater		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		
Apr 24	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	Unknown local source
June 5	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	Structure fire near the station
Total Hours	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	

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
Fine Particulate (PM _{2.5})	1	April 24	Unknown local source
	1	June 5	Structure fire near the air monitoring station

There were no 24-hour exceedances at any station in the FAP network during Q2 2020.