2021 Q3 (July-September)
Air Quality Monitoring Results

FORT AIR PARTNERSHIP
We Monitor the Air You Breathe

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. The newly named Keith Purves Portable Monitoring Station began operation August 1, 2021 in the Town of Lamont.

FAP – 2021 Q3		**Risk Level (% of time in each)**			
Station Name	**Hours Monitored**	**Low**	**Moderate**	**High**	**Very High**
Bruderheim	2145	85.64%	11.79%	1.91%	0.65%
Elk Island	2128	89.14%	8.04%	2.02%	0.80%
Fort Saskatchewan	2091	89.10%	7.75%	2.34%	0.81%
Gibbons	2119	89.00%	8.87%	1.79%	0.33%
Lamont County	2146	89.10%	8.95%	1.40%	0.56%
Redwater	2155	88.03%	9.10%	2.09%	0.79%
Keith Purves Portable (Lamont)	962	100%	0%	0%	0%
Total hours	**13746**	**12253**	**1163**	**246**	**84**

Hours with a High or Very High Risk AQHI Rating

Event Dates	FAP Continuous Air Quality Monitoring Station															
	Bruderheim		Elk Island		Fort Sask.		Gibbons		Lamont County		Redwater		Keith Purves Portable (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		
Jul 9			1												**1**	Summer-time smog
Jul 9											1				**1**	Natural, due to wetlands
Jul 15-20	38	14	42	17	45	17	32	7	30	12	42	17			**313**	Wildfire smoke
Aug 4 & 5	3														**3**	Summer-time smog
Aug 14					4		1				1				**6**	Wildfire smoke
Aug 28							2								**2**	Undeter-mined
Sep 2 & 5							3								**3**	Undeter-mined
Sep 8											1				**1**	Natural, due to wetlands
Total Hours	41	14	43	17	49	17	38	7	30	12	45	17	-	-	**330**	

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 ($PM_{2.5}$)	328	July 15, 17-20 August 14	Wildfire smoke
Fine Particulate ($PM_{2.5}$)	3	August 28 September 5	Undetermined cause
Hydrogen Sulphide (H_2S)	8	July 5, 9, 12, 28, 31	Natural due to wetlands
Ozone (O_3)	3	July 8, 9	Summertime smog
Hydrogen Sulphide (H_2S)	4	September 8, 13, 29	Natural due to wetlands

24-Hour Exceedances			
Parameter	**Exceedances**	**Date**	**Attributed Cause**
Fine Particulate ($PM_{2.5}$)	28	July 13-20	Wildfire smoke
Fine Particulate ($PM_{2.5}$)	18	August 1-3, 14, 15	Wildfire smoke