2018 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 describes the level of health risk associated with each of four different levels. These levels are categorized as low, moderate, high or very high. The higher the index number, the greater the risk to health. Go to our website's AQHI page for more information. Seven of FAP's 10 continuous air monitoring stations monitor the substances required to calculate the AQHI.

		Risk Level (% of time)			
Station Name	**Hours Monitored**	**Low**	**Moderate**	**High**	**Very High**
Bon Accord*	5,842	90.19%	8.37%	1.23%	0.21%
Bruderheim	8,568	90.52%	7.97%	1.37%	0.14%
Elk Island	8,215	90.23%	8.35%	1.17%	0.26%
Fort Saskatchewan	8,347	83.01%	15.55%	1.29%	0.14%
Gibbons	8,585	85.39%	12.88%	1.56%	0.16%
Lamont County	8,572	90.74%	8.04%	1.14%	0.08%
Redwater	8,453	88.70%	9.57%	1.63%	0.09%
Total hours	**56,582**	**49,973**	**5,760**	**763**	**86**

		Risk Level (# of hours)			
Station Name	**Hours Monitored**	**Low**	**Moderate**	**High**	**Very High**
Bon Accord*	5,842	5,269	489	72	12
Bruderheim	8,568	7,756	683	117	12
Elk Island	8,215	7,412	686	96	21
Fort Saskatchewan	8,347	6,929	1,298	108	12
Gibbons	8,585	7,331	1,106	134	14
Lamont County	8,572	7,778	689	98	7
Redwater	8,453	7,498	809	138	8
Total hours	**56,496**	**49,973**	**5,760**	**763**	**86**

**The new portable station at Bon Accord began operating in April, 2018.*

Hours with a High or Very High Risk AQHI Rating

This table shows the number of hours with a high or very high risk AQHI rating during 2018, when they occurred and the likely cause, when identifiable.

Event Dates	Fort Air Partnership Continuous Air Quality Monitoring Station															
	Bon Accord*		Bruder-heim		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		
Jan. 20	-	-	-	-	-	-	-	-	1	-	-	-	-	-	**1**	Unknown local source
March 5	-	-	-	-	2	-	-	-	-	-	-	-	-	-	**2**	Wintertime inversion
March 8	-	-	-	-	-	-	-	-	2	-	-	-	-	-	**2**	
March 12-14	-	-	-	-	7		6		9	-	-	-	-	-	**22**	
May 14	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	Grass fires
July 3	-	-	-	-	-	-	-	-	1	-	-	-	-	-	**1**	Summertime smog
Aug. 7	3	-	1	-	-	-	-	-	3	-	-	-	2	-	**9**	Wildfire smoke
Aug. 8	13	-	4	-	4	-	1	-	7	-	-	-	5	-	**34**	
Aug. 9	1	-	4	-		-	5	-	2	-	-	-	10	-	**22**	
Aug. 10	4	4	6	2	4	3	5	3	4	5	7	-	8	-	**55**	
Aug. 11	3	-	7	-	4	2	5	-	4	-	6	-	9	-	**40**	
Aug. 14	-	-	6	-	6	-	4	-	4	-	1	-	2	-	**23**	
Aug. 15	17	-	19	2	13	8	20	-	21	1	20	-	18	-	**139**	
Aug. 16	8	-	24	-	14	-	10	-	13	-	20	-	24	-	**113**	
Aug. 17	13	-	14	-	6	-	15	-	17	-	13	-	21	-	**99**	
Aug. 18	3	8	4	8	3	8	3	9	3	8	4	7	4	8	**80**	

**The Bon Accord station began operations in April, 2018.*

	Fort Air Partnership Continuous Air Quality Monitoring Station															
Event Dates	**Bon Accord***		**Bruder-heim**		**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		
Aug. 22	4	-	7	-	9	-	7	-	9	-	7	-	4	-	**47**	Wildfire smoke
Aug. 23	-	-	8	-	15	-	19	-	18	-	18	-	15	-	**93**	
Aug. 25	3	-	4	-	6	-	1	-	5	-	-	-	6	-	**25**	
Aug. 26	-	-	8	-		-	7	-	9	-	2	-	10	-	**36**	
Oct. 24	-	-	-	-	3	-	-	-	-	-	-	-	-	-	**3**	Local road paving
Oct. 31	-	-	-	-	-	-	-	-	2	-	-	-	-	-	**2**	Unknown smoke
Total Hours	**72**	**12**	**117**	**12**	**96**	**21**	**108**	**12**	**134**	**14**	**98**	**7**	**138**	**8**	**849**	

**The Bon Accord station began operations in April, 2018.*

Summary of Exceedances

Air quality measurements are compared hourly to the Alberta Ambient Air Quality Objectives (AAAQO). Any exceedance of an AAAQO is reported to the Alberta Government and the cause of the exceedance investigated.

One Hour Exceedances			
Parameter	**Exceed-ances**	**Dates**	**Attributed Cause**
Hydrogen Sulphide (H_2S)	2	January 20	Local industry
Respirable Particulate ($PM_{2.5}$)	1	January 20	Unknown localized source
	1	March 14	Wintertime inversion
Hydrogen Sulphide (H_2S)	14	May 5, 11, 14, 16, 19, 23, 27	Naturally occurring, from nearby wetlands
Respirable Particulate ($PM_{2.5}$)	1	May 14	Grass fires
	1	July 3	Summertime smog
Hydrogen Sulphide (H_2S)	1	July 26	Local industry
	3	August 16, 19	
Ozone (O_3)	6	August 9	Summertime smog
Respirable Particulate ($PM_{2.5}$)	20	August 7	Wildfire smoke
	17	August 8	
	7	August 9	
	75	August 10	
	18	August 11	
	20	August 14	
	154	August 15	
	117	August 16	
	112	August 17	
	61	August 18	
	62	August 22	
	80	August 23	
	29	August 25	
	34	August 26	
Total	**836**		

24 Hour Exceedances			
Parameter	**Exceed-ances**	**Dates**	**Attributed Cause**
Respirable Particulate ($PM_{2.5}$)	2	March 8	Wintertime inversion
	1	March 12	
	4	March 13	
	1	March 17	
Hydrogen Sulphide (H_2S)	4	May 11, 14, 23, 27	Naturally occurring, from nearby wetlands
Respirable Particulate ($PM_{2.5}$)	7	August 7	Wildfire smoke
	7	August 8	
	7	August 9	
	7	August 10	
	6	August 11	
	6	August 14	
	7	August 15	
	6	August 16	
	6	August 17	
	7	August 18	
	3	August 19	
	7	August 20	
	7	August 21	
	7	August 22	
	6	August 23	
	7	August 25	
	6	August 26	
Total	**121**		