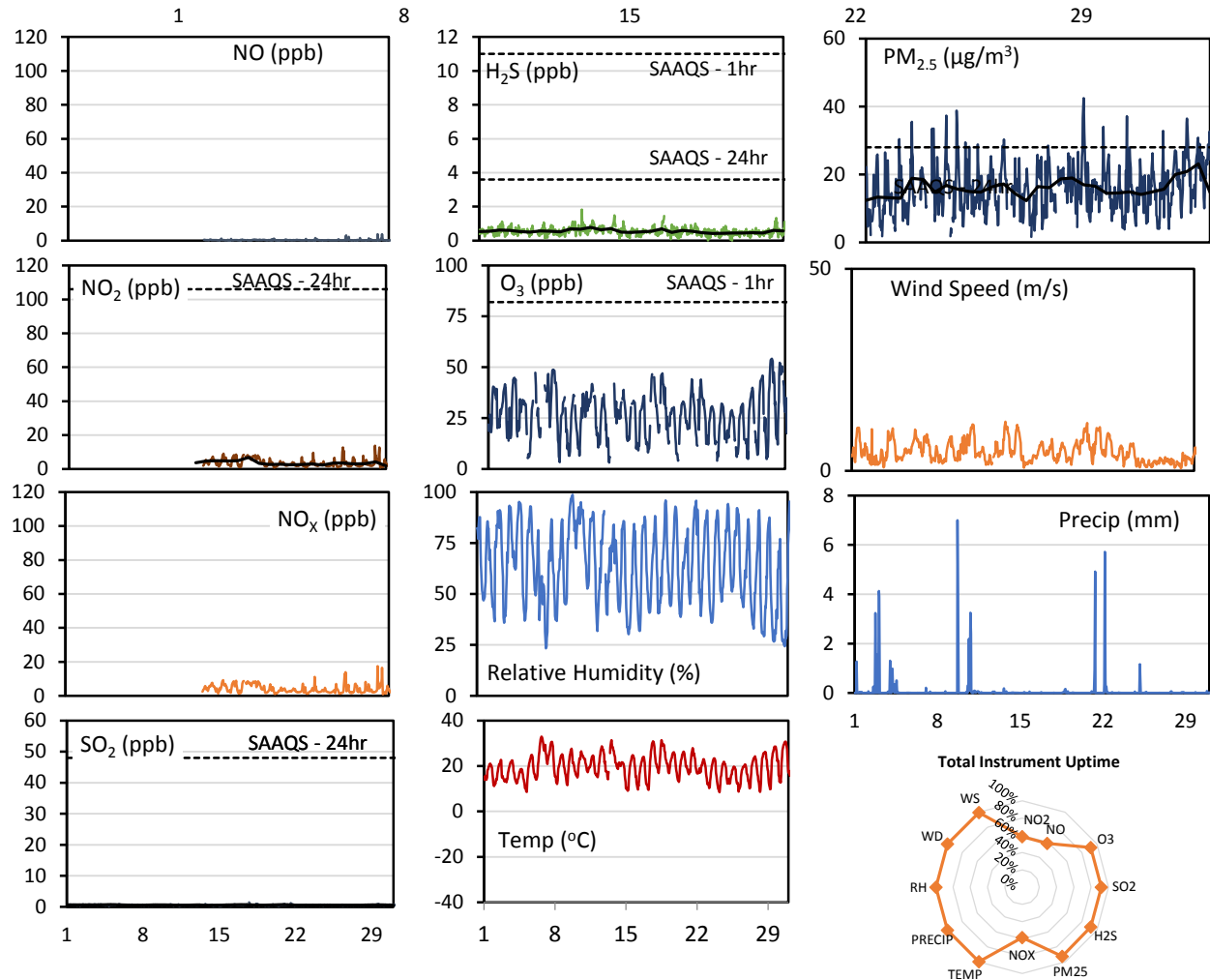
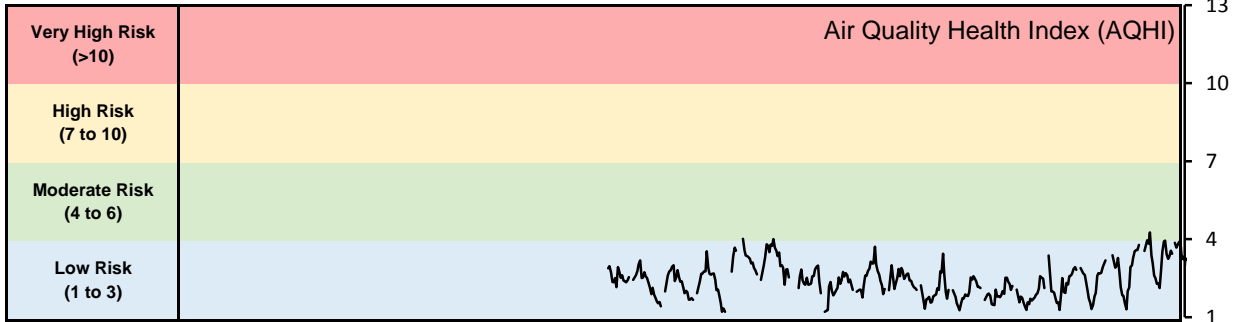


## GPAZ Pense Station - July 2018 Summary Report

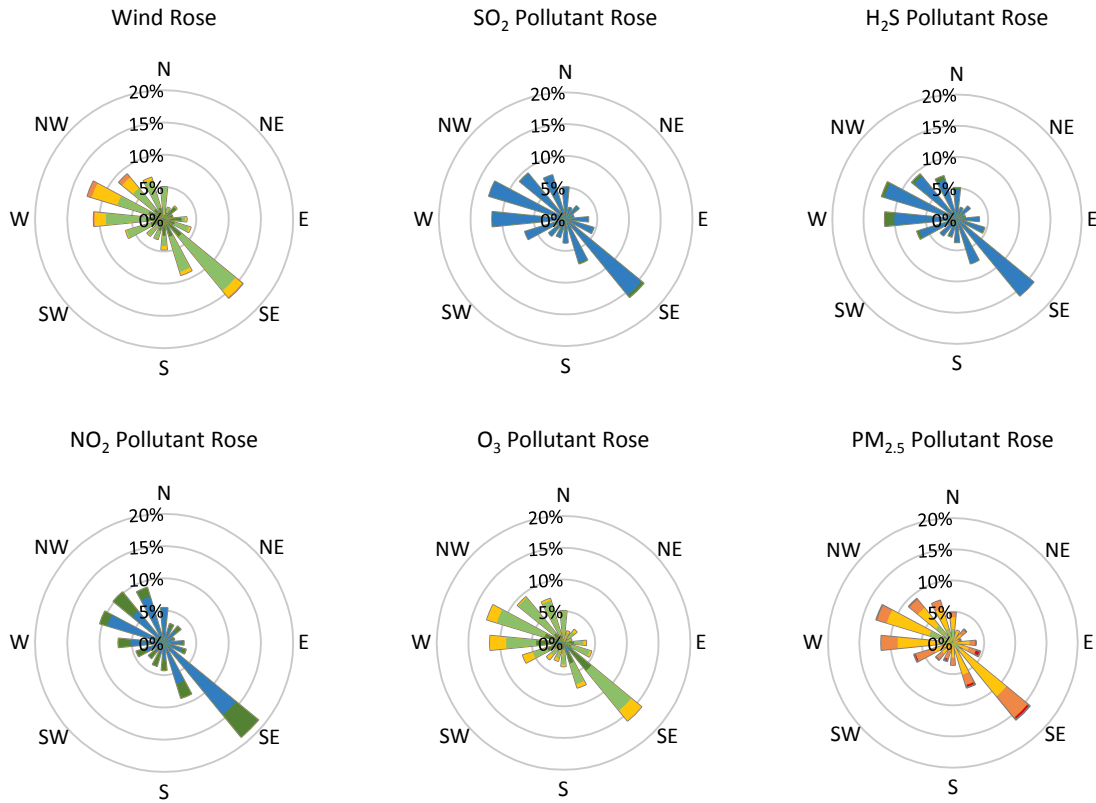
Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Total Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.3	58%	0.5	Jul-30	-	-	3.8	Jul-30 09:00	-	-
NO <sub>2</sub>	ppb	3.6	58%	6.8	Jul-18	106	0	13.7	Jul-29 23:00	159	0
NO <sub>x</sub>	ppb	3.9	58%	7.2	Jul-18	-	-	17.5	Jul-29 23:00	-	-
SO <sub>2</sub>	ppb	0.6	92%	0.7	Jul-17	48	0	1.5	Jul-17 18:00	172	0
H <sub>2</sub> S	ppb	0.6	92%	0.8	Jul-12	3.6	0	1.8	Jul-11 03:00	11	0
O <sub>3</sub>	ppb	26.5	92%	39.3	Jul-07	-	-	54.2	Jul-29 16:00	82	0
PM <sub>2.5</sub>	µg/m <sup>3</sup>	16.0	93%	23.1	Jul-30	28	0	42.5	Jul-20 00:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



\* colored lines indicate 1-hr concentration data for all parameters; solid black lines indicate 24-hr concentrations for PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, and H<sub>2</sub>S

**GPAZ Pense Station - July 2018 Summary Report**



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
		0.3 ≤ WS < 1.4	1.4 ≤ WS < 3.1	3.1 ≤ WS < 7.8	7.8 ≤ WS < 10.8	10.8 ≤ WS < 13.6	WS ≥ 13.6	
SO <sub>2</sub>	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172	
NO <sub>2</sub>	ppb	0 ≤ C < 5	5 ≤ C < 15	15 ≤ C < 30	30 ≤ C < 100	100 ≤ C < 212	C ≥ 212	
H <sub>2</sub> S	ppb	0 ≤ C < 1	1 ≤ C < 3.6	3.6 ≤ C < 5	5 ≤ C < 8	8 ≤ C < 10.8	C ≥ 10.8	
O <sub>3</sub>	ppb	0 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 40	40 ≤ C < 60	60 ≤ C < 82	C ≥ 82	
PM <sub>2.5</sub>	µg/m <sup>3</sup>	0 ≤ C < 2	2 ≤ C < 4	4 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 30	C ≥ 30	

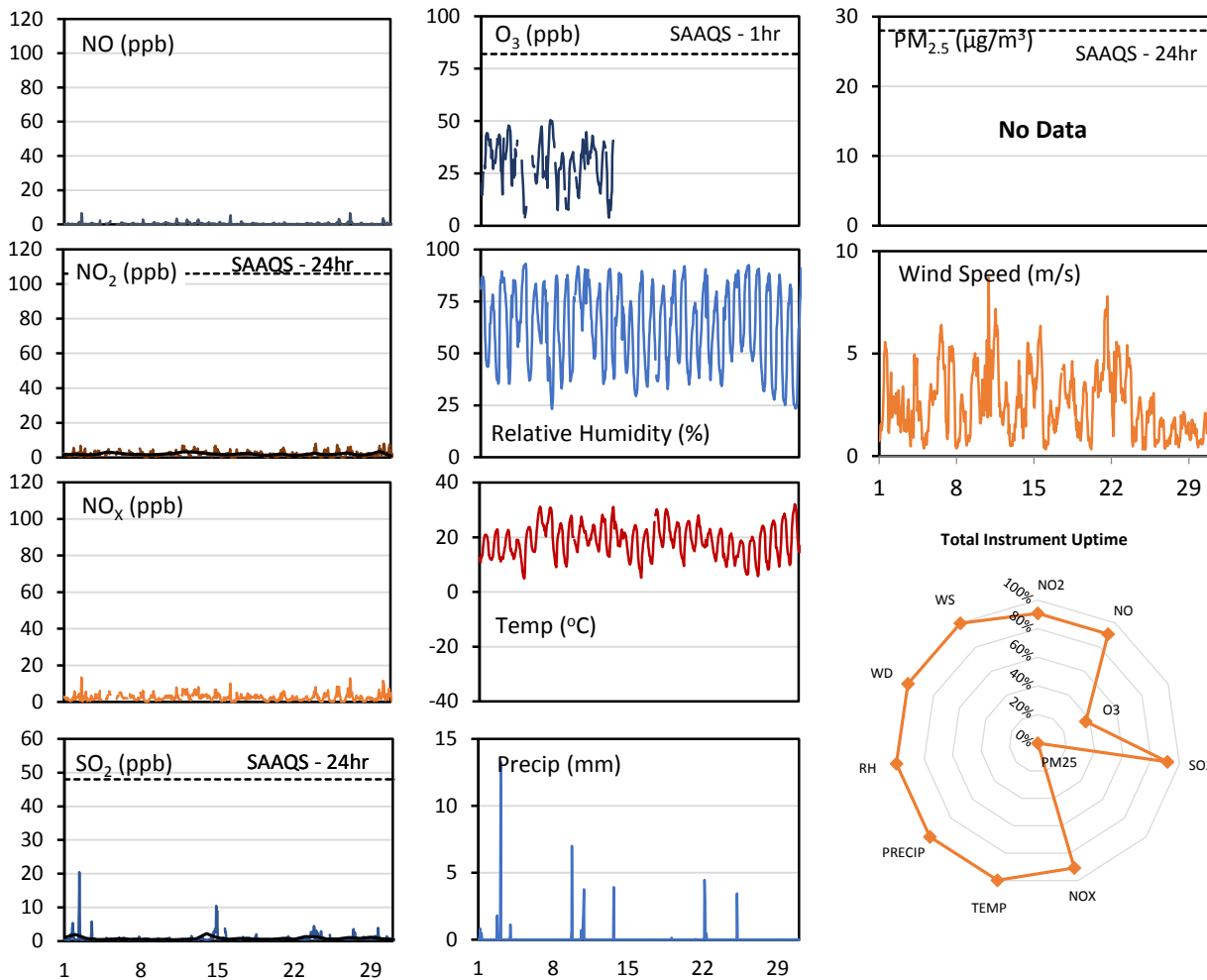
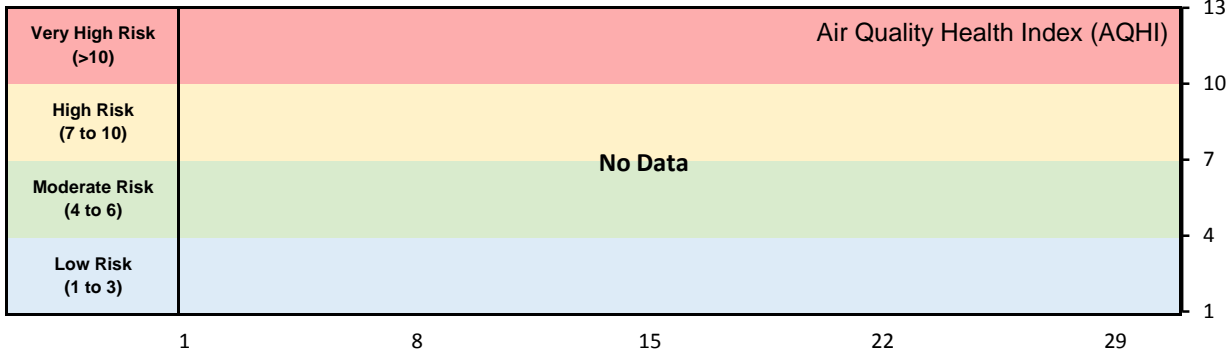
**Monthly Update**

- Achieved >91.8% of total uptime for all parameters except NO<sub>x</sub> (58.3%)
- Achieved >91.0% of scheduled uptime for all parameters except NO<sub>x</sub> (61.0%)
- Calibration was performed on July 6
- Sample pump for NO<sub>x</sub> analyzer was repaired on July 18
- Downtime of 4% due to routine daily internal zeroes and spans
- NO<sub>x</sub> monitor was replaced on July 13

## GPAZ East Regina Station - July 2018 Summary Report

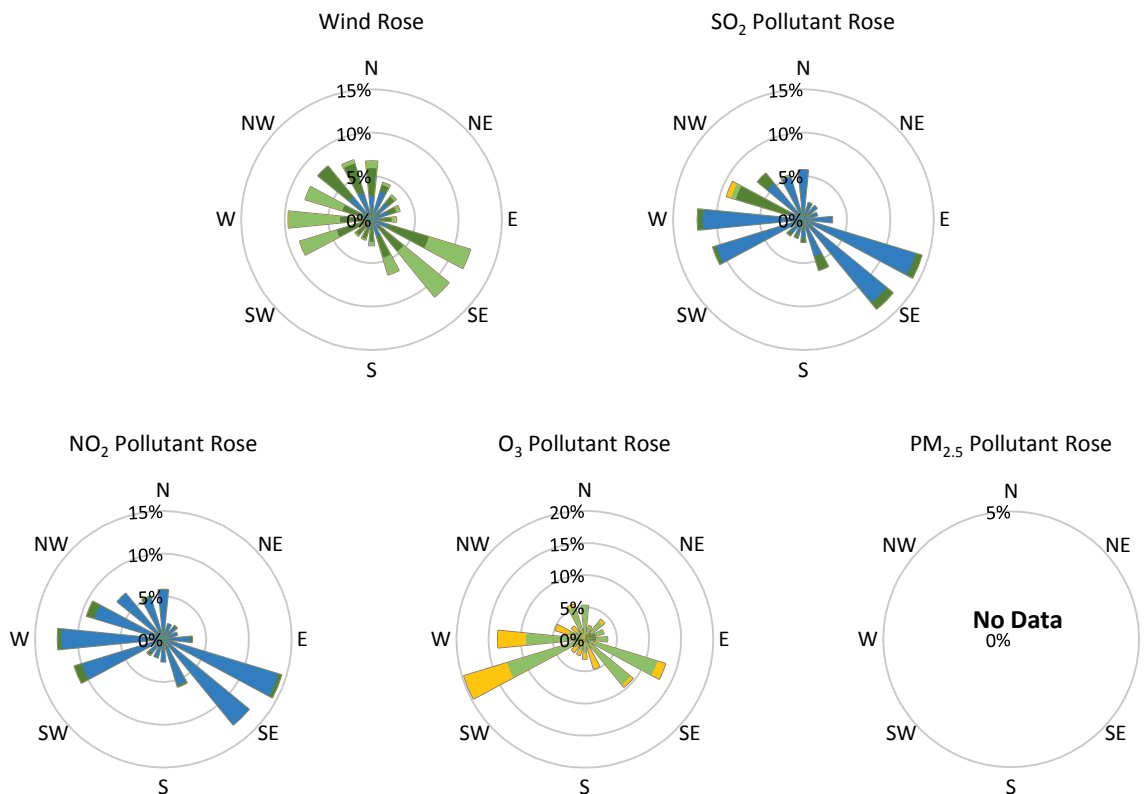
Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.4	91%	1.0	Jul-27	-	-	6.6	Jul-27 07:00	-	-
NO <sub>2</sub>	ppb	2.0	91%	3.6	Jul-30	106	0	8.0	Jul-24 03:00	159	0
NO <sub>x</sub>	ppb	2.4	91%	4.3	Jul-30	-	-	13.4	Jul-02 14:00	-	-
SO <sub>2</sub>	ppb	0.8	92%	2.2	Jul-14	48	0	20.5	Jul-02 09:00	172	0
O <sub>3</sub>	ppb	29.7	37%	38.4	Jul-07	-	-	50.5	Jul-07 13:00	82	0
PM <sub>2.5</sub>	µg/m <sup>3</sup>	No Data	No Data	No Data	No Data	28	No Data	No Data	No Data	-	No Data

SAAQS: Saskatchewan Ambient Air Quality Standards



\* colored lines indicate 1-hr concentration data for all parameters; solid black lines indicate 24-hr concentrations for PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub>

## GPAZ East Regina Station - July 2018 Summary Report



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
		0.3 ≤ WS < 1.4	1.4 ≤ WS < 3.1	3.1 ≤ WS < 7.8	7.8 ≤ WS < 10.8	10.8 ≤ WS < 13.6	WS ≥ 13.6	
SO <sub>2</sub>	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172	
NO <sub>2</sub>	ppb	0 ≤ C < 5	5 ≤ C < 15	15 ≤ C < 30	30 ≤ C < 100	100 ≤ C < 212	C ≥ 212	
O <sub>3</sub>	ppb	0 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 40	40 ≤ C < 60	60 ≤ C < 82	C ≥ 82	
PM <sub>2.5</sub>	µg/m <sup>3</sup>	0 ≤ C < 2	2 ≤ C < 4	4 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 30	C ≥ 30	

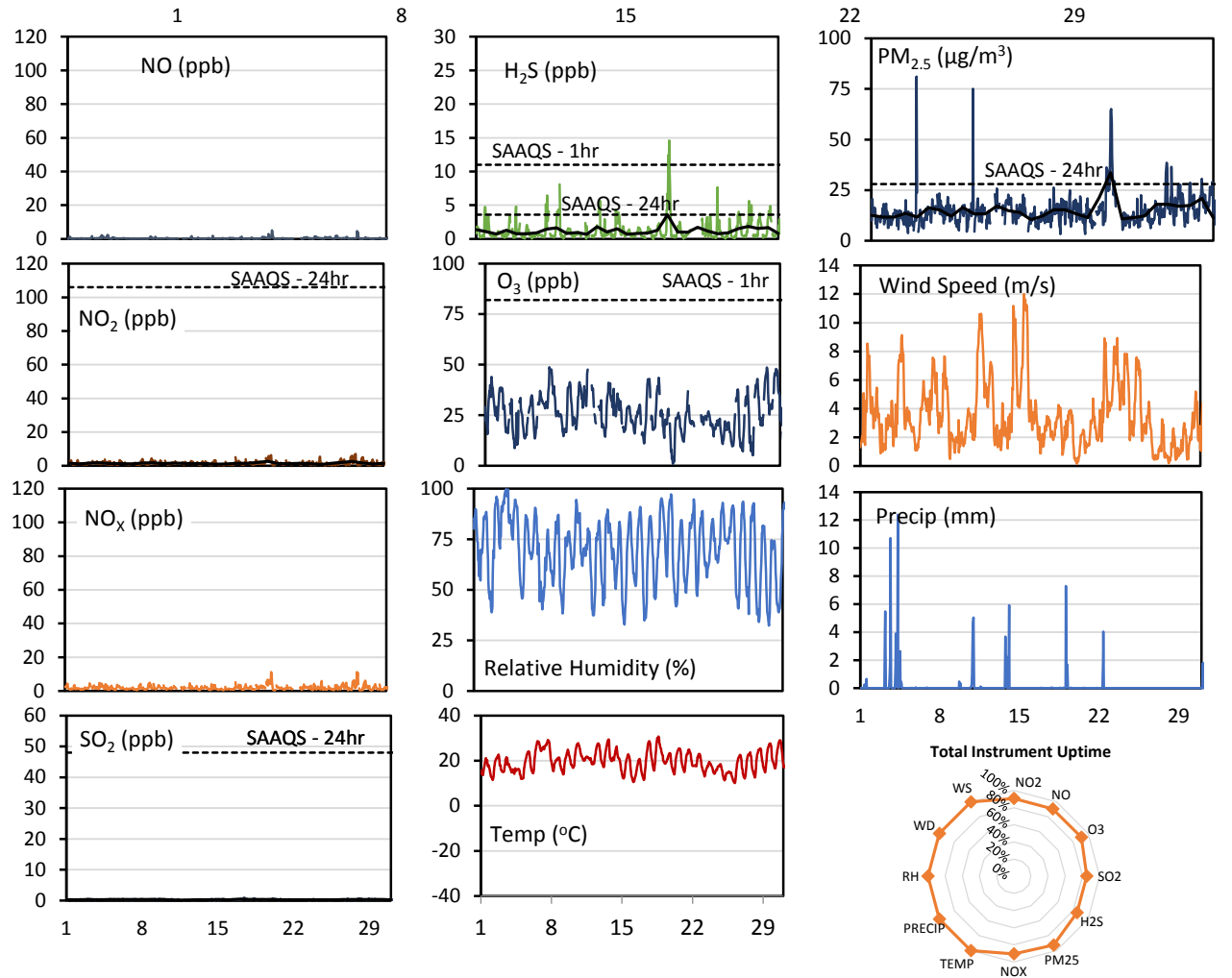
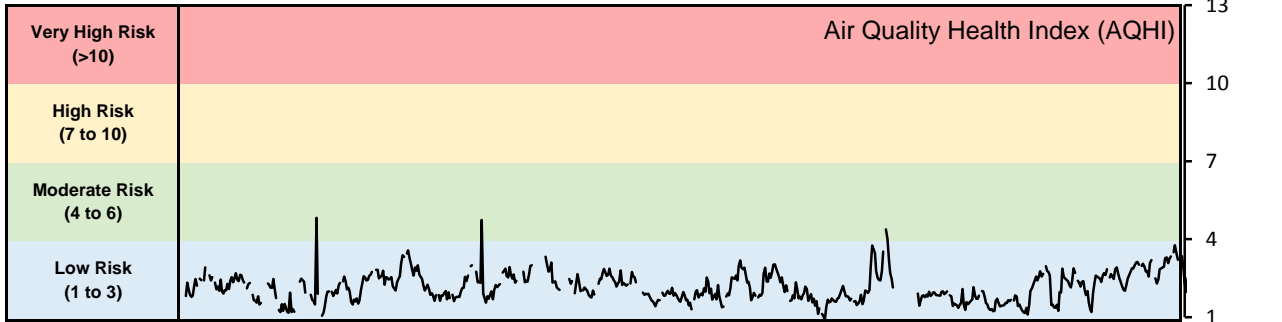
### Monthly Update

- Achieved >94.8% of scheduled uptime for all parameters except ozone (38.5%) and PM<sub>2.5</sub> (0%)
- Achieved >94.1% of total uptime for all parameters
- Ozone analyzer failed on July 14, was removed and sent for servicing on July 17 and installed on July 30
- Nephelometer failed and data was invalidated for July
- Calibration was performed on July 4<sup>th</sup> to 5<sup>th</sup>
- Ozone was calibrated on July 31
- Downtime of 4% results from routine daily internal zeroes and spans

## GPAZ Yorkton Station - July 2018 Summary Report

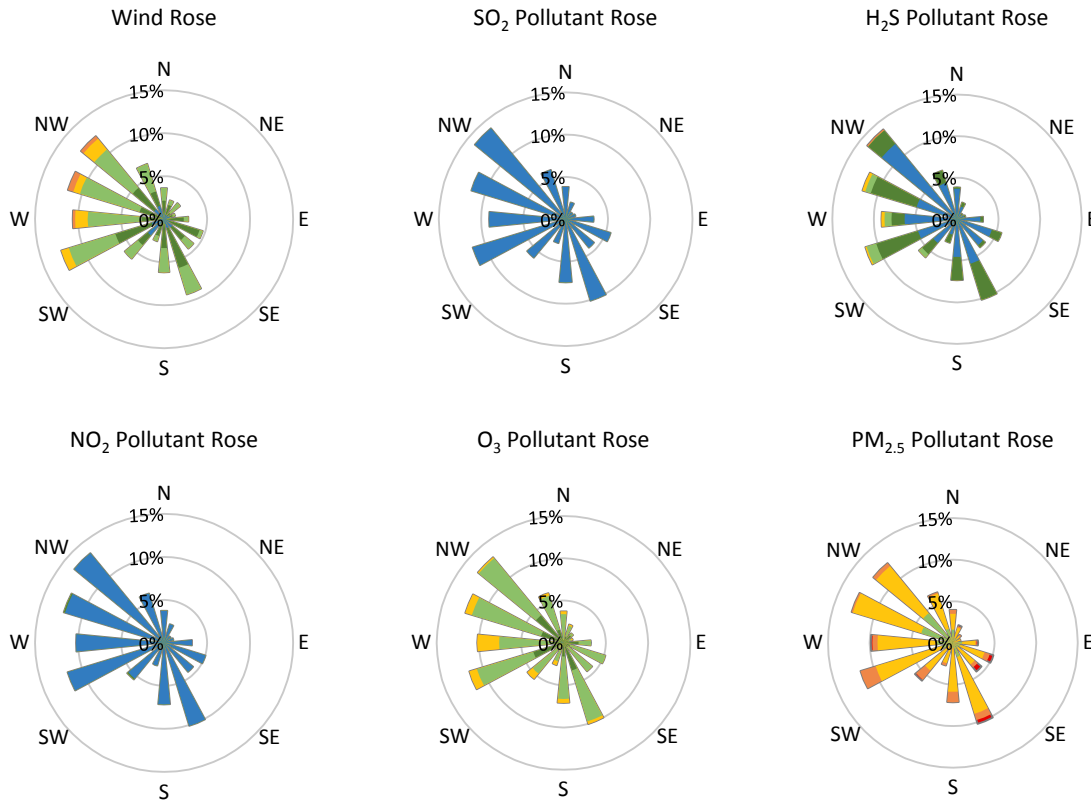
Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Total Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.4	91%	0.9	Jul-20	-	-	5.1	Jul-20 06:00	-	-
NO <sub>2</sub>	ppb	1.5	91%	2.6	Jul-28	106	0	7.0	Jul-28 08:00	159	0
NO <sub>x</sub>	ppb	1.9	91%	3.5	Jul-20	-	-	11.2	Jul-20 06:00	-	-
SO <sub>2</sub>	ppb	0.3	85%	0.5	Jul-17	48	0	1.0	Jul-17 11:00	172	0
H <sub>2</sub> S	ppb	1.2	85%	3.6	Jul-20	3.6	0	14.6	Jul-20 04:00	11	2
O <sub>3</sub>	ppb	25.7	91%	38.3	Jul-30	-	-	48.7	Jul-07 13:00	82	0
PM <sub>2.5</sub>	µg/m <sup>3</sup>	14.7	93%	33.6	Jul-22	28	1	81.1	Jul-04 23:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



\* colored lines indicate 1-hr concentration data for all parameters; solid black lines indicate 24-hr concentrations for PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, and H<sub>2</sub>S

**GPAZ Yorkton Station - July 2018 Summary Report**



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
Wind Speed	m/s	0.3 ≤ WS < 1.4	1.4 ≤ WS < 3.1	3.1 ≤ WS < 7.8	7.8 ≤ WS < 10.8	10.8 ≤ WS < 13.6	WS ≥ 13.6	
SO <sub>2</sub>	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172	
NO <sub>2</sub>	ppb	0 ≤ C < 5	5 ≤ C < 15	15 ≤ C < 30	30 ≤ C < 100	100 ≤ C < 212	C ≥ 212	
H <sub>2</sub> S	ppb	0 ≤ C < 1	1 ≤ C < 3.6	3.6 ≤ C < 5	5 ≤ C < 8	8 ≤ C < 10.8	C ≥ 10.8	
O <sub>3</sub>	ppb	0 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 40	40 ≤ C < 60	60 ≤ C < 82	C ≥ 82	
PM <sub>2.5</sub>	µg/m <sup>3</sup>	0 ≤ C < 2	2 ≤ C < 4	4 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 30	C ≥ 30	

**Monthly Update**

- Achieved >90.6% of total uptime for all parameters except for SO<sub>2</sub>/H<sub>2</sub>S (85.1%/87.7%)
- Achieved >91.7% of scheduled uptime for all parameters except for SO<sub>2</sub> (88.9)
- Station was calibrated on July 12 and July 22
- Downtime of 4% due to routine daily internal zeroes and spans

**Exceedance Summary (1- Hour Average - Exceedances Highlighted)**

Exceedance Time	AQHI	NO <sub>2</sub> ppb	NO ppb	SO <sub>2</sub> ppb	O <sub>3</sub> ppb	NO <sub>x</sub> ppb	H <sub>2</sub> S ppb	PM <sub>2.5</sub> µg/m <sup>3</sup>	Temp °C	WD deg	WS m/s
Jul-20 02:00	0.0	5.0	1.2	0.7	1.2	6.2	<b>12.4</b>	12.5	15.1	322.1	0.3
Jul-20 04:00	1.0	3.0	1.2	0.4	4.3	4.2	<b>14.6</b>	11.9	14.0	333.9	0.6

**Exceedance Summary (24- Hour Average - Exceedances Highlighted)**

Exceedance Time	AQHI	NO <sub>2</sub> ppb	NO ppb	SO <sub>2</sub> ppb	O <sub>3</sub> ppb	NO <sub>x</sub> ppb	H <sub>2</sub> S ppb	PM <sub>2.5</sub> µg/m <sup>3</sup>	Temp °C	WD deg	WS m/s
Jul-22	2.8	1.3	0.2	0.3	21.7	1.5	1.0	<b>33.6</b>	19.5	210.4	4.5