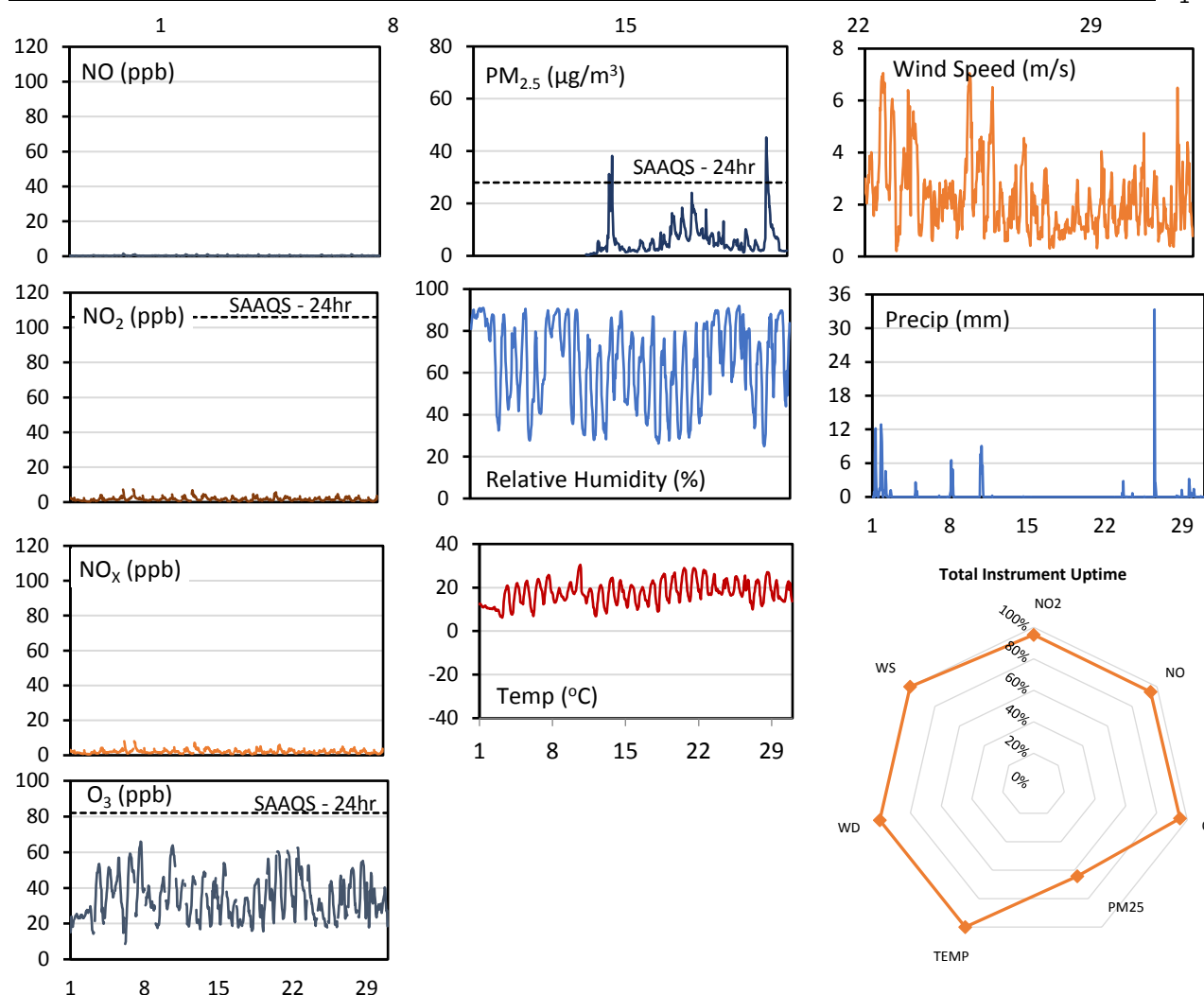
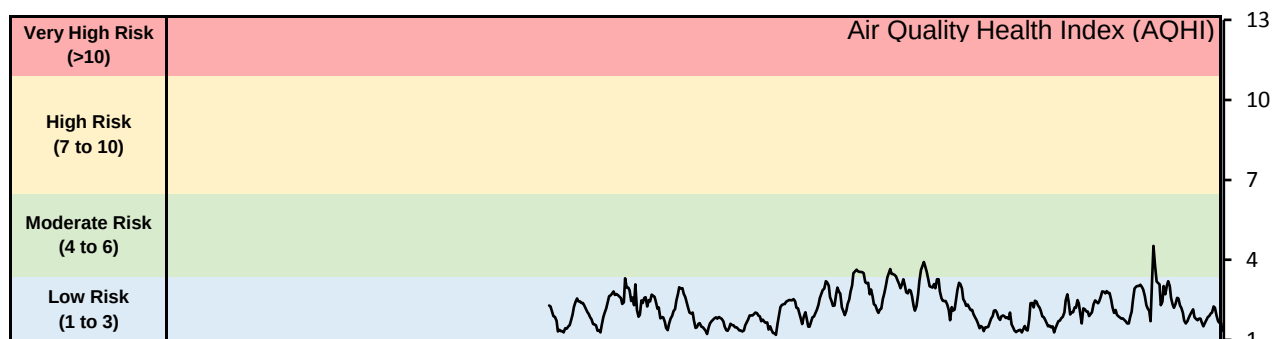


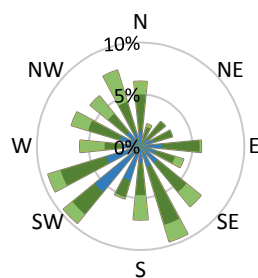
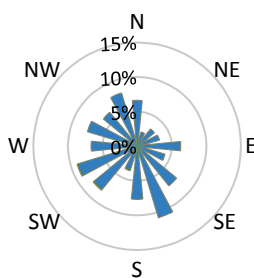
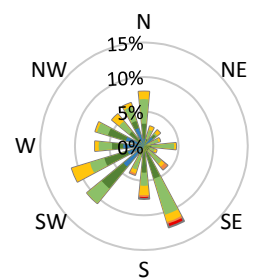
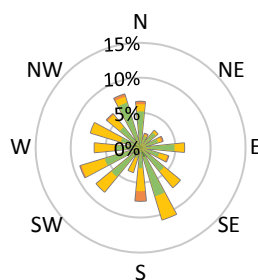
SESAA Esterhazy Station - June 2018 Summary Report

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	95%	0.5	Jun-06	-	-	1.6	Jun-06 05:00	-	-
NO ₂	ppb	1.7	95%	3.0	Jun-07	106	0	7.4	Jun-07 03:00	159	0
NO _x	ppb	2.1	95%	3.4	Jun-07	-	-	8.1	Jun-07 03:00	-	-
O ₃	ppb	34.5	95%	47.6	Jun-10	-	-	65.9	Jun-07 15:00	82	0
PM _{2.5}	µg/m ³	6.2	64%	17.1	Jun-29	28	0	45.2	Jun-29 00:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



Wind Rose


NO₂ Pollutant Rose

PM_{2.5} Pollutant Rose

O₃ Pollutant Rose


Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class					
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$
PM _{2.5}	ug/m ³	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$

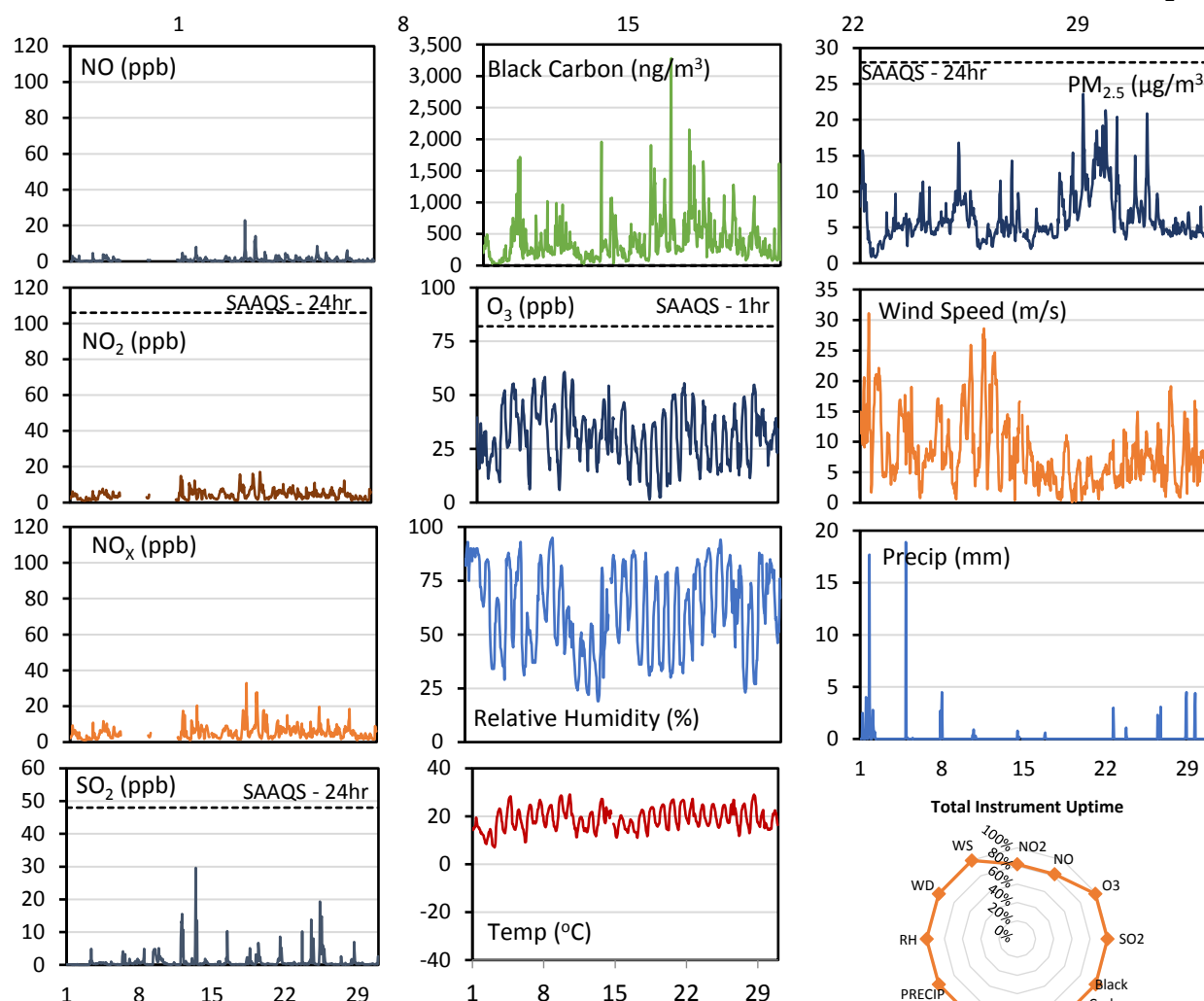
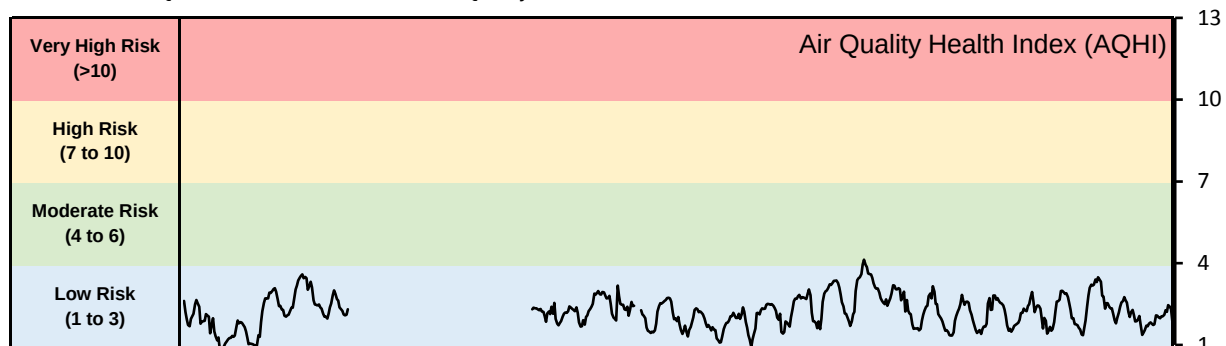
Monthly Update

- Achieved >99.2% of scheduled uptime for all parameters except for PM_{2.5} (64.4%)
- Downtime of 4% results from routine daily Internal Zeroes and Spans
- PM_{2.5} experienced operational issues that led to a loss of data, the issue was resolved on June 11th

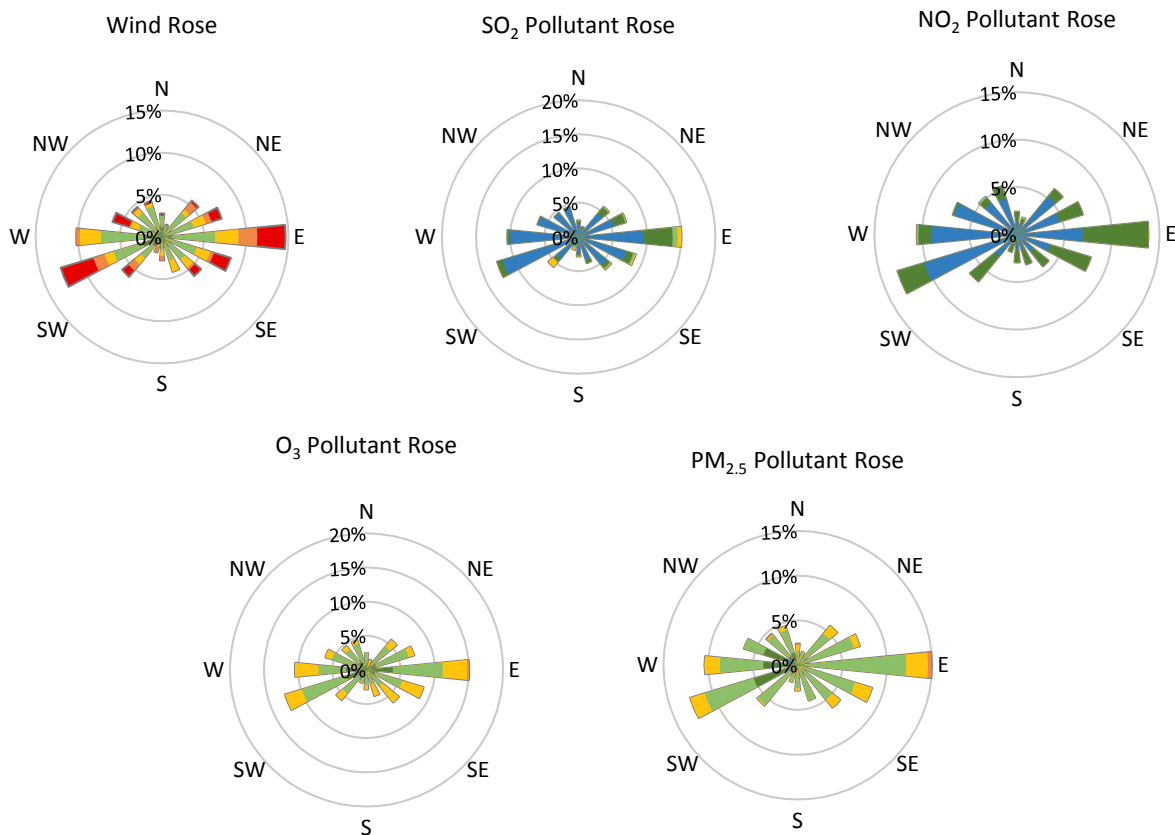
SESAA Estevan Station - June 2018 Summary Report

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	1.0	82%	2.6	Jun-18	-	-	22.9	Jun-18 06:00	-	-
NO ₂	ppb	4.3	82%	7.6	Jun-19	106	0	17.1	Jun-19 22:00	159	0
NO _x	ppb	5.4	82%	10.1	Jun-19	-	-	32.9	Jun-18 06:00	-	-
SO ₂	ppb	0.9	99%	3.8	Jun-25	48	0	29.6	Jun-13 10:00	172	0
Black Carbon	ng/m ³	383.8	99%	770.3	Jun-19	-	-	3280.0	Jun-19 23:00	-	-
O ₃	ppb	31.2	99%	46.0	Jun-07	-	-	60.8	Jun-09 17:00	82	0
PM _{2.5}	µg/m ³	6.4	99%	15.2	Jun-21	28	0	23.6	Jun-19 22:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



SESAA Estevan Station - June 2018 Summary Report



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$	
SO ₂	ppb	$0 \leq C < 1$	$1 \leq C < 5$	$5 \leq C < 10$	$10 \leq C < 57$	$57 \leq C < 172$	$C \geq 172$	
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$	
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$	
PM _{2.5}	$\mu\text{g}/\text{m}^3$	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$	

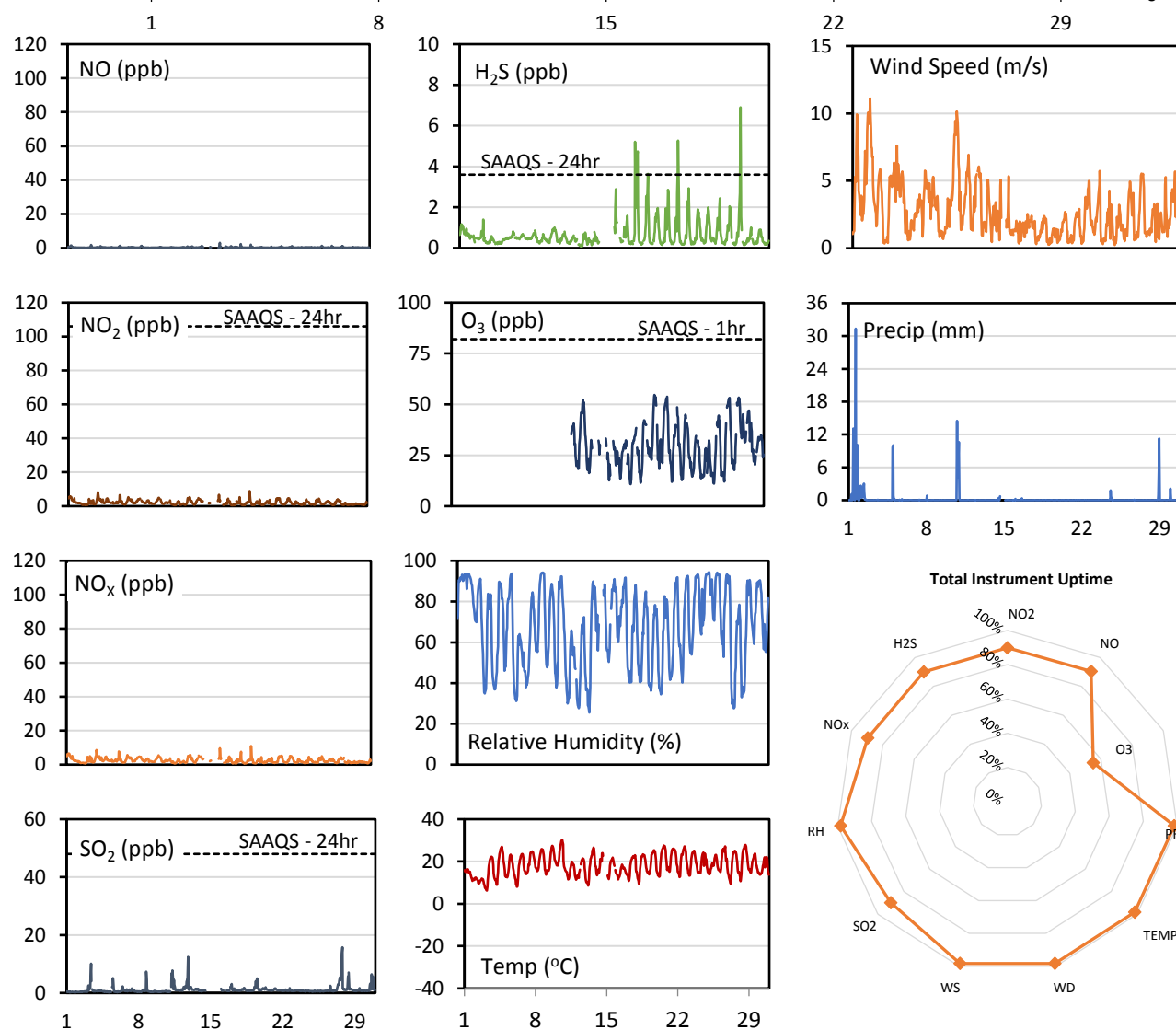
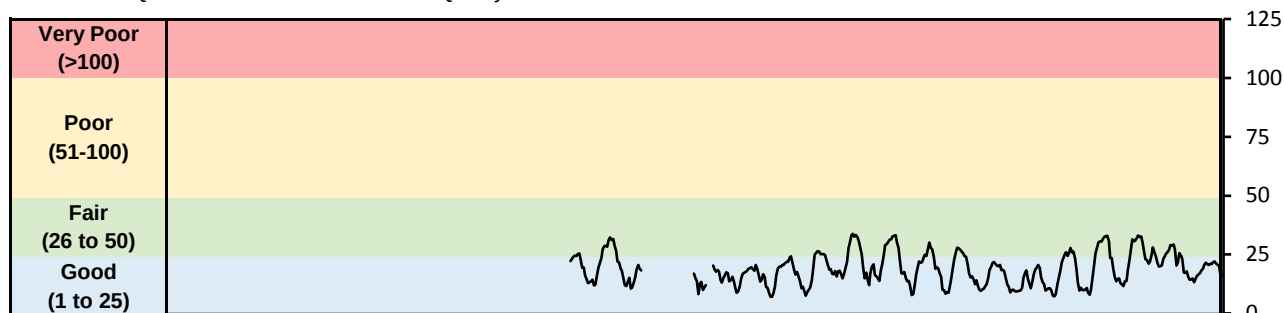
Monthly Update

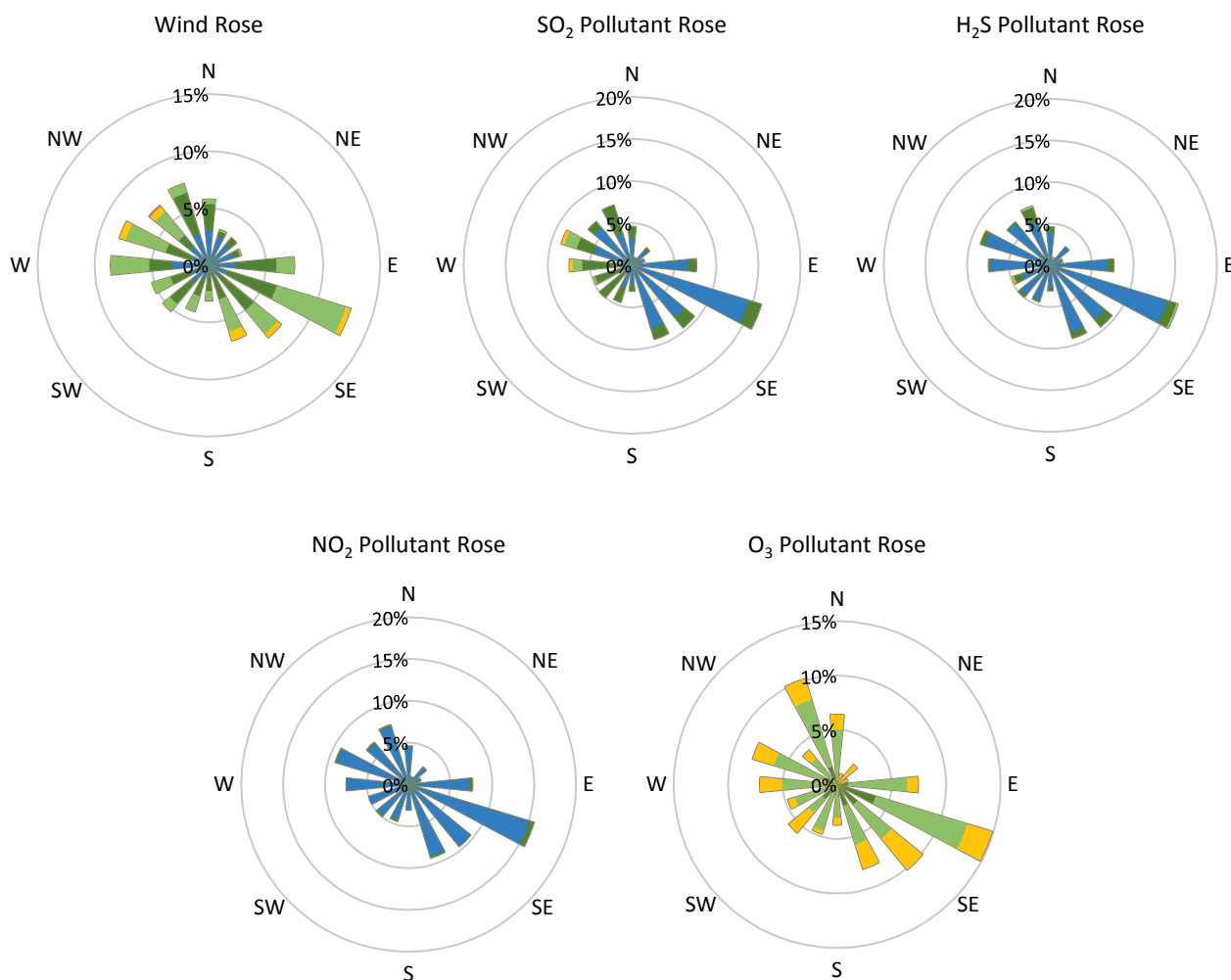
- Achieved >99.0% of scheduled uptime for all parameters, excluding NO_x (81.9%)
- Downtime of 4% results from daily internal zeroes and spans

SESAA Glen Ewen Station - June 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	90%	0.6	Jun-14	-	-	3.1	Jun-16 03:00	-	-
NO ₂	ppb	2.1	90%	3.7	Jun-01	106	0	8.9	Jun-19 05:00	159	0
NO _x	ppb	2.5	90%	4.3	Jun-01	-	-	10.9	Jun-19 05:00	-	-
SO ₂	ppb	1.1	90%	3.8	Jun-27	48	0	15.8	Jun-27 19:00	172	0
H ₂ S	ppb	0.7	90%	1.4	Jun-18	3.6	0	6.9	Jun-28 05:00	11	0
O ₃	ppb	29.6	55%	37.6	Jun-29	-	-	54.6	Jun-20 12:00	82	0

SAAQS: Saskatchewan Ambient Air Quality Standards





Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class					
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$
SO ₂	ppb	$0 \leq C < 1$	$1 \leq C < 5$	$5 \leq C < 10$	$10 \leq C < 57$	$57 \leq C < 172$	$C \geq 172$
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$
H ₂ S	ppb	$0 \leq C < 1$	$1 \leq C < 3.6$	$3.6 \leq C < 5$	$5 \leq C < 8$	$8 \leq C < 10.8$	$C \geq 10.8$
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$

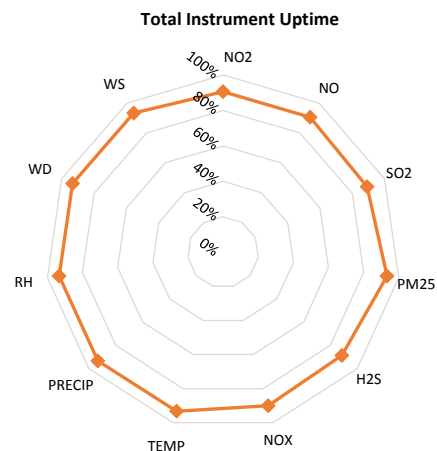
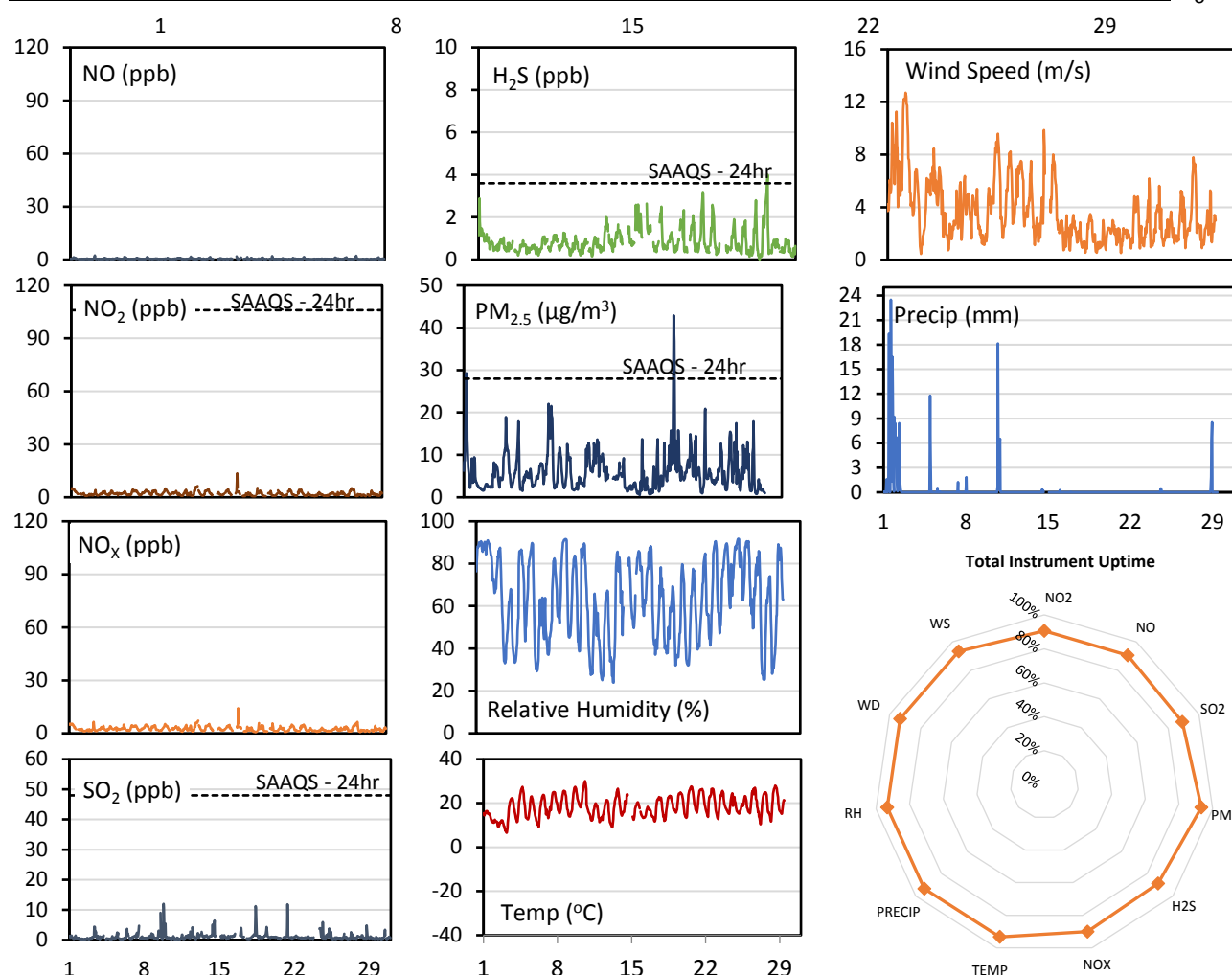
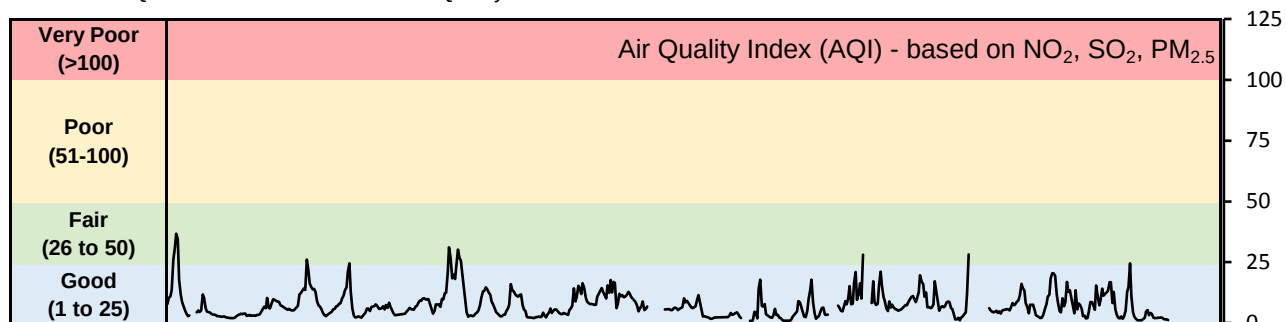
Monthly Update

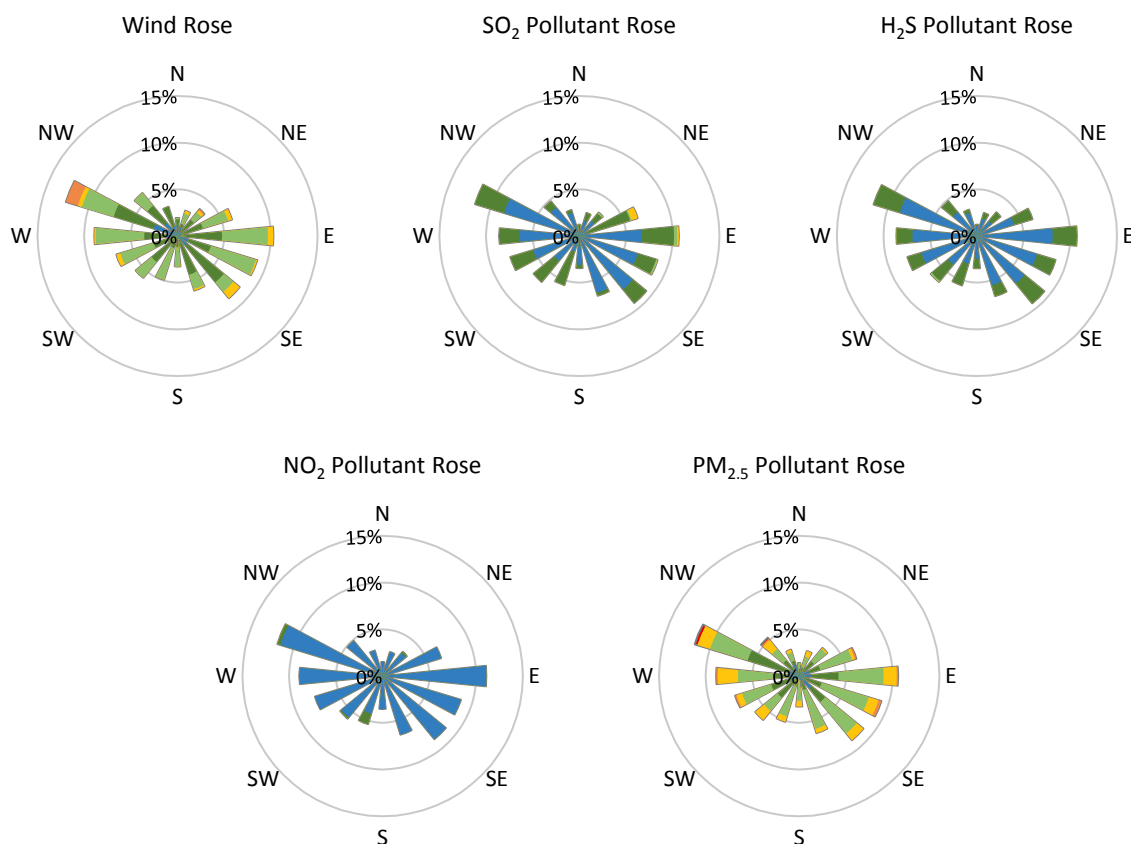
- Achieved >93.9% of scheduled uptime for all parameters except O₃ (57.5%)
- Downtime of 4% results from routine daily Internal Zeroes and Spans
- O₃ analyzer was installed on June 12th
- Station was calibrated on June 15th

SESAA Oxbow Station - June 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%	0.6	Jun-14	-	-	2.3	Jun-03 08:00	-	-
NO ₂	ppb	2.1	91%	3.4	Jun-01	106	0	13.6	Jun-17 00:00	159	0
NO _x	ppb	2.5	90%	4.0	Jun-01	-	-	14.2	Jun-17 00:00	-	-
SO ₂	ppb	1.1	89%	2.5	Jun-09	48	0	12.0	Jun-09 19:00	172	0
H ₂ S	ppb	0.9	89%	1.7	Jun-16	3.6	0	4.0	Jun-28 08:00	11	0
PM _{2.5}	µg/m ³	6.0	93%	12.7	Jun-20	28	0	42.9	Jun-20 19:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards





Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$	
SO ₂	ppb	$0 \leq C < 1$	$1 \leq C < 5$	$5 \leq C < 10$	$10 \leq C < 57$	$57 \leq C < 172$	$C \geq 172$	
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$	
H ₂ S	ppb	$0 \leq C < 1$	$1 \leq C < 3.6$	$3.6 \leq C < 5$	$5 \leq C < 8$	$8 \leq C < 10.8$	$C \geq 10.8$	
PM _{2.5}	µg/m ³	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$	

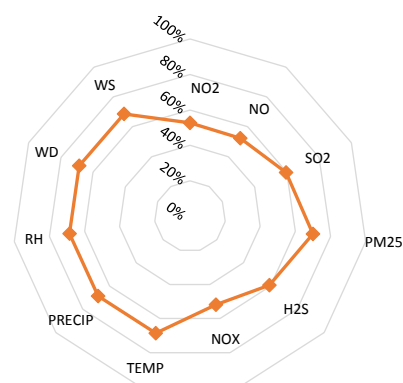
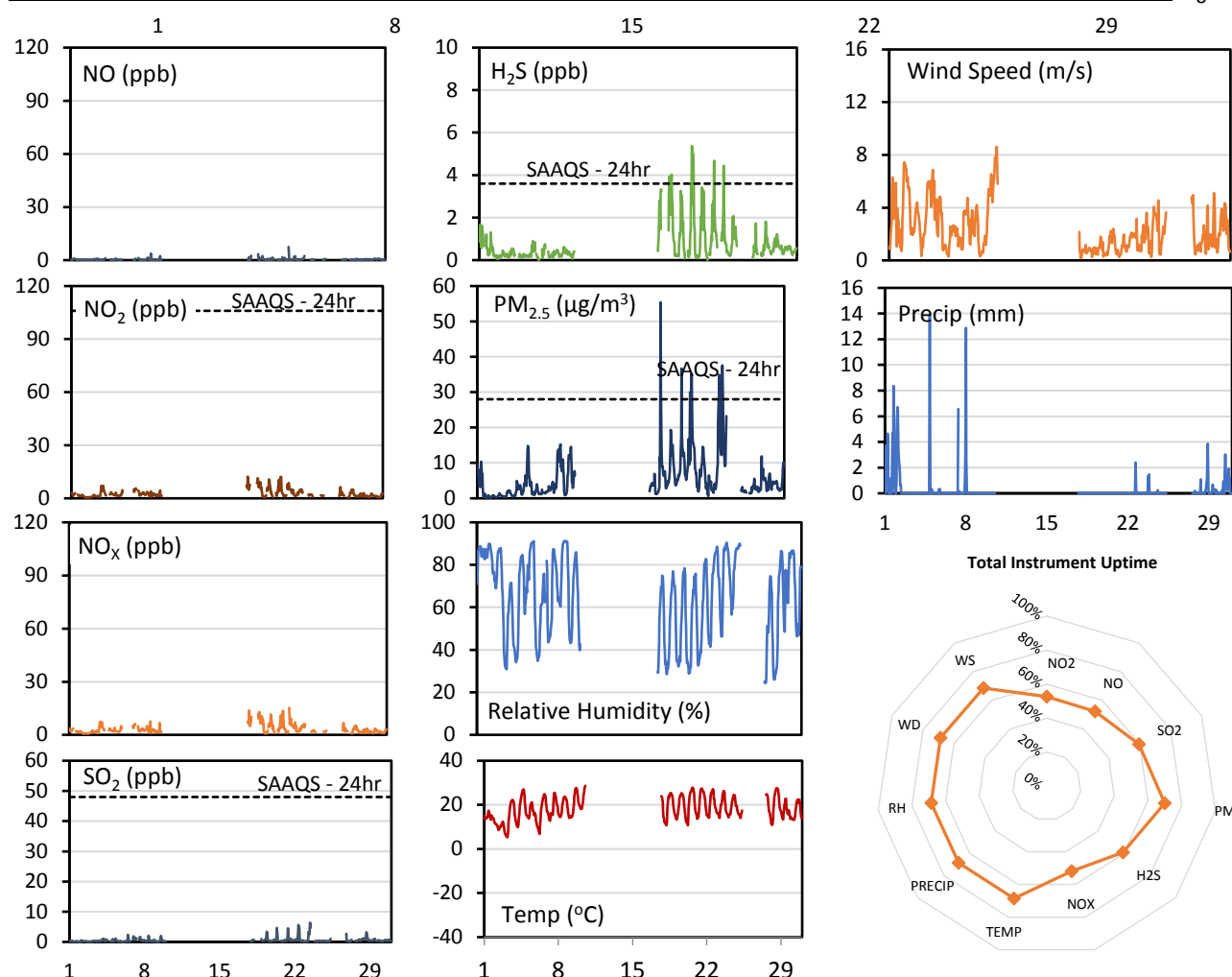
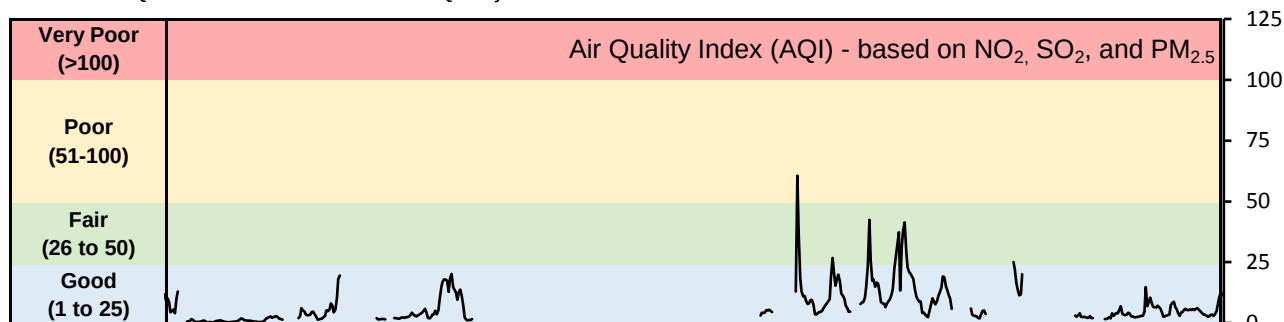
Monthly Update

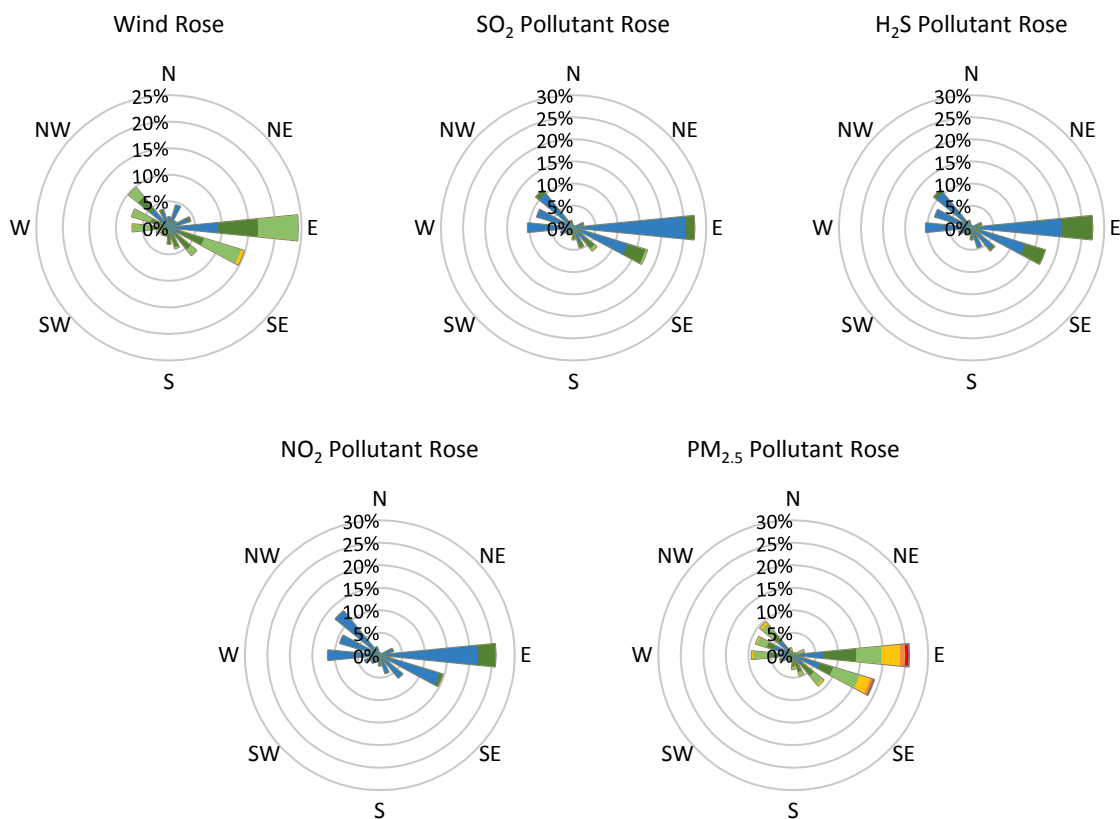
- Achieved >92.6% of scheduled uptime for all parameters
- Downtime of 4% results from routine daily Internal Zeroes and Spans
- Station was calibrated on June 16th

SESAA Stoughton Station - June 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	52%	1.2	Jun-18	-	-	7.4	Jun-21 19:00	-	-
NO ₂	ppb	2.8	53%	7.6	Jun-18	106	0	12.3	Jun-18 00:00	159	0
NO _x	ppb	3.2	52%	9.4	Jun-18	-	-	15.2	Jun-21 19:00	-	-
SO ₂	ppb	0.6	59%	1.4	Jun-23	48	0	6.4	Jun-23 10:00	172	0
H ₂ S	ppb	0.8	59%	2.8	Jun-18	3.6	0	5.4	Jun-21 02:00	11	0
PM _{2.5}	µg/m ³	5.6	70%	15.8	Jun-25	28	0	55.4	Jun-18 22:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards





Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$	
SO ₂	ppb	$0 \leq C < 1$	$1 \leq C < 5$	$5 \leq C < 10$	$10 \leq C < 57$	$57 \leq C < 172$	$C \geq 172$	
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$	
H ₂ S	ppb	$0 \leq C < 1$	$1 \leq C < 3.6$	$3.6 \leq C < 5$	$5 \leq C < 8$	$8 \leq C < 10.8$	$C \geq 10.8$	
PM _{2.5}	$\mu\text{g}/\text{m}^3$	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$	

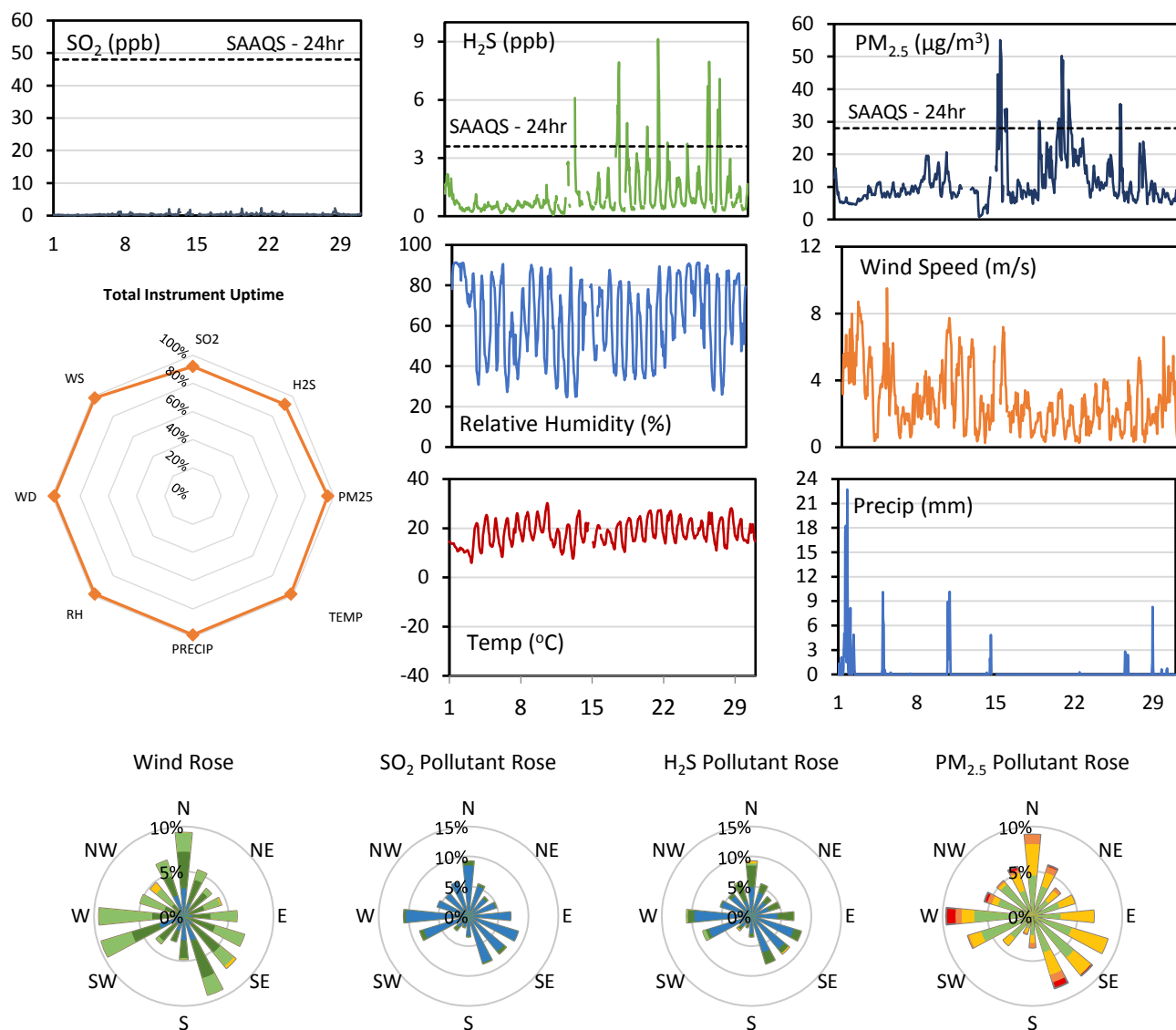
Monthly Update

- Achieved >54.2% of scheduled uptime for all parameters
- Downtime of 4% due to routine daily internal zeroes and spans
- Downtime due to air conditioning issues
- Air conditioner was replaced on June 26th
- Station was calibrated on June 18th and 20th

SESAA Wauchope Station - June 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		
SO ₂	ppb	0.4	92%	0.7	Jun-13	48	0	2.4	Jun-21 07:00	172	0
H ₂ S	ppb	1.1	92%	2.4	Jun-13	3.6	0	9.1	Jun-22 03:00	11	0
PM _{2.5}	µg/m ³	11.4	96%	28.7	Jun-15	28	1	55.1	Jun-15 12:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



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 ₂	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172
H ₂ S	ppb	0 ≤ C < 1	1 ≤ C < 3.6	3.6 ≤ C < 5	5 ≤ C < 8	8 ≤ C < 10.8	C ≥ 10.8
PM _{2.5}	µg/m ³	0 ≤ C < 2	2 ≤ C < 4	4 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 30	C ≥ 30

Monthly Update

- Achieved >95.7% of scheduled uptime for all parameters
- Downtime of 4% results from routine daily Internal Zeroes and Spans
- Station was calibrated on June 13th

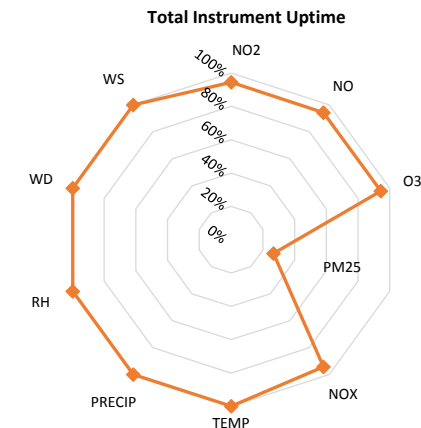
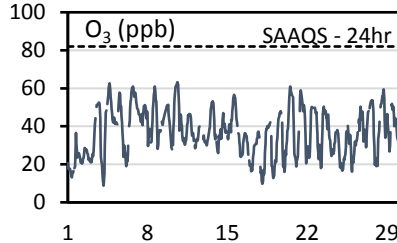
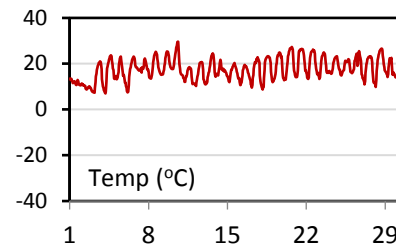
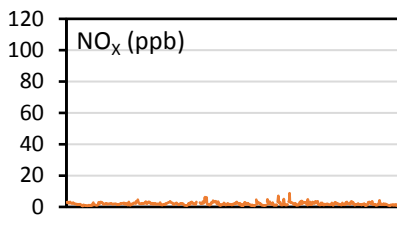
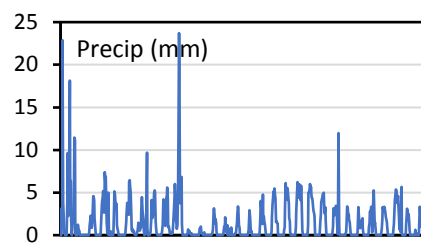
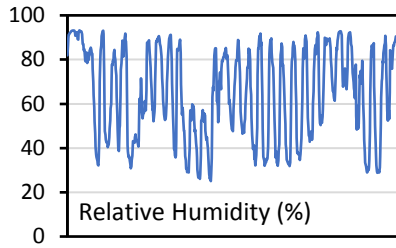
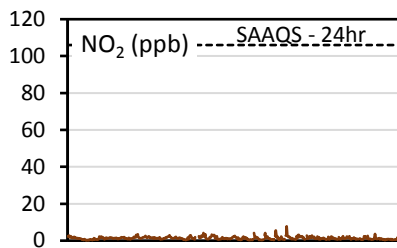
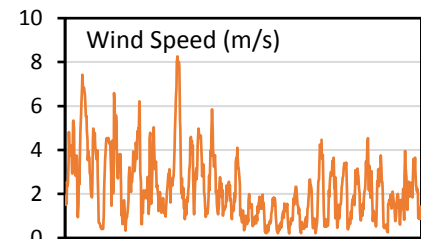
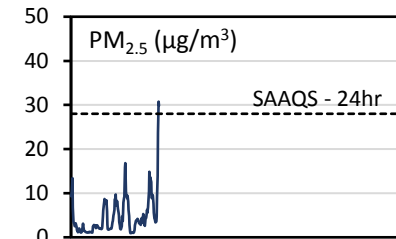
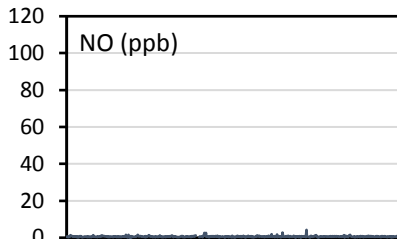
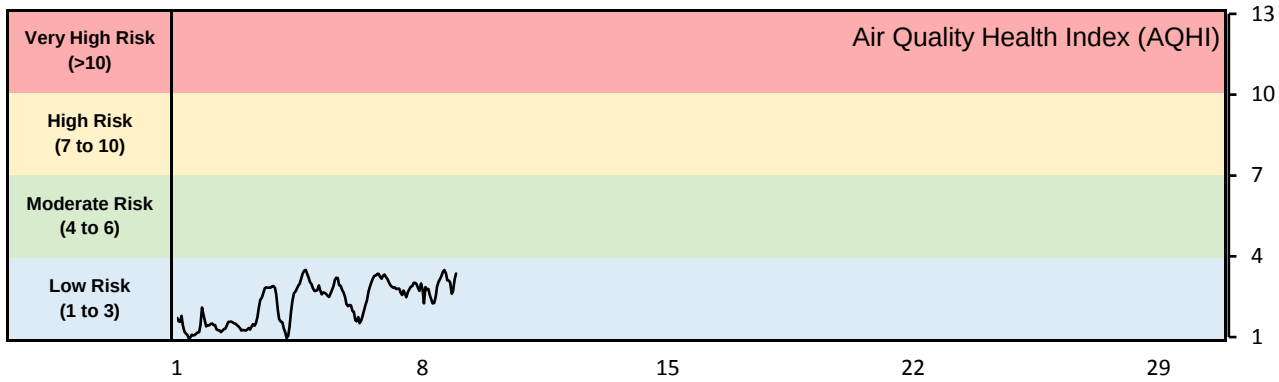
Exceedance Summary (24- Hour Average - Exceedances Highlighted)

Exceedance Date	SO ₂ ppb	PM _{2.5} µg/m ³	H ₂ S ppb	Temp °C	WD deg	WS m/s
Jun-15	0.2	28.7	0.7	17.3	287.9	4.0

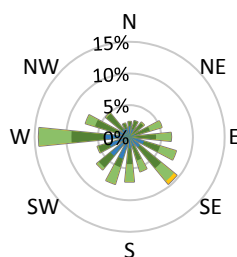
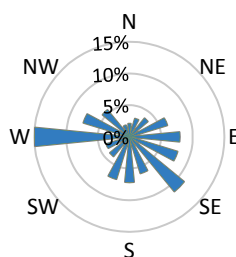
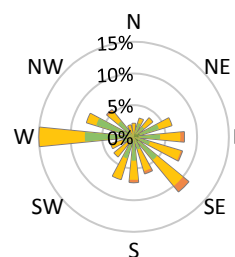
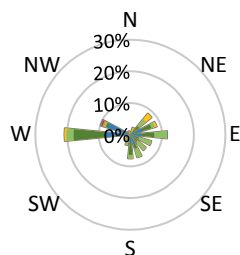
SESAA Wawota Station - June 2018 Summary Report

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	0.6	94%	0.9	Jun-13	-	-	4.2	Jun-22 11:00	-	-
NO ₂	ppb	1.3	94%	2.0	Jun-13	106	0	7.8	Jun-20 20:00	159	0
NO _x	ppb	2.0	94%	2.8	Jun-13	-	-	8.8	Jun-20 20:00	-	-
O ₃	ppb	36.7	94%	47.6	Jun-10	-	-	63.2	Jun-10 15:00	82	0
PM _{2.5}	µg/m ³	4.8	27%	11.1	Jun-08	28	0	30.8	Jun-08 22:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



Wind Rose


NO₂ Pollutant Rose

O₃ Pollutant Rose

PM_{2.5} Pollutant Rose


Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$	
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$	
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$	
PM _{2.5}	µg/m ³	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$	

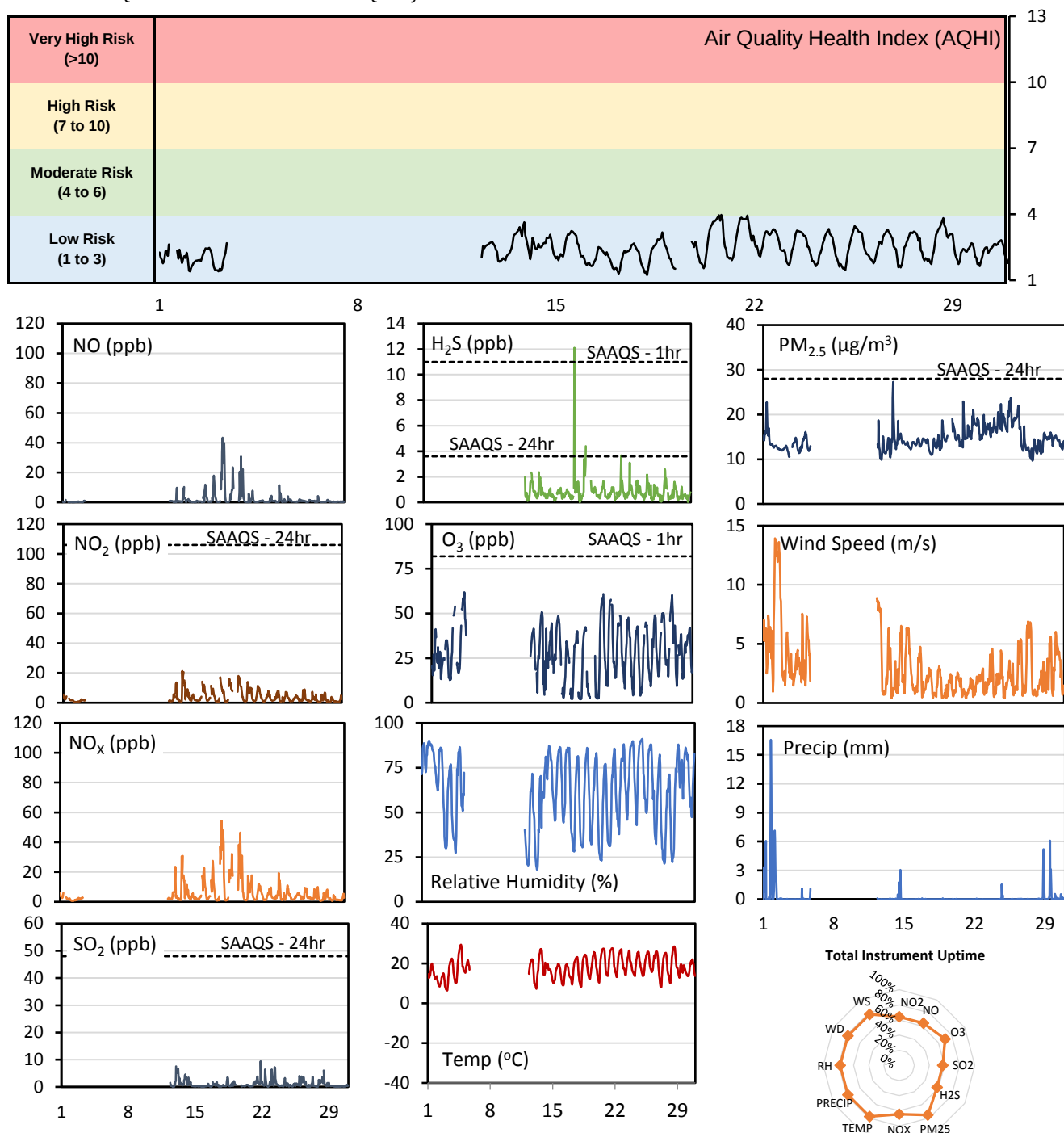
Monthly Update

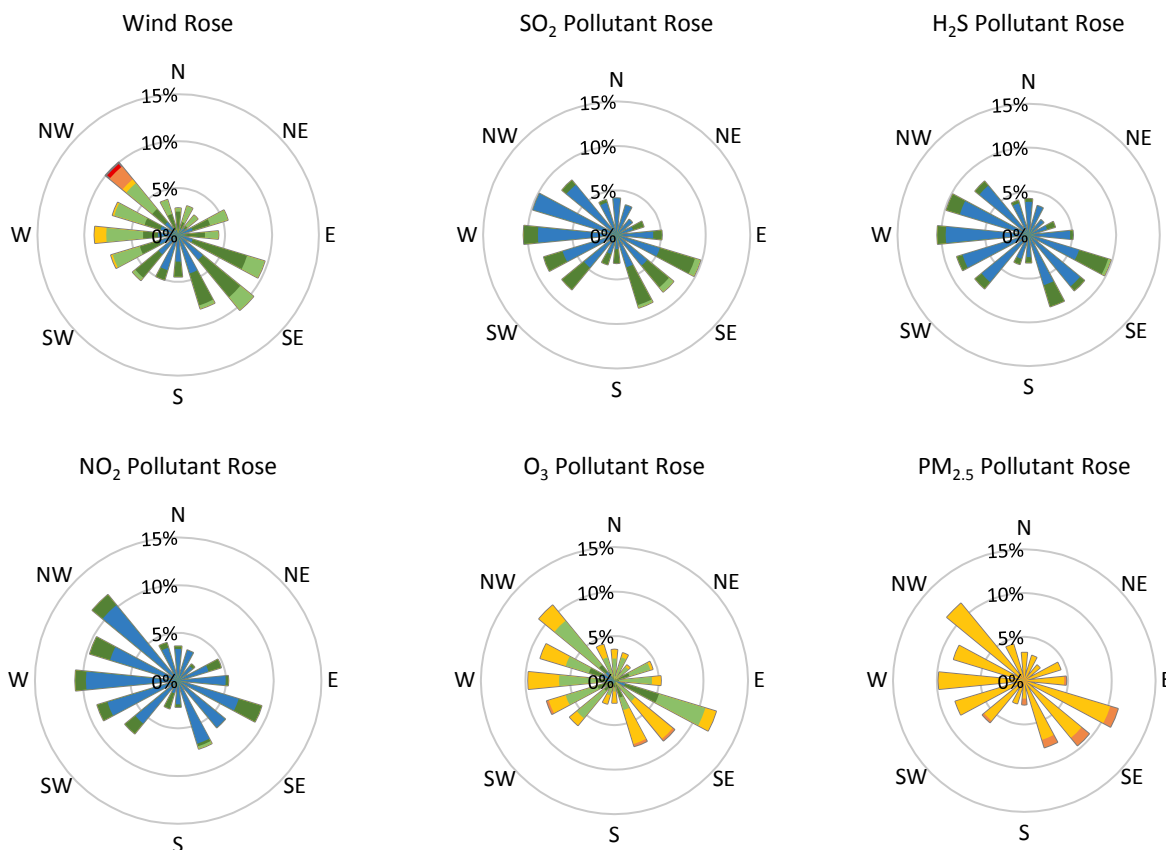
- Achieved >98.6% of scheduled uptime for all parameters except PM_{2.5} (26.7%)
- Downtime of 4% due to routine daily Internal Zeroes and Spans
- PM_{2.5} downtime due to instrument issues
- SHARP was pulled on June 23rd and sent to CD Nova for servicing
- Station was calibrated on June 12th

SESAA Weyburn Station - June 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	2.2	64%	12.3	Jun-18	-	-	43.4	Jun-18 01:00	-	-
NO ₂	ppb	3.9	64%	12.1	Jun-19	106	0	21.4	Jun-13 20:00	159	0
NO _x	ppb	6.1	64%	21.8	Jun-19	-	-	54.4	Jun-18 01:00	-	-
SO ₂	ppb	1.1	58%	2.8	Jun-13	48	0	9.4	Jun-21 20:00	172	0
H ₂ S	ppb	0.8	58%	2.1	Jun-19	3.6	0	12.1	Jun-17 22:00	11	1
O ₃	ppb	28.2	70%	39.8	Jun-04	-	-	61.9	Jun-04 18:00	82	0
PM _{2.5}	µg/m ³	14.6	76%	19.1	Jun-25	28	0	27.3	Jun-13 21:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards





Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class					
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$
SO ₂	ppb	$0 \leq C < 1$	$1 \leq C < 5$	$5 \leq C < 10$	$10 \leq C < 57$	$57 \leq C < 172$	$C \geq 172$
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$
H ₂ S	ppb	$0 \leq C < 1$	$1 \leq C < 3.6$	$3.6 \leq C < 5$	$5 \leq C < 8$	$8 \leq C < 10.8$	$C \geq 10.8$
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$
PM _{2.5}	$\mu\text{g}/\text{m}^3$	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$

Monthly Update

- Achieved >60.4% of scheduled uptime for all parameters
- Downtime of 4% due to routine daily Internal Zeroes and Spans
- Downtime a result of air conditioner issues
- Air conditioner replaced on June 12th
- Station was calibrated on June 19th

Exceedance Summary (1- Hour Average - Exceedances Highlighted)

Exceedance Time	AQHI	NO ₂ ppb	NO ppb	SO ₂ ppb	O ₃ ppb	NO _x ppb	H ₂ S ppb	PM _{2.5} $\mu\text{g}/\text{m}^3$	Temp °C	WD deg	WS m/s
Jun-17 22:00	2.3	17.1	20.1	0.8	3.2	37.2	12.1	14.6	14.4	348.3	0.4