



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## CONSERVATION LEARNING CENTRE

Saskatchewan 53.03°N 105.77°W Estab. 2011

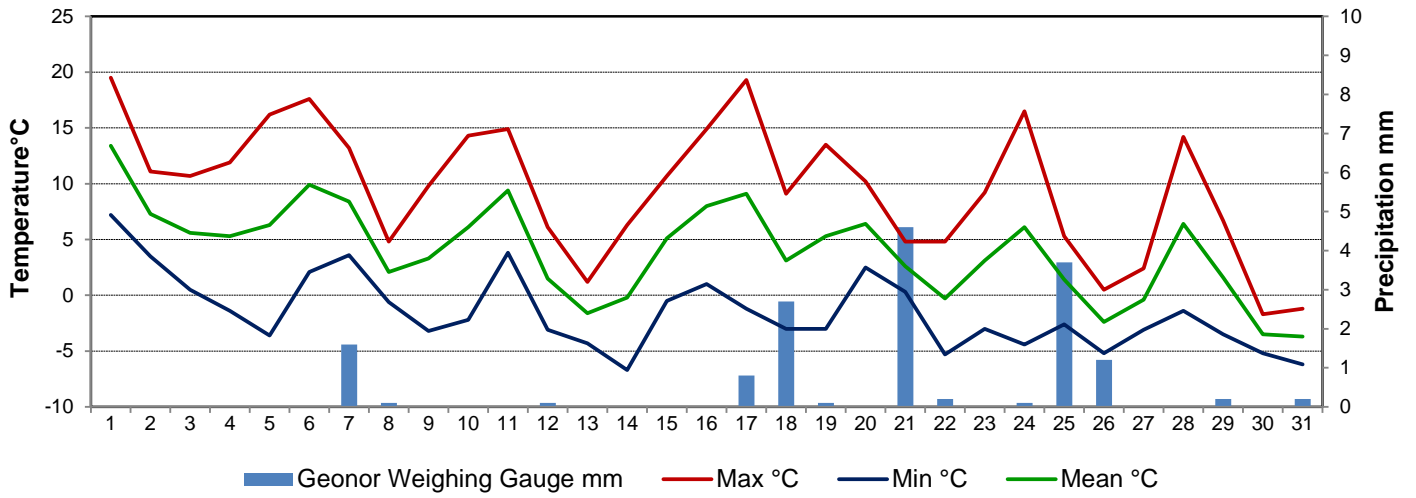
Preliminary **October 2017**

Day	Temperature			Degree-days			Precipitation			Relative Humidity		Station Pressure <i>corrected to sea level</i>	
	Max	Min	Mean	Growing	Heating	Cooling	Geonor Weighing Gauge	Tipping Bucket	Snow-on-Ground 0900h	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	°C	°C	5°C base	18°C base	18°C base	mm	mm	cm	%	%	mbar	mbar
1	19.5	7.2	13.4	8.4	4.6	0.0	0.0	0.0	0	93	54	1002	997
2	11.1	3.5	7.3	2.3	10.7	0.0	0.0	0.0	0	92	74	1016	1002
3	10.7	0.5	5.6	0.6	12.4	0.0	0.0	0.0	0	77	34	1022	1016
4	11.9	-1.4	5.3	0.3	12.7	0.0	0.0	0.0	0	91	39	1020	1018
5	16.2	-3.6	6.3	1.3	11.7	0.0	0.0	0.0	0	94	31	1020	1009
6	17.6	2.1	9.9	4.9	8.1	0.0	0.0	0.0	0	80	30	1009	986
7	13.2	3.6	8.4	3.4	9.6	0.0	1.6	1.4	0	88	35	994	987
8	4.8	-0.6	2.1	0.0	15.9	0.0	0.1	0.2	0	86	55	1014	995
9	9.8	-3.2	3.3	0.0	14.7	0.0	0.0	0.0	0	81	38	1016	1009
10	14.3	-2.2	6.1	1.1	11.9	0.0	0.0	0.0	0	82	36	1014	1010
11	14.9	3.8	9.4	4.4	8.6	0.0	0.0	shut off for winter	0	76	37	1010	1002
12	6.1	-3.1	1.5	0.0	16.5	0.0	0.1		0	85	62	1013	1004
13	1.2	-4.3	-1.6	0.0	19.6	0.0	0.0		0	81	50	1020	1013
14	6.3	-6.7	-0.2	0.0	18.2	0.0	0.0		0	82	39	1020	1011
15	10.7	-0.5	5.1	0.1	12.9	0.0	0.0		0	84	41	1016	1006
16	14.9	1.0	8.0	3.0	10.0	0.0	0.0		0	75	28	1007	1003
17	19.3	-1.2	9.1	4.1	8.9	0.0	0.8		0	86	23	1003	979
18	9.1	-3.0	3.1	0.0	14.9	0.0	2.7		0	83	30	1005	983
19	13.5	-3.0	5.3	0.3	12.7	0.0	0.1		0	76	41	1003	996
20	10.2	2.5	6.4	1.4	11.6	0.0	0.0	data logger error for daily max min temps (Oct 21)	0	84	57	997	989
21	4.8	0.3	2.6	0.0	15.4	0.0	4.6		0	91	78	1002	990
22	4.8	-5.3	-0.3	0.0	18.3	0.0	0.2		0	94	79	1007	997
23	9.2	-3.0	3.1	0.0	14.9	0.0	0.0		0	95	52	1025	1007
24	16.5	-4.4	6.1	1.1	11.9	0.0	0.1		0	92	34	1024	1009
25	5.3	-2.6	1.4	0.0	16.6	0.0	3.7		0	95	62	1018	1001
26	0.5	-5.2	-2.4	0.0	20.4	0.0	1.2		0	93	71	1030	1019
27	2.4	-3.1	-0.4	0.0	18.4	0.0	0.0		0	89	75	1022	1017
28	14.2	-1.4	6.4	1.4	11.6	0.0	0.0		0	89	46	1016	1000
29	6.7	-3.5	1.6	0.0	16.4	0.0	0.2		0	78	63	1023	1003
30	-1.7	-5.2	-3.5	0.0	21.5	0.0	0.0		0	81	56	1025	1014
31	-1.2	-6.2	-3.7	0.0	21.7	0.0	0.2		0	86	64	1014	999
Total				38.1	433.3	0.0	15.6	1.6					
Avg	9.6	-1.6	4.0	Fall maintenance 11 Oct 2017 (capped tipping bucket, empty and re-charge all-season precipitation gauge (Geonor), swap dessicant from the solar radiation instruments)			237.5	Cumulative ppt					
Extreme	19.5	-6.7					4.6	1.4	0	95	23	1030	979
Date	1	14					21			23	17	26	17

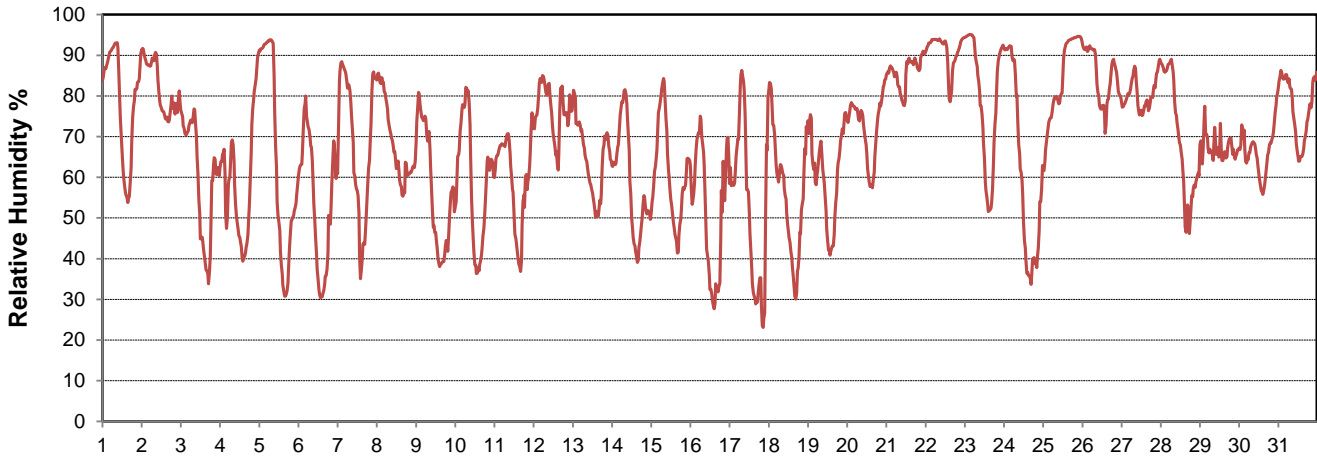
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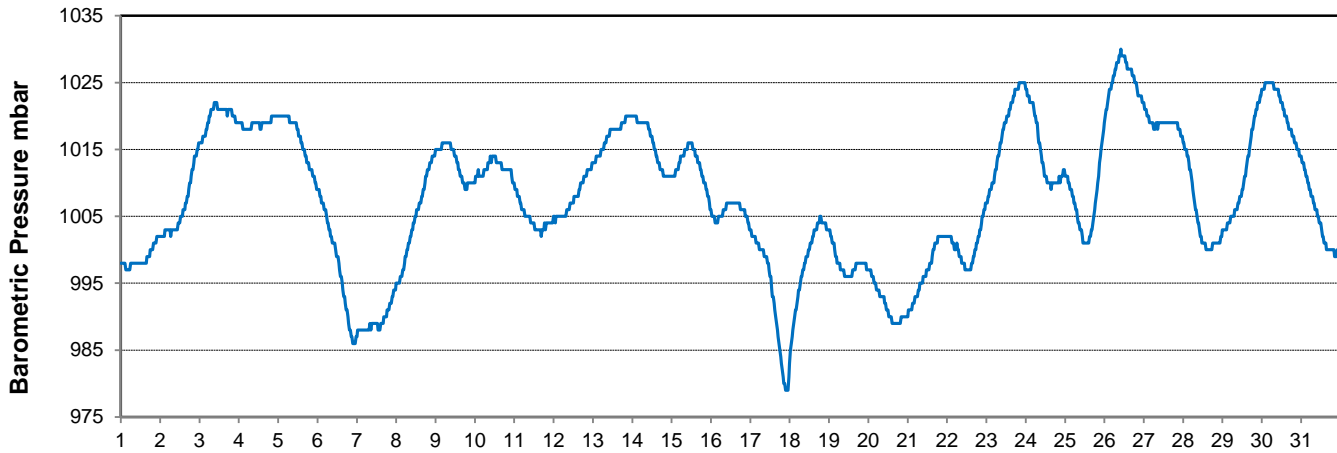
### Temperature and Precipitation for October 2017



### Relative Humidity for October 2017



### Barometric Pressure Corrected to Sea Level for October 2017





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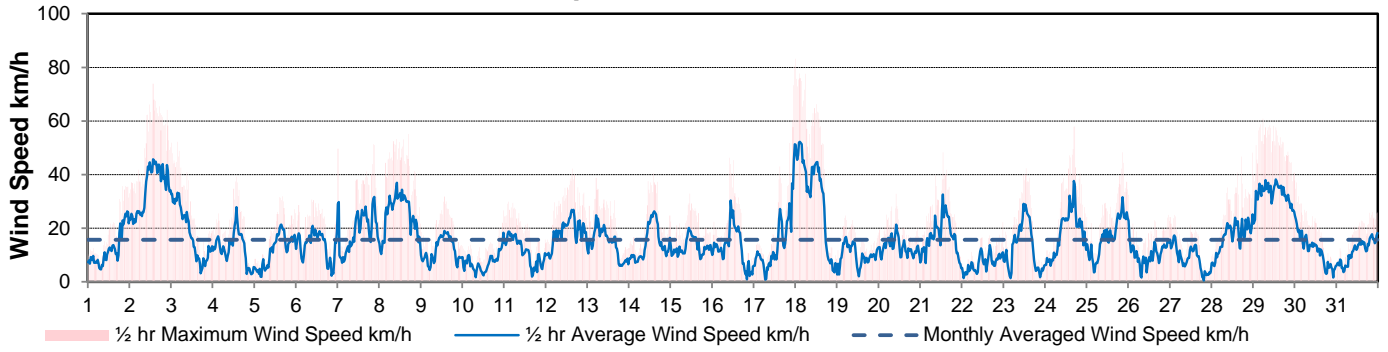
Preliminary **October 2017**

Day	Wind Gust			Soil Temperatures at 0900hrs								Soil Moisture 30 cm	Radiation		
	Max	Direction	Time	Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm	0900hrs	Bright Sunshine	Global	Diffuse
	km/h			°C	°C	°C	°C	°C	°C	°C	°C	%	hours	MJ/m <sup>2</sup>	MJ/m <sup>2</sup>
1	35.8	NNE	20:26	9.5	10.0	10.5	11.0	10.5	10.5	10.0	8.0	21	8.1	11.1	4.0
2	73.9	N	13:59	10.5	11.5	11.0	11.0	10.0	10.0	9.5	7.0	21	0.0	2.8	2.5
3	52.2	N	3:53	2.0	8.5	9.0	10.0	10.5	10.5	10.0	7.5	21	9.6	12.9	1.7
4	39.2	NNW	13:51	3.0	7.0	8.0	9.5	10.5	10.5	10.0	8.0	20	10.9	12.7	1.5
5	32.0	SW	16:10	2.0	5.5	6.5	8.5	10.0	10.5	10.0	8.0	20	9.7	10.3	5.2
6	30.7	WSW	9:17	6.0	7.0	7.5	8.5	10.0	10.5	10.0	8.0	20	9.1	11.2	2.5
7	51.4	NW	20:56	8.0	8.5	8.5	9.0	9.5	10.0	10.0	8.0	20	6.9	9.1	3.3
8	55.2	NNW	17:26	1.0	7.0	8.0	9.0	9.5	10.0	10.0	8.0	20	2.8	6.6	5.2
9	31.8	SSW	13:52	1.0	5.5	6.5	8.0	9.5	10.0	10.0	8.0	20	7.6	10.6	2.3
10	26.7	E	23:47	1.5	5.0	6.0	7.5	9.0	10.0	10.0	8.0	19	7.2	9.3	4.2
11	29.8	ENE	2:40	5.5	7.0	7.5	8.0	9.0	9.5	10.0	8.0	19	6.4	7.8	3.8
12	42.2	NW	15:50	3.5	7.0	7.0	8.0	9.0	9.5	9.5	8.0	19	0.2	4.0	3.6
13	38.7	NW	5:27	-1.5	5.0	5.5	7.5	9.0	9.5	9.5	8.0	19	4.1	7.0	5.1
14	40.5	SSW	14:17	-4.0	3.5	4.5	6.5	8.5	9.5	9.5	8.0	19	8.6	10.0	2.9
15	32.9	NW	11:14	2.0	4.5	5.0	6.5	8.0	9.5	9.5	8.0	19	8.8	10.1	1.9
16	46.3	WNW	10:23	6.0	5.0	5.5	6.5	8.0	9.0	9.5	8.0	18	8.9	8.8	3.3
17	80.4	WNW	23:52	1.0	5.0	5.5	7.0	8.0	9.0	9.5	8.0	18	6.7	7.3	4.1
18	83.2	WNW	0:12	3.5	6.0	6.5	7.5	8.0	9.0	9.5	8.0	21	9.3	9.7	2.5
19	24.7	E	5:11	1.5	4.0	4.5	6.5	8.0	9.0	9.0	8.0	20	7.3	8.4	3.0
20	32.8	E	10:25	4.5	5.5	6.0	6.5	7.5	8.5	9.0	8.0	20	3.2	5.5	4.3
21	48.3	NW	13:25	5.0	5.5	6.0	7.0	7.5	8.5	9.0	8.0	20	0.0	1.1	1.0
22	22.2	WNW	23:53	-3.5	3.5	4.5	6.0	7.5	8.5	9.0	8.0	21	5.1	6.5	5.3
23	42.3	NNW	13:06	3.5	4.0	4.5	6.0	7.5	8.5	9.0	8.0	21	7.8	8.4	1.9
24	58.0	NW	17:16	2.0	3.0	3.5	5.5	7.0	8.5	9.0	8.0	21	5.8	6.6	1.8
25	48.3	NNE	20:44	2.5	4.5	5.0	5.5	7.0	8.0	8.5	8.0	21	0.0	1.3	1.2
26	32.5	NNE	0:04	-2.5	3.5	4.0	5.5	7.0	8.0	8.5	8.0	21	2.0	5.7	3.8
27	25.0	SW	2:42	-2.5	3.5	4.0	5.0	6.5	8.0	8.5	8.0	21	4.6	6.0	2.2
28	48.2	NNW	23:59	1.5	3.0	3.5	5.0	6.5	8.0	8.5	8.0	23	7.0	6.4	2.8
29	60.8	NW	5:30	2.0	4.0	4.5	5.5	6.5	7.5	8.5	8.0	23	0.2	3.1	2.9
30	37.8	N	0:00	-3.5	2.5	3.0	4.5	6.5	7.5	8.5	8.0	22	0.2	3.6	3.3
31	26.1	E	20:44	-4.0	2.0	2.5	4.0	6.0	7.5	8.5	8.0	22	1.1	7.4	6.7
Total	data logger error for max daily wind (Oct 21)												169.2	231.3	99.8
Mean				2.2	5.4	5.9	7.2	8.3	9.1	9.3	8.0	20.3			
Extreme	83.2	WNW	0:12	Fall maintenance 11 Oct 2017 (adjust automated diffuse ring, check/recharge battery of solar power system, install new surveillance camera)											
Date	18														

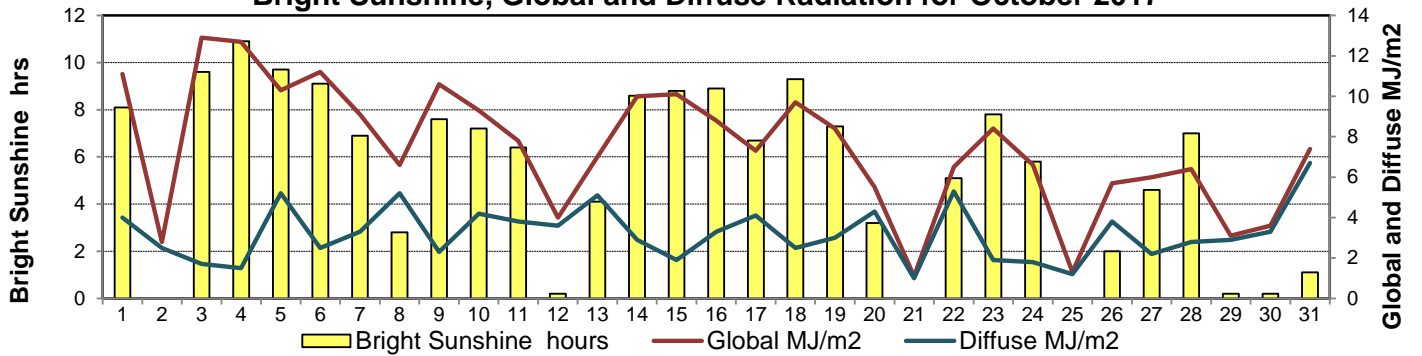
### GLOSSARY OF TERMS

<b>Degree-days</b>	<b>Radiation</b>
Tm Mean Temperature	Bright Sunshine is the unobstructed direct radiation from the sun, as opposed to the shading of a location by clouds or by other atmospheric obstructions.
Growing (Tm-5°C); if Tm ≤ 5°C then GDD = 0	
Heating (18°C-Tm); if Tm ≥ 18°C then HDD = 0	
Cooling (Tm-18°C); if Tm ≤ 18°C then CDD = 0	Diffuse is radiation reaching the earth's surface after having been scattered from the direct solar beam
T Trace of Precipitation	Global is the sum of the direct solar and diffuse radiation
<b>SOG</b> Depth of snow-on-the-ground	
<b>Red Cell</b> no data available	<b>Relative Humidity</b> The ratio of the air's water vapour content to its water vapour capacity which changes with temperature.
<b>Red Number</b> manual calculation	<b>Air Pressure</b> The force exerted by the weight of a column of air above a given point
	<b>Wind Gust</b> The daily highest instantaneous value recorded irrespective of direction and/or duration

### Wind Speed for October 2017

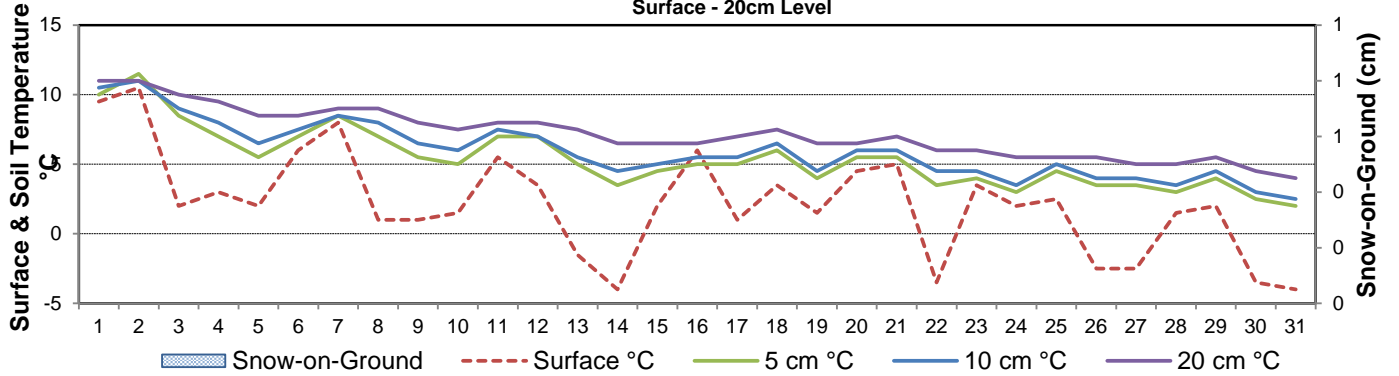


### Bright Sunshine, Global and Diffuse Radiation for October 2017



### Soil Temperatures for October 2017

Surface - 20cm Level



### Soil Temperatures for October 2017

50 - 300cm Level

