



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## CONSERVATION LEARNING CENTRE

Saskatchewan 53.03°N 105.77°W 451m asl Estab. 2011

Preliminary **December 2023**

Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure <i>corrected to sea level</i>	
	Max	Avg Max	Min	Avg Min	Mean	Avg Mean	Growing	Heating	Cooling	Geonor all-season ppt Gauge	Comments	Snow-on-Ground 0900h	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	2012-2021	°C	2012-2021	°C	2012-2021	5°C base	18°C base	18°C base	mm		cm	%	%	mbar	mbar
1	-2.1	-4.6	-13.6	-13.3	-7.9	-9.0	0.0	25.9	0.0	0.0		0	96	71	1008	1001
2	-3.4	-5.3	-12.9	-14.5	-8.2	-9.9	0.0	26.2	0.0	0.0		0	97	82	1001	995
3	-5.8	-4.7	-14.5	-13.9	-10.2	-9.3	0.0	28.2	0.0	0.0		0	96	88	1004	997
4	-1.7	-5.5	-16.7	-13.8	-9.2	-9.7	0.0	27.2	0.0	0.1		0	97	86	1011	1002
5	2.0	-7.5	-10.5	-17.0	-4.3	-12.3	0.0	22.3	0.0	0.0		0	97	71	1011	1002
6	5.4	-10.2	-6.4	-18.5	-0.5	-14.4	0.0	18.5	0.0	0.0		0	97	73	1007	1003
7	3.7	-10.5	-2.4	-18.7	0.7	-14.7	0.0	17.3	0.0	13.6		0	99	87	1004	998
8	-1.2	-8.8	-7.3	-20.2	-4.3	-14.5	0.0	22.3	0.0	0.1		0	94	74	1017	1004
9	-1.7	-7.6	-12.1	-18.1	-6.9	-12.9	0.0	24.9	0.0	0.0		0	95	71	1019	1013
10	-1.5	-9.1	-11.9	-18.1	-6.7	-13.6	0.0	24.7	0.0	0.0		0	94	79	1013	1006
11	-0.9	-8.9	-13.4	-17.4	-7.2	-13.2	0.0	25.2	0.0	0.0		0	79	47	1021	1007
12	-2.9	-7.9	-14.4	-15.1	-8.7	-11.5	0.0	26.7	0.0	0.0		0	89	65	1021	1015
13	3.2	-9.1	-6.0	-18.6	-1.4	-13.9	0.0	19.4	0.0	0.0		0	84	56	1015	1007
14	5.2	-9.4	-3.4	-18.1	0.9	-13.8	0.0	17.1	0.0	0.0		0	78	54	1024	1007
15	4.1	-6.4	-7.8	-17.5	-1.9	-12.0	0.0	19.9	0.0	0.0		0	93	45	1027	1015
16	4.2	-9.3	-7.3	-18.9	-1.6	-14.2	0.0	19.6	0.0	0.0		0	88	62	1014	1005
17	-2.6	-10.2	-17.5	-20.0	-10.1	-15.1	0.0	28.1	0.0	1.6		3	97	71	1020	1007
18	-0.6	-8.4	-12.9	-20.1	-6.8	-14.3	0.0	24.8	0.0	0.0		2	95	71	1016	1003
19	-5.3	-9.8	-14.4	-19.4	-9.9	-14.6	0.0	27.9	0.0	0.0		1	95	82	1017	1006
20	-2.7	-9.5	-11.7	-20.1	-7.2	-14.8	0.0	25.2	0.0	0.5		3	95	84	1016	1007
21	0.4	-8.2	-12.5	-17.5	-6.1	-12.9	0.0	24.1	0.0	0.0		3	97	80	1014	1007
22	2.8	-9.7	-13.4	-17.4	-5.3	-13.6	0.0	23.3	0.0	0.0		2	99	84	1012	999
23	2.6	-10.3	-5.9	-20.5	-1.7	-15.4	0.0	19.7	0.0	0.0		2	96	69	1015	999
24	-3.5	-12.4	-13.4	-19.6	-8.5	-16.0	0.0	26.5	0.0	0.0		2	94	69	1019	1015
25	-0.7	-13.9	-11.7	-22.3	-6.2	-18.1	0.0	24.2	0.0	0.0		2	92	62	1018	1017
26	1.5	-13.0	-12.9	-23.9	-5.7	-18.5	0.0	23.7	0.0	0.0		2	93	52	1017	1011
27	2.5	-13.2	-12.7	-25.8	-5.1	-19.5	0.0	23.1	0.0	0.0		2	95	58	1018	1013
28	2.5	-14.8	-13.5	-26.6	-5.5	-20.7	0.0	23.5	0.0	0.0		2	94	63	1016	1010
29	-3.4	-16.2	-13.0	-24.7	-8.2	-20.5	0.0	26.2	0.0	0.0		2	94	75	1020	1013
30	-2.7	-15.5	-17.4	-26.4	-10.1	-21.0	0.0	28.1	0.0	0.0		2	96	71	1021	1019
31	-0.5	-14.9	-10.6	-24.9	-5.6	-19.9	0.0	23.6	0.0	0.0		2	96	71	1019	1009
Total							0.0	737.4	0.0	15.9			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	-0.1	-9.8	-11.4	-19.4	-5.8	-14.6	Monthly 2012 - 2021 Average			10.3	2012-2021 Average					
Extreme	5.4	7.1	-17.5	-39.9			0	1008.8	0	259.0	2023 Cumulative ppt		99	45	1027	995
Date	6	2014	17	2013						378.6	Cumulative Average		7	15	15	2

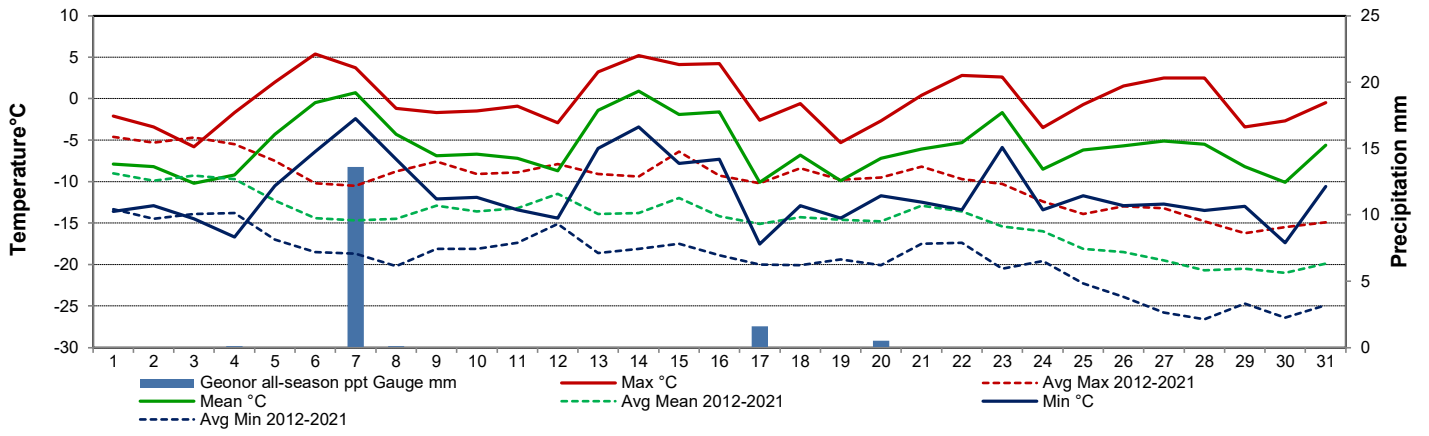
Note: Red numbers indicate manual calculation; Red cell indicate data not available

-lowest snow depth recorded at site (2012-2023)

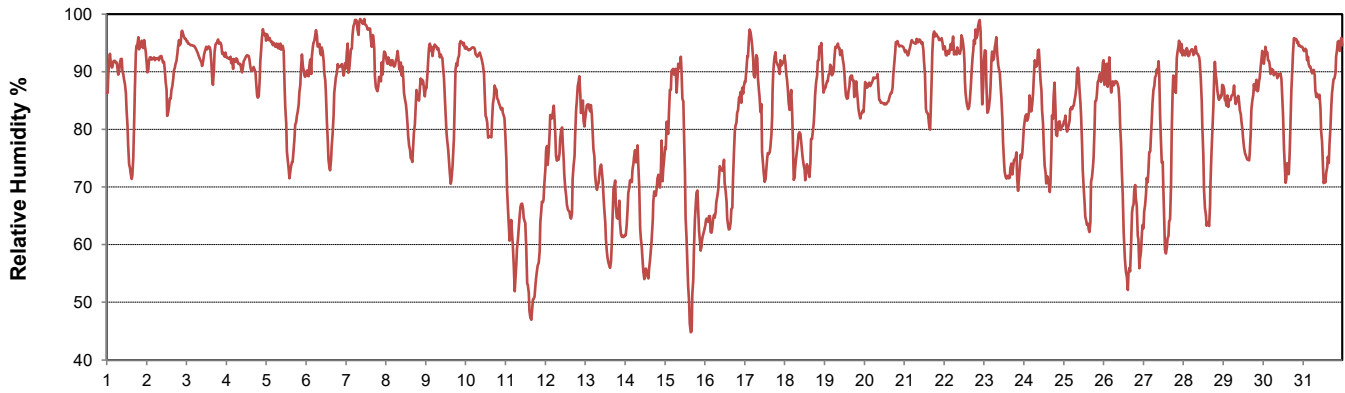
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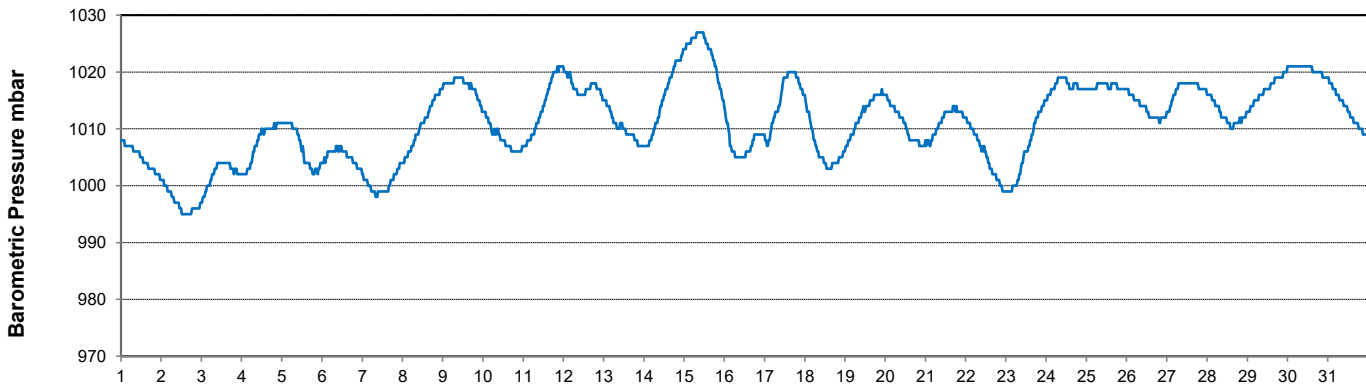
### Temperature and Precipitation for December 2023



### Relative Humidity for December 2023



### Barometric Pressure Corrected to Sea Level for December 2023





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## CONSERVATION LEARNING CENTRE

Saskatchewan 53.03°N 105.77°W 451m asl Estab. 2011

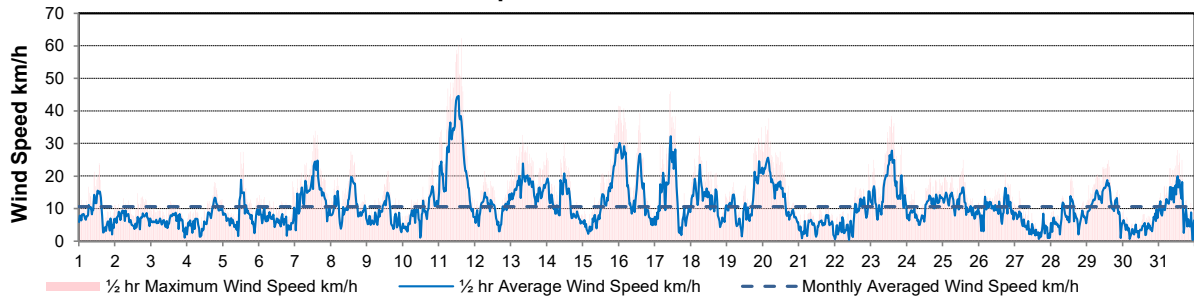
Preliminary **December 2023**

Day	Wind Gust (10 meter)			Wind Speed (10 meters) Daily Average	Soil Temperatures at 0900hrs								Radiation				
	Max	Direction	Time		Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm	Bright Sunshine	Possible	% Possible	Global	Diffuse
	km/h				°C	°C	°C	°C	°C	°C	°C	°C	hours	hours		MJ/m <sup>2</sup>	MJ/m <sup>2</sup>
1	23.9	SW	13:58	8.1	-13.5	-3.5	-2.5	-1.0	0.5	3.0	5.0	7.5	6.8	8.0	85.5	4.7	0.9
2	14.7	S	15:05	6.9	-10.5	-5.5	-4.5	-2.0	0.5	3.0	5.0	7.5	3.7	7.9	46.8	3.5	1.3
3	12.2	SSW	13:15	6.0	-13.5	-4.5	-4.0	-2.0	0.5	3.0	5.0	7.0	5.7	7.9	72.3	4.8	1.1
4	18.2	SW	18:59	7.0	-16.0	-6.5	-5.5	-3.0	0.0	3.0	5.0	7.0	2.8	7.8	35.7	3.2	1.5
5	27.4	SSE	13:32	7.7	-10.5	-5.5	-5.0	-3.0	0.0	3.0	5.0	7.0	0.2	7.8	2.6	1.4	1.2
6	18.3	S	22:53	6.6	-4.5	-4.0	-3.5	-2.5	-0.5	2.5	4.5	7.0	0.0	7.8	0.0	1.7	1.6
7	33.9	NNE	13:40	14.7	2.0	-1.0	-1.5	-1.5	-0.5	2.5	4.5	7.0	0.0	7.8	0.0	0.7	0.7
8	27.4	NW	13:59	11.0	-6.0	-1.0	-1.0	-1.0	0.0	2.5	4.5	7.0	6.5	7.7	84.1	4.1	1.0
9	21.5	WNW	14:59	7.3	-9.5	-4.0	-3.0	-1.5	0.0	2.5	4.5	7.0	6.2	7.7	80.4	4.4	0.8
10	24.8	WSW	20:05	8.9	-11.5	-6.0	-5.0	-2.5	0.0	2.5	4.5	7.0	6.2	7.7	80.7	4.6	0.8
11	62.3	SW	15:02	25.4	-6.0	-5.0	-4.5	-2.5	-0.5	2.0	4.5	7.0	6.2	7.7	80.9	3.3	1.0
12	21.4	SW	6:44	9.8	-9.0	-7.0	-6.5	-4.0	-0.5	2.0	4.0	7.0	6.0	7.6	78.5	3.2	0.7
13	32.5	SSW	8:23	16.8	-3.0	-5.5	-5.5	-4.0	-1.0	2.0	4.0	7.0	6.6	7.6	86.5	3.2	0.7
14	30.1	NNW	11:38	11.6	-2.0	-4.5	-4.0	-3.0	-1.0	2.0	4.0	6.5	0.6	7.6	7.9	2.0	1.8
15	37.8	SSW	23:46	11.7	-7.5	-4.5	-4.0	-2.5	-1.0	2.0	4.0	6.5	5.3	7.6	69.7	2.8	0.8
16	41.5	SSW	0:26	16.1	0.0	-3.5	-3.5	-2.5	-1.0	1.5	4.0	6.5	4.7	7.6	61.9	2.7	0.8
17	46.0	NW	10:38	13.5	-5.5	-4.0	-3.5	-2.5	-1.0	1.5	4.0	6.5	6.0	7.6	79.2	3.3	0.9
18	32.3	SSW	5:57	12.8	-8.5	-5.0	-5.0	-3.5	-1.0	1.5	3.5	6.5	5.8	7.6	76.6	2.6	1.2
19	34.9	E	23:15	11.7	-13.0	-5.5	-5.0	-3.5	-1.0	1.5	3.5	6.5	3.0	7.6	39.7	3.0	1.5
20	37.7	E	4:00	14.5	-7.5	-5.0	-5.0	-3.5	-1.5	1.5	3.5	6.5	0.0	7.6	0.0	1.5	1.5
21	11.4	SSE	18:08	4.6	-9.0	-5.0	-4.5	-3.5	-1.5	1.5	3.5	6.5	5.2	7.6	68.8	3.6	1.1
22	23.7	SSW	22:52	7.0	-12.0	-6.0	-5.5	-4.0	-1.5	1.5	3.5	6.5	6.2	7.6	82.0	4.6	1.0
23	38.4	NW	14:27	15.9	-3.5	-4.5	-4.5	-3.5	-1.5	1.5	3.5	6.5	4.3	7.6	56.9	2.8	1.2
24	19.6	WSW	15:32	10.0	-14.5	-5.5	-4.5	-3.0	-1.5	1.0	3.5	6.5	6.9	7.6	91.1	3.9	0.8
25	24.9	SSW	13:50	11.4	-12.0	-6.0	-5.5	-4.0	-1.5	1.0	3.0	6.5	7.0	7.6	92.5	3.4	0.7
26	20.9	S	18:14	9.9	-13.0	-7.0	-6.0	-4.5	-2.0	1.0	3.0	6.0	6.8	7.6	89.7	3.5	0.7
27	15.4	W	3:28	4.3	-13.0	-6.5	-6.0	-4.5	-2.0	1.0	3.0	6.0	7.0	7.6	92.2	3.2	0.6
28	19.9	SW	14:23	7.1	-11.0	-7.0	-6.5	-4.5	-2.0	1.0	3.0	6.0	6.5	7.6	85.5	4.1	0.8
29	24.8	E	14:50	12.1	-7.0	-6.0	-5.5	-4.5	-2.0	1.0	3.0	6.0	7.0	7.6	91.9	3.2	0.7
30	11.6	S	22:58	4.3	-16.5	-7.0	-6.5	-4.5	-2.5	1.0	3.0	6.0	6.8	7.6	89.1	4.2	1.0
31	28.0	SSW	12:40	10.8	-6.5	-7.0	-6.5	-5.0	-2.5	1.0	3.0	6.0	3.3	7.7	43.1	2.6	1.4
Total													149.3	237.5	62.9	99.8	31.8
Mean				10.5	-8.8	-5.1	-4.6	-3.1	-1.0	1.9	3.9	6.6	-greatest number of bright sunshine hours (2012-2023)				
Extreme	62.3	SW	15:02														
Date	11																

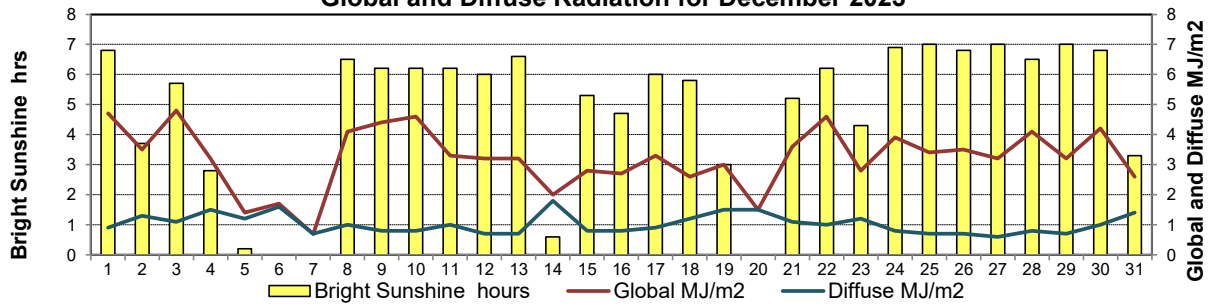
### GLOSSARY OF TERMS

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

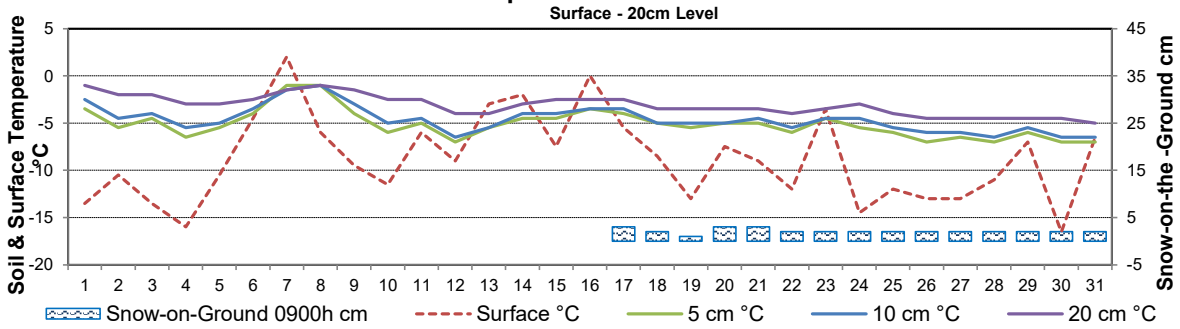
**Wind Speed for December 2023**



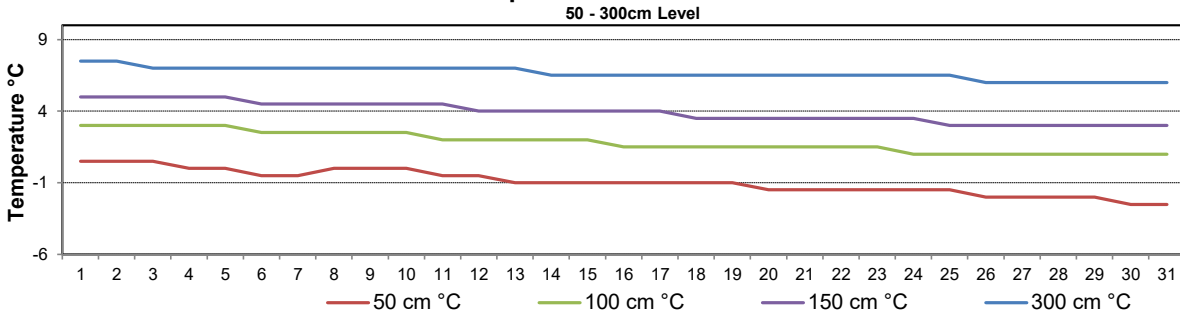
**Global and Diffuse Radiation for December 2023**



**Soil Temperatures for December 2023**



**Soil Temperatures for December 2023**





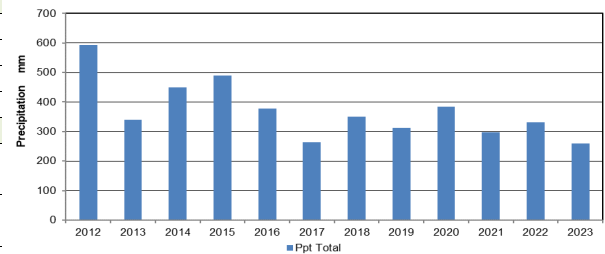
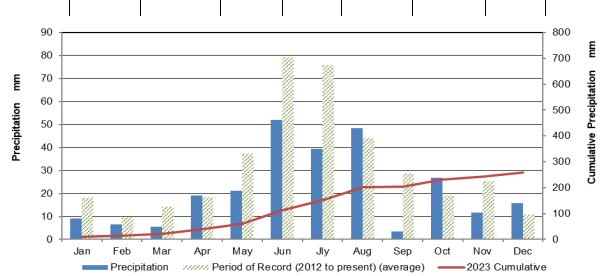
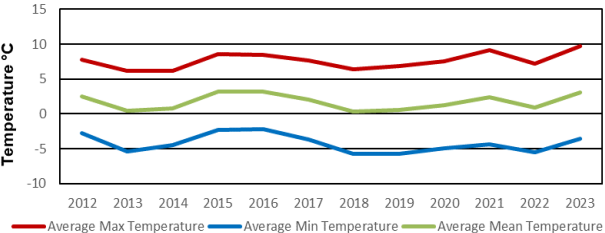
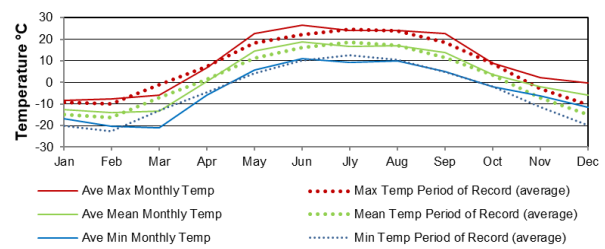
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## CONSERVATION LEARNING CENTRE

Saskatchewan 53.03°N 105.77°W 451m asl Estab. 2011

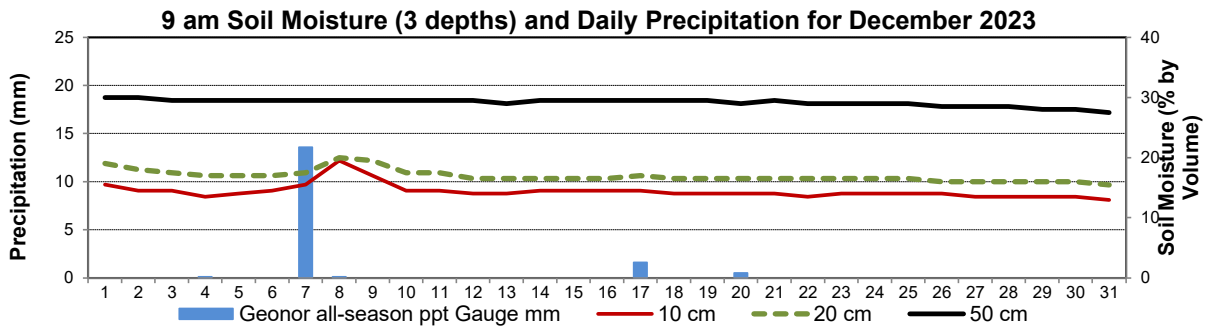
Preliminary **December 2023**

Day	2 meter Wind Speed			Soil Moisture at 0900 hrs (rounded to the 0.5%)		
	Daily Average	Max ½ hr Avg	½ hr Extreme Max	10 cm	20 cm	50 cm
	km/h	km/h	km/h	% by volume (soil type is Clay Loam)		
1	5.0	13.0	20.0	15.5	19.0	30.0
2	5.0	7.6	11.2	14.5	18.0	30.0
3	3.0	6.1	11.2	14.5	17.5	29.5
4	2.0	10.8	14.9	13.5	17.0	29.5
5	4.0	13.4	21.6	14.0	17.0	29.5
6	1.0	5.7	12.9	14.5	17.0	29.5
7	10.0	18.0	27.0	15.5	17.5	29.5
8	5.0	14.9	20.8	19.5	20.0	29.5
9	3.0	12.0	18.3	17.0	19.5	29.5
10	6.0	13.0	19.9	14.5	17.5	29.5
11	19.0	32.9	46.5	14.5	17.5	29.5
12	6.0	12.1	18.5	14.0	16.5	29.5
13	13.0	19.0	27.5	14.0	16.5	29.0
14	9.0	15.7	22.9	14.5	16.5	29.5
15	7.0	21.2	30.4	14.5	16.5	29.5
16	12.0	22.2	31.2	14.5	16.5	29.5
17	9.0	23.5	33.1	14.5	17.0	29.5
18	10.0	17.9	27.5	14.0	16.5	29.5
19	8.0	19.6	27.2	14.0	16.5	29.5
20	10.0	20.1	31.2	14.0	16.5	29.0
21	3.0	5.8	8.9	14.0	16.5	29.5
22	2.0	11.4	16.8	13.5	16.5	29.0
23	11.0	20.4	28.7	14.0	16.5	29.0
24	5.0	11.3	15.4	14.0	16.5	29.0
25	8.0	13.1	19.1	14.0	16.5	29.0
26	6.0	10.1	12.9	14.0	16.0	28.5
27	2.0	6.6	9.1	13.5	16.0	28.5
28	4.0	11.5	17.9	13.5	16.0	28.5
29	8.0	14.4	19.5	13.5	16.0	28.0
30	2.0	5.1	8.5	13.5	16.0	28.0
31	7.0	2.0	23.0	13.0	15.5	27.5
Total						
Mean				14	17	29.2
Extreme	19.0	32.9	46.5	19.5	20	30
Date	-3	-3	-3	-0.5	-0.5	-1.5

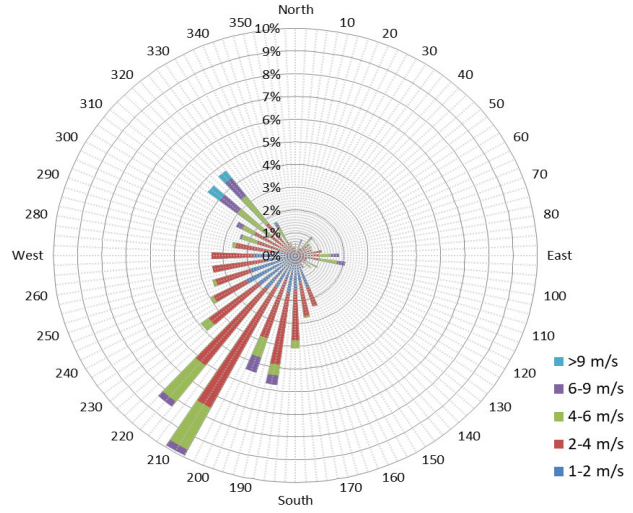


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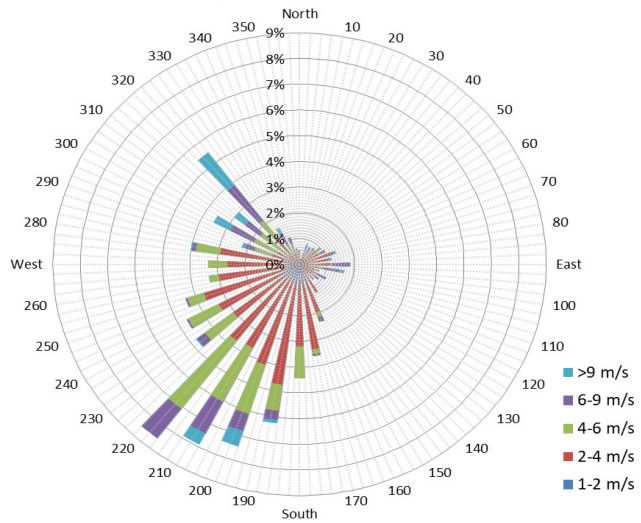




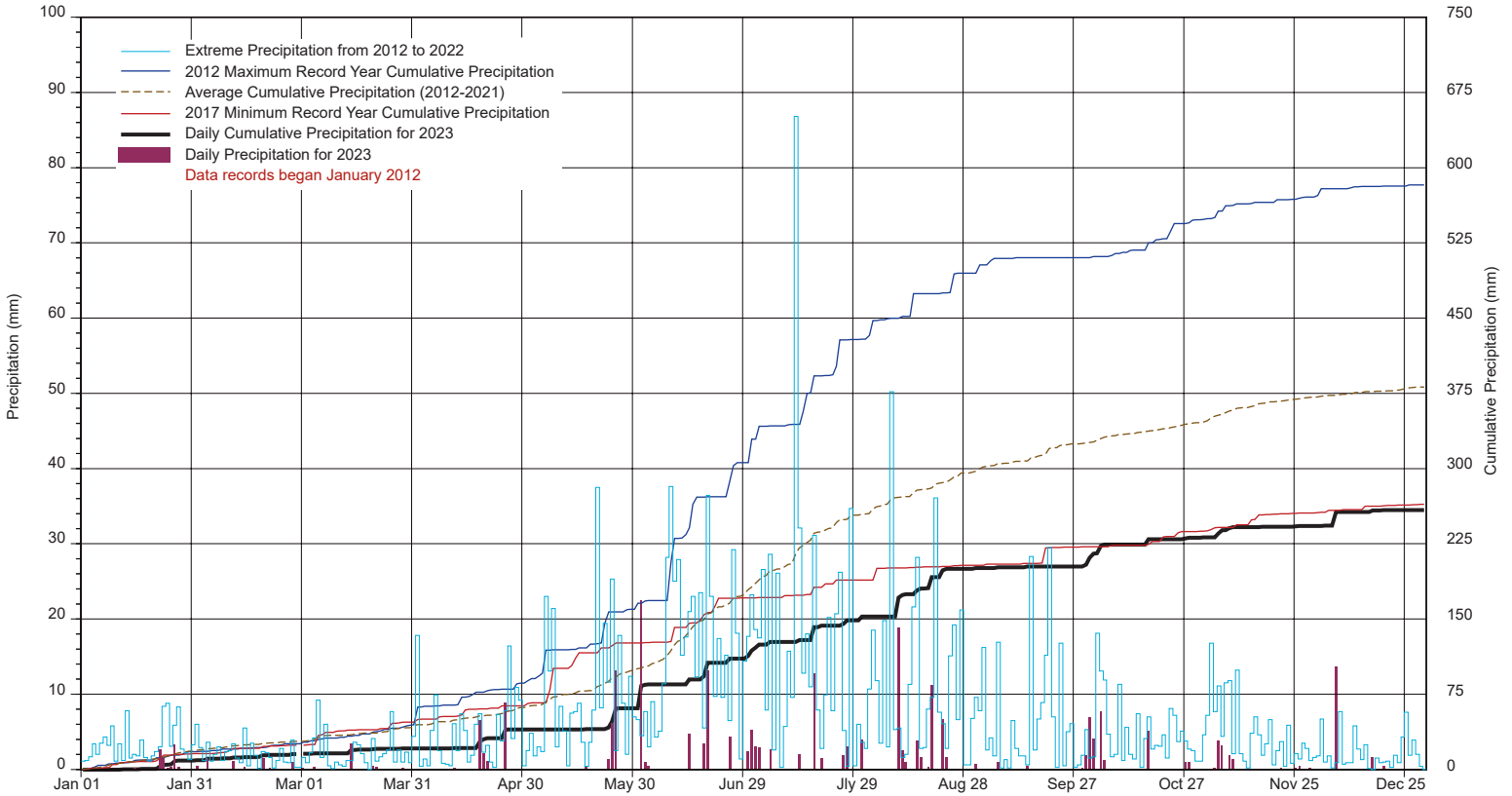
10 minute Average Wind Speed and Direction CLC December 2023



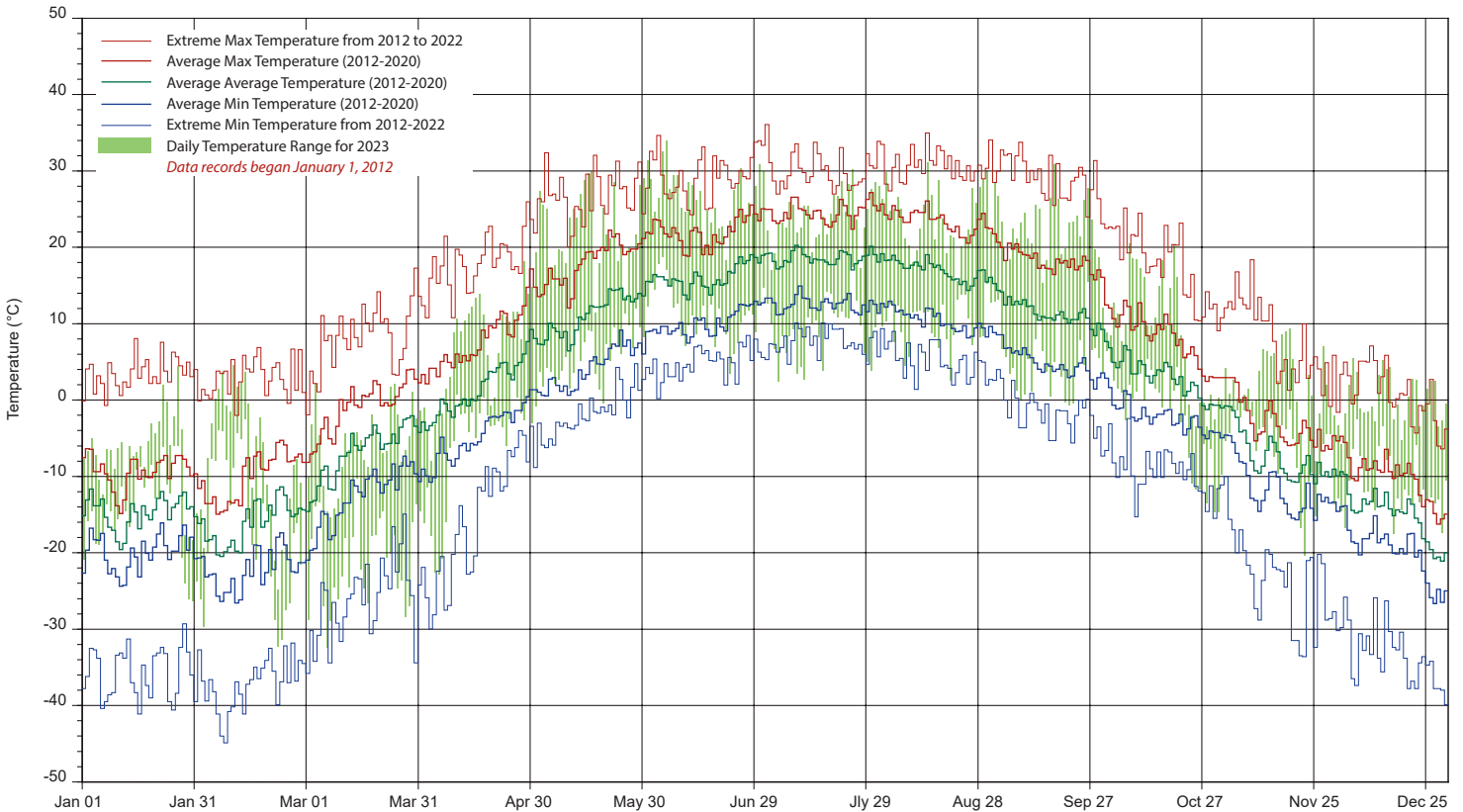
1/2 hr Maximum Wind Speed and Direction CLC December 2023



# SRC's CLIMATE REFERENCE STATION at the Conservation Learning Centre 2023 PRECIPITATION AND AVERAGE



## 2023 TEMPERATURES AND AVERAGES



SRC proudly recognizes the following CRS supporters:

