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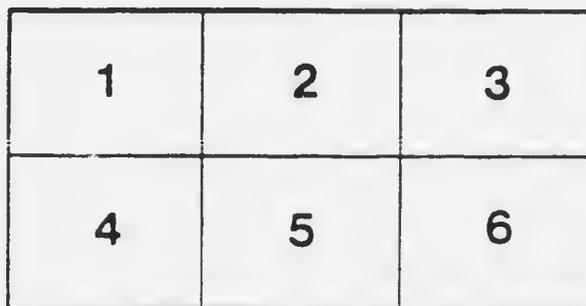
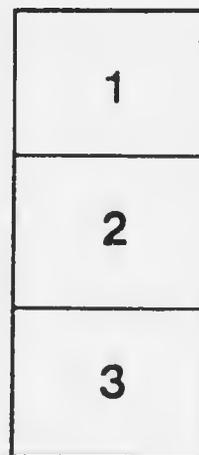
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THE METEOROLOGICAL SERVICE OF CANADA  
DEPARTMENT OF MARINE AND FISHERIES

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THE  
TEMPERATURE AND PRECIPITATION  
*of*  
ALBERTA, SASKATCHEWAN  
AND MANITOBA

By  
A. J. Connor, M.A.  
Climatologist of the Meteorological Service

Published under the Direction of  
SIR FREDERIC STUPART, F.R.S. Can.  
Director of the Meteorological Service  
CHIEF OFFICE, TORONTO



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OTTAWA  
THOMAS MULVEY  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
1926



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OTTAWA  
THOMAS MULVEY  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
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This volume is a continuation of the series which was begun in 1915 by the publication of a discussion of the temperature and precipitation observations of British Columbia.

R. F. STUPART,

Director of the Meteorological Service.

METEOROLOGICAL OFFICE,  
TORONTO, December, 1919.



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## THE TEMPERATURE AND PRECIPITATION OF ALBERTA, SASKATCHEWAN AND MANITOBA.

So much has already been written to describe the geographical features of these Western Provinces, in a fuller and more excellent manner than can be done here, in the publications of the Department of the Interior, that it seems unnecessary to begin with an extended reference to the topography and resources of the Prairie Provinces. But since one often meets well-informed persons who have the impression that these provinces are almost altogether a wide expanse of prairie land of nearly unvarying level, it may not be out of place here to point out that a careful study of the maps accompanying this volume will be sufficient to correct this impression. There are great prairies, but there are also hilly and broken plateau regions. So far as our observations go, the variability of any of the meteorological factors tends to be least on the open prairie, and greatest where the contours are irregular. Good and bad years from the agricultural standpoint are therefore more likely to be sharply differentiated in Southern Saskatchewan and Southern Alberta than on the central plains; and this is probably true of the upper portion of the Assiniboine valley also, although the scarcity of observations from that region leaves this a matter for future enquiry. The fixing of the variability of the rainfall within tabulated limits for various districts is, of course, the most important thing from the agriculturists' viewpoint and necessarily also from their bankers' viewpoint; more important in fact than the fixing of an average rainfall. But on account of the broken character of the records made in these provinces it is at present scarcely possible to fix these variations for any locality. We hope to accomplish something in this regard in the near future, but in this present volume it was thought best to give full tables of monthly totals of precipitations from the beginning of observations at each station. These tables give some idea, at least, of the chance or expectation of good rainfall in any of the older districts. The systematic mapping of these chances of a good agricultural season we believe would prove of value to many. Towards this end all the observers of the Meteorological Service are urged to keep a record unbroken for as long a time as possible.

Means and extremes for the few stations with long records have been published at various times before this. It was therefore upon the records of short length which have been made here and there in the three provinces during the last three decades of years that the work of this volume was mainly expended. The result of the attempt to reduce these to a homogeneous system of averages is not perfectly satisfactory to us, and some remarks upon the reliability of the derived averages will be found in an appendix. Observing stations must be increased in number and the present stations must continue their records for several years longer before our averages will reach a satisfactory stage. Without the observations of the last seven years in the central plains, broken as the records are, it is doubtful if the isotherms could have been drawn with any degree of accuracy. And before any great credence can be given to attempts to carry isotherms and isohyets north of the 53rd parallel new stations must be opened up, in advance of settlement if possible.

### THE BASIN OF THE NORTH SASKATCHEWAN RIVER.

#### TEMPERATURE.

**January.**—At the headwaters of this river (the Brazeau, Nordegg, and Clearwater streams) the only observations made have been carried on for only four or five years at Nordegg and in the Brazeau Forest Reserve as well as at Rocky Mt. House for a few months. These observations establish a large difference of temperature between the headwaters of the North Saskatchewan and the basins of the McLeod and Pembina Rivers which flow north to join the Athabasca. At Nordegg the mean maximum for January is about  $19^{\circ}$  and the mean daily minimum about  $-5^{\circ}$  while near Mountpark the mean daily maximum may be very little lower but the corresponding minimum is probably  $-10^{\circ}$  or  $-12^{\circ}$ . Going downstream towards Edmonton, we find the maximum temperature falling slowly to about  $15^{\circ}$  at that place, while the minimum temperature falls rapidly at first to about  $-10^{\circ}$  where the river flows past the Pembina. Passing this ridge the river turns sharply to the east and thereafter passes through territory of higher minimum temperature till  $-4^{\circ}$  is reached at Edmonton and the country immediately to the south. For about 40 miles south and southeast of Edmonton the temperature is fairly constant; the mean for the month is normally  $5^{\circ}$  or  $6^{\circ}$  with a daily range of  $20^{\circ}$ .

Going downstream from Edmonton for nearly 50 miles we are moving to the northeast and approaching the highlands which divide the Athabasca and the Saskatchewan Rivers from the Beaver. On this watershed the temperature-gradient is steep, the normal daily maximum

decreasing from  $15^{\circ}$  at Edmonton to  $2^{\circ}$  at St. Paul des Metis, and the minimum from  $-4^{\circ}$  to  $-12^{\circ}$ . From this point the temperature continues to decrease towards the northeast in the Beaver River Basin, but the North Saskatchewan turns near latitude  $54^{\circ}$  and longitude  $113^{\circ}$  and thence moves a little south of east till near the boundary of the two Provinces when it turns to the southeast. From the interprovincial boundary to Battleford its course is nearly parallel to the isotherms, since the great cold waves spread well to the south of the river into the central plains. These plains are, in part, drained by a system of north-flowing tributaries of the Saskatchewan, and in January the temperature gradient is flatter in these subsidiary basins than elsewhere in the three provinces except probably the little known regions east of Lake Athabasca. Along the main stream the mean maximum is normally about  $5^{\circ}$  and the corresponding minimum  $-16^{\circ}$ , while 150 miles southwest at the head of Sounding Creek, near Oyen and Youngstown the maximum has fallen to only  $10^{\circ}$ , and the minimum to  $-9^{\circ}$ . It is worthy of note that while the gradient of the minimum temperature is fairly steep near the main stream it practically disappears on the plains but that on the contrary the gradient of the maximum temperature which can scarcely be said to exist near Battleford gradually becomes established in the southern portion of the tributary system.

Fifty miles southeast of Battleford the North Saskatchewan turns again to the northeast and flows for about 75 miles nearly parallel with the South Saskatchewan and separated from it by a width of about 15 miles. In January there is very little variation of the maximum temperature in this region ( $5^{\circ}$  at Prince Albert,  $7^{\circ}$  at Saskatoon) but the mean minimum increases from  $-18^{\circ}$  or  $-19^{\circ}$  on the slopes north of Prince Albert to  $-10^{\circ}$  or  $-11^{\circ}$  southwest of Saskatoon.

East of Prince Albert from the confluence of the branches to the mouth of the river the country is very sparsely settled and few observations have been obtained. The course of the isotherms is therefore subject to much more uncertainty than in the country further west. The most important feature of this region is, however, the forested ridge which beginning with the Pasquia Hills is continued in a southerly direction by the Poreupine Hills and the Duck and Riding Mountains. East of the Pasquia Hills the basin of the Carrot River (which flows parallel with and just south of the Saskatchewan to join it at Le Pas) appears to be warmer than the central Plains. The course of the isotherms to the west of this forested ridge is in all months such as to show that the effect of this elevated wooded region is to depress the temperature of eastern Saskatchewan and western Manitoba. Upon the higher portions of this ridge the January temperature is probably lower than  $-8^{\circ}$ , with a mean maximum of  $2^{\circ}$  and a mean minimum of  $-20^{\circ}$ . The short series of observation by the forest-ranger in the Pasquia Reserve would indicate that upon the onset of the great cold waves this ridge suffers a more rapid fall in temperature than occurs at first in the Saskatoon region.

Below the confluence to the point where the Saskatchewan empties into the Great Lakes of Manitoba the course is on the north side of the ridge at first and finally through a flat marshy country in a southerly direction on the east of the ridge. The temperature ranges from a minimum of  $-20^{\circ}$  or  $-22^{\circ}$  to a maximum of  $3^{\circ}$ .

**February.**—The comparative warmth of the portion of this basin which lies in the mountainous region is sufficiently striking to be worthy of note. At Nordegg the mean maximum is nearly  $24^{\circ}$  with a mean minimum of nearly zero, while at Edmonton there is a decrease of about  $3^{\circ}$  and farther downstream at Onion Lake the decrease is  $12^{\circ}$ . The February map in fact shows that there is a general fall in the normal temperature from west to east, that is to say from the mountain valleys to the plains. While the effect no less than the causes of the chinook winds is still very obscure, yet there is no doubt that the chinooks tend to raise the mean temperatures of places of observation in the mountain valleys. For even though their effect is scattered and local, all the valleys from time to time are affected by this wind, more or less. Another and perhaps related cause of the higher temperature of the winter months in the mountain valleys, is the much slower fall of temperature at high elevations as compared with the very rapid fall on the plains when the great cold waves move down from the northwest. This difference in the rates of cooling upon the advance of cold waves is apparently the largest factor in keeping the mean temperatures of the mountain valleys from varying within such wide limits as the mean temperatures of the plains. The much more rapid cooling on the plains produces an inversion of temperature with altitude which as shown by simultaneous records on Sulphur Mt. and at lower levels is often very large.

On the other hand we have instances when the temperature in the higher valleys is rapidly and greatly depressed while little or no change is experienced at the lower levels. These instances appear always to be attended by falling pressure with the barometric minimum east of the mountains. On such occasions (as on the 25th and 26th of February, 1918) the minimum temperature may be  $20^{\circ}$  or  $30^{\circ}$  lower at Nordegg than at Edmonton. Such difference of temperature might ordinarily be expected as between the northwest quadrant of a winter low and the central region, but as the low moves east or southeast this great difference of temperature between the quadrants is not preserved on the plains. These very cold currents which traverse the higher valleys on the western side of a low area are therefore to be considered a distinctive feature of the climate of the high valleys.

Near the boundary between Alberta and Saskatchewan the temperature in the basin of the North Saskatchewan is much lower than at Edmonton. At Lloydminster and Onion Lake the daily maximum is about  $13^{\circ}$  and the daily minimum  $-10^{\circ}$ . To the northeast these temperatures decrease to  $6^{\circ}$  and  $-16^{\circ}$  on the Beaver River divide. But towards Battleford and in the subsidiary basins to the south, (the Battle, Ribstone, and Eyehill Creeks) there is little change. At Battleford the daily maximum is  $10^{\circ}$  and the daily minimum  $-11^{\circ}$ . Northeast of Battleford the land rises 600 feet in 30 miles and observations made at Meota and Jackfish Lake show that there is a sharp drop in the minimum temperature experienced in ascending the slope, while the maximum temperature changes very slowly at first. In the Big River Forest Reservation the normal daily temperatures probably range between  $-18^{\circ}$  and  $6^{\circ}$ .

From Saskatoon to the confluence of the branches the maximum temperature changes very slowly but the minimum temperature falls about  $5^{\circ}$ . In the Torch River country the daily maximum is  $5^{\circ}$  and the daily minimum  $-18^{\circ}$ . At Le Pas the temperatures are much the same and at Grand Rapids  $2^{\circ}$  or  $3^{\circ}$  higher.

South of the Carrot the forested hill country is as cold or colder than Le Pas. In the Pasquia Hills and on the Divide between the Little Swan and the Smoking Tent Rivers the mean daily minimum is probably  $-20^{\circ}$ .

**March.**—March is the first month in which is noticeable the gradual transition of the area of greatest warmth from the higher levels to the plains. The mean daily minimum temperatures at Edmonton and Wetaskiwin average about  $11^{\circ}$  and at Nordegg less than  $8^{\circ}$ . The maximum, also, is higher at Edmonton,  $34^{\circ}$  as compared with  $32^{\circ}$ . East of Edmonton, however, the temperatures are lower and at Lloydminster the daily range of temperature is from zero to  $26^{\circ}$ . In the southern tributary system, the Battle, Ribstone and Eyehill Creeks, the advance of spring is normally a little slower than in the main valley. At Battleford and Saskatoon the normal daily range is from  $4^{\circ}$  to  $26^{\circ}$ . At Prince Albert the maximum is the same but the minimum is  $6^{\circ}$  or  $7^{\circ}$  lower. In the highlands on the north side of the river, the Shellbrook and Big River country, the day temperatures are as high as in the main valley but the night temperatures are much lower.

In the Torch River country the maximum is  $25^{\circ}$  and the minimum about  $-8^{\circ}$  or  $-9^{\circ}$ , and the same is true of Le Pas.

From Melfort to Crooked River the temperatures are much the same as in the Big River country. In the Pasquia Hills it is a little colder than at Le Pas and near the mouth a little warmer.

**April.**—At Nordegg the mean maximum is  $46^{\circ}$  and the mean minimum  $20^{\circ}$ . Downstream the temperature increases to  $52^{\circ}$  and  $28^{\circ}$  at Edmonton. Thence eastward it decreases again and in the region of the Battle River and the Ribstone and Eyehill Creeks the maximum is  $48^{\circ}$  and the minimum  $24^{\circ}$ .

From Lloydminster to Battleford and Saskatoon there is a small increase in warmth which is not maintained as we go northeast to Prince Albert. The Big River region is not as warm as the valley at Nordegg in the mountains, as is the case also from Fort a la Corne to the mouth.

**May.**—At Nordegg the mean maximum is  $55^{\circ}$  and the mean minimum  $31^{\circ}$ , thence eastward the maximum increases at a more rapid rate than the minimum temperature. This comparatively slow rise of the minimum temperature delays agricultural operations in the valleys east of the fifth meridian.

Near Calmar and Conjuring Creek the mean minimum is  $36^{\circ}$  and the maximum  $62^{\circ}$ . At Edmonton the minimum of  $38^{\circ}$  is higher than that of places just outside the city. Eastwards from Edmonton the temperature decreases slowly to Lloydminster (maximum  $61^{\circ}$ , minimum  $33^{\circ}$ ), beyond which it rises more quickly to  $63^{\circ}$  and  $37^{\circ}$  at Battleford. From Battleford to Saskatoon and Prince Albert there is little change.

In the Sounding Lake and Sullivan Lake districts the temperatures are a little lower than at Battleford.

The districts around the Big, Sturgeon, Torch and Carrot Rivers are also comparatively cool while the Pasquia and Porcupine areas have a maximum of  $58^{\circ}$  and a minimum of  $32^{\circ}$  or a little lower. From Le Pas to Grand Rapids the corresponding temperatures are  $59^{\circ}$  and  $33^{\circ}$ .

**June.**—At Nordegg the mean maximum is  $64^{\circ}$  and the mean minimum  $37^{\circ}$ . At Calmar and Conjuring Creek these temperatures have increased to  $70^{\circ}$  and  $40^{\circ}$ .

The plateau between the Saskatchewan and the Beaver is shown by the observations at Stry and Moose to be subject to frosts, the mean minimum being  $42^{\circ}$  to  $40^{\circ}$ . The day temperatures, however, are high at Stry and Moose; but at Lloydminster where the minimum improves the maximum is a little lower.

In the western portion of the region drained by the Battle, Ribstone and Eyehill Creeks the maximum daily temperature is generally  $67^{\circ}$  and the minimum  $43^{\circ}$ . From Kindersley north to Battleford and east to Saskatoon temperatures increase again to a maximum of  $46^{\circ}$  or  $47^{\circ}$  at Battleford and Saskatoon.

North of Battleford and towards Prince Albert the minimum temperatures are a little lower. In the Torch River region the maximum is 70° and the minimum 43°. At Le Pas the minimum increases a little. At Grand Rapids the maximum has risen to 70° again.

**July.**—Edmonton has a mean maximum of 74° and a mean minimum of 48°. At Nordegg to corresponding temperatures are 69° and 41°.

Between Onion Lake and the Beaver the temperatures are 72° and 46° or 45°.

South of the main stream the coolest region is at the head of the Eyehill and Ribstone Creeks. Towards Battleford and Saskatoon it is 3° or 4° warmer with a maximum of 76° and a minimum of 50° or 51°.

The Sturgeon and Shellbrook Region north of Prince Albert has a mean minimum of 47° while the Torch River country is probably a little warmer.

At Le Pas the mean maximum is 76° with a mean minimum of 51°.

**August.**—At Edmonton the normal maximum is 71° and the minimum nearly 47°. West of Camar the minimum temperatures fall sharply, and at Nordegg the normal minimum is 38° with a maximum of 67°. Also northeastwards, to the Beaver River, the maximum falls to 66° on the Divide and the minimum to 38°.

From 70° at Lloydminster the maximum increases to 74° at Battleford and Saskatoon, and the minimum from 44° to 46° or 47°.

From Saskatoon to Prince Albert the maximum decreases by 3° with little change in the minimum.

Low Minimum temperatures occur in the Pasquia and Poreupine areas, while the mouth of the Saskatchewan remains quite warm.

**September.**—At Nordegg the mean maximum is 57° and the mean minimum is 33° and near Edmonton the corresponding temperatures are 62° and 37°. In the basins of the Battle, Ribstone and Eyehill Creeks the mean minimum is generally 34°. Battleford and Saskatoon are warmer but the minimum of 39° at Battleford is very local and 37° is the general minimum of the district.

The Pasquia-Poreupine region has a maximum of 60° and a minimum of 33°.

From Le Pas to Grand Rapids the maximum is 60° and the minimum 39° to 41°.

**October.**—The mean minimum exceeding 30° at Edmonton appears to be restricted to an indefinitely small area. Most of the region from Wetaskiwin to Mornville has a mean minimum of 28° while at Nordegg on the west, the Athabasca divide on the north and Vermilion on the east it falls to 26°. On the Beaver divide it is 22° and at Lloydminster is 24°.

At Battleford the minimum is 28° although this appears too high and is probably very local. North of the river from Battleford to Ft. a la Corne it is 26° or lower.

At Le Pas it rises to 27° and at Grand Rapids to 29°.

The daily maximum is 52° in the Edmonton-Wetaskiwin and Battleford-Saskatoon districts. Elsewhere it is 50° or lower.

**November.**—At Edmonton the normals are 33° and 15.5 while at Nordegg they are 31° and 11°. Portions of the Southern tributary System and of the Beaver divide are cooler than Nordegg so that we may say that the inversion of the mountain-plains temperature gradient which is characteristic of the winter months has been established before the close of the month.

The region of Battleford and Saskatoon is warmer than the southern tributaries but from Saskatoon to Prince Albert and in the districts north of the main stream it is cooler.

**December.**—The observations made at Edson and Jasper up to the present indicate a mean maximum of 26° and a mean minimum of 5° or 6° while at Edmonton the mean maximum is 25° and the mean minimum 7°. Northeastward there appears to be a very great fall of temperature to the Beaver River basin.

The great cold of far northern Saskatchewan during this month is pressing steadily southward into the whole region between the North and South Saskatchewan rivers. In the Sounding Lake region the mean maximum is 17° and the mean minimum zero. At Prince Albert the corresponding figures are 15° and -4°; in the Pasquia and the Poreupine districts 10° or 8° and -10° or -11° and at Le Pas the same; at Grand Rapids 13° and -4°.

**N.B.**—In the foregoing paragraphs "maximum" or "minimum" always refers to the normal daily maximum or minimum temperature and not to the extreme highest temperature or the extreme lowest.

RECORDS OF FIRST AND LAST FROSTS, BASIN OF THE  
NORTH SASKATCHEWAN.

ALLIANCE (Argyle).

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1917	June	174	23	33.0					

BON ACCORT, ALTA.

1902	June	171	20	29.0		Sept.	246	3	32.0
1903	June	160	9	29.5		Aug	226	14	33.0
1904	May	151	31	32.0		Aug	240	28	33.0
1905	June	176	25	33.4					
1906	May	139	19	29.2		Sept.	253	10	33.0
1907	June	173	22	32.3		Aug	231	19	31.5
1908	June	164	13	31.4		Aug	233	21	26.8
1909	May	139	19	27.2		Aug	240	28	28.9

CALMAR (Kinnaird), ALTA.

1916	June	176	25	31.0					
1917	June	174	23	33.0		Aug	222	10	32.0

CHAGONESS, SASK.

1912	June	168	17	30.0					
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CORONATION, ALTA.

1913	July	193	12	23.0					
1914	June	161	10	33.0		Sept.	247	4	28.0

CUMBERLAND HOUSE, SASK.

1911	May	147	27	32.0		Aug	243	31	33.0
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DAYSLAND, ALTA.

1908	May	125	5	21.0					
1910	June	173	22	33.0		Aug	232	20	30.0
1912	June	157	6	29.0		Aug	235	23	33.0
1913	June	167	16	33.0		July	195	14	32.0
1914	May	149	29	33.0		Sept	249	6	31.0
1915	June	165	14	30.0		Sept	244	1	30.0
1916	June	157	6	32.0		Sept	251	8	33.0
1917	June	164	13	32.0		Aug	222	10	32.0
						Aug	220	8	30.0

EDMONTON, ALTA.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month	Day of Year.	Date.	Temp.
1883	June	152	1	25-0	Sept	258	15	30-0	
1884	June	182	30	32-3	Aug	226	13	30-0	
1885	May	145	25	33-0	July	200	19	33-0	
1886	May	136	16	33-0	Aug	241	29	32-0	
1887	June	176	25	28-0	Aug	220	8	26-0	
1888	June	157	5	30-0	Sept	263	19	29-5	
1889	May	133	13	33-0	Sept	250	7	29-0	
1890	May	150	30	30-0	Aug	228	16	33-0	
1891	June	160	9	33-0	Sept	263	20	30-5	
1892	June	155	3	33-0	Sept	248	4	32-0	
1893	May	141	21	33-0	Sept	260	17	28-0	
1894	May	133	13	32-0	Sept	219	6	33-0	
1895	June	15	8	31-5	Aug	242	30	32-0	
1896	June	164	13	33-0	Sept	244	1	32-5	
1897	June	175	24	32-0	Sept	252	9	30-0	
1898	June	164	13	25-5	Sept	244	1	31-0	
1899	May	149	29	33-5	Aug	240	28	32-5	
1900	May	122	2	32-5	Aug	237	25	33-0	
1901	May	131	11	33-0	Sept	249	6	28-0	
1902	June	171	20	33-0	Sept	254	11	31-5	
1903	June	160	19	32-5	Sept	246	3	32-0	
1904	May	143	23	29-0	Sept	255	12	31-0	
1905	June	175	24	29-0	Sept	254	11	31-0	
1906	May	137	17	32-0	Sept	255	12	33-0	
1907	May	151	31	32-0	Aug	231	19	31-0	
1908	May	121	1	29-0	Aug	235	21	31-0	
1909	May	139	19	29-0	Aug	240	28	29-0	
1910	June	164	13	30-0	Aug	229	17	33-0	
1911	May	147	27	28-0	Aug	239	27	33-0	
1912	June	155	4	32-5	Sept	257	14	27-6	
1913	June	154	3	32-5	Sept	249	6	33-0	
1914	May	151	31	31-5	Sept	244	1	33-0	
1915	June	165	14	32-0	Sept	251	8	33-0	
1916	June	152	1	29-0	Aug	222	10	32-0	
1917	June	164	13	32-0	Sept	249	6	31-0	

ENDIANG, ALTA.

1911	June	156	5	31-7	Aug	238	26	31-7
1912	June	156	5	31-2	Aug	241	29	31-7
1913	May	139	19	31-2	Sept	252	9	26-7
1914	May	150	30	28-2	Aug	220	8	33-2
1915					Sept	251	8	32-2
1916	May	149	29	31-2	Aug	223	11	32-2
1917	May	150	30	33-0	Sept	248	5	33-0

ELK POINT, ALTA.

1912					Aug	238	26	33-0
1913					Aug	229	17	31-5
1914	June	166	25	31-1	Aug	222	10	31-5

GILT EDGE, ALTA.

1910	June	154	3	32-0	Aug	242	30	32-4	
1911	June	162	11	32-5	Frost every month	July	201	20	31-0

HALKIRK, ALTA.

1907	June	174	23	29-0	Aug	218	6	30-5
1908	May	140	20	32-0	Aug	233	21	32-0
1909	May	139	19	32-0	Aug	240	28	32-0
1910	June	155	4	32-0	Aug	235	23	33-0
1911	May	148	28	30-0	Aug	239	27	32-0
1912	June	156	5	33-0	Aug	242	30	31-0
1913	May	140	20	33-0	Sept	245	2	33-0
1914	May	151	31	33-0	Aug	220	8	33-0
1915	June	179	28	33-0	Sept	251	8	31-5
1916	June	157	6	33-0	Aug	222	10	33-5
1917	June	154	3	32-9	Sept	248	5	33-9

HARDISTY, ALTA.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1915	June	167	16	33-0		Sept.	251	8	30-0
1916	June	158	7	33-0		Aug.	222	10	30-0
1917	June	171	20	30-0		Aug.	220	8	32-0

HUMBOLDT, SASK.

1907						Sept.	255	12	28-0
1908	June	159	8	33-0		Aug.	225	13	33-0
1909	June	173	22	22-0		Sept.	256	13	32-0
1910	June	164	13	33-0		Aug.	229	17	32-0
1911	May	148	28	32-0		Aug.	240	28	32-0
1912						Sept.	257	14	33-0
1913	July	182	1	33-0		Sept.	245	2	28-0
1914	May (Broken)	142	22	33-0		Aug.	222	10	29-0
1915	June	167	16	25-0		Aug.	237	25	29-0
1916	July	190	9	25-0	Frost every month	Aug.	223	11	32-0
1917	June	172	21	33-0	" "	July	185	4	25-0

ISLAY, ALTA.

1909	June	179	28	24-0		Aug.	238	26	22-0
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LACOMBE, Ex. F., ALTA.

1908	June	178	27	30-4		Aug.	224	12	32-3
1909	June	180	29	31-8		Aug.	233	21	33-2
1910	June	173	22	31-2	Frost every month	July	206	25	32-4
1911	May	149	29	31-5		Aug.	221	9	33-4
1912	June	157	6	29-7		July	195	14	30-4
1913	May	139	19	33-4		July	206	25	31-9
1914	May	151	31	32-4		Aug.	243	31	32-2
1915	June	170	19	32-9		Sept.	231	8	33-4
1916	June	174	23	32-9		Sept.	223	11	28-9
1917	June	161	10	31-0	Frost every month	July	211	30	29-0

LLOYDMINSTER, SASK.

1913	May	137	17	31-0					
1914	May	150	30	30-0					

LOVELAND-ARGYLE, ALTA.

1910	June	174	23	33-0	Frost every month	July	207	26	33-0
1911	May	147	27	31-0		July	201	20	32-0
1912	June	157	6	29-0		Aug.	242	30	32-0
1913	June	154	3	30-0		Sept.	249	6	31-0
1914	May	151	31	31-0		Sept.	244	1	30-0
1915	June	164	13	30-0		Sept.	251	8	31-0

MELFORT, SASK.

1902	June	171	20	32-0		Sept.	244	1	32-0
1903	May	141	21	32-0		Sept.	247	4	32-0
1904						Aug.	218	6	33-0
1905	June	174	23	32-0		Sept.	255	12	26-0
1910	June	156	5	28-5		Aug.	228	16	33-0
1911	May	147	27	33-0		Aug.	222	10	33-0
1912	June	168	17	32-0		Sept.	258	15	25-0
1913	July	186	5	20-0		Sept.	255	12	31-0
1914	June	176	25	30-0		Aug.	236	24	24-0
1915	July	182	1	30-0	Frost every month	Aug.	237	25	27-0
1916	June	152	1	30-0		Aug.	241	29	28-0
1917	June	172	21	32-0		Sept.	245	2	32-5



ROCKY MT. HOUSE, ALTA.

Year.	Late Frost.				—	Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1917	June	179	28	31.0	Frost every month	July	187	6	33.0

SEDGEWICK, ALTA.

1917	June	176	25	33.0		Aug	220	8	33.0
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VERMILION, ALTA.

1913	June	156	5	31.0	Frost every month	Sept	245	2	32.0
1916						July	204	23	33.0
1917						Aug	219	7	29.0

WASTINA, ALTA.

1913	June	151	3	32.5		Aug	240	28	33.0
1914	June	175	24	33.5		Aug	243	31	30.0
1915	June	163	12	33.0		Aug	240	28	31.5
1916	June	157	6	32.0		Aug	223	11	27.0
1917	June	174	23	33.0		July	211	30	28.0

WETASKIWIN, ALTA.

1903	May	142	22	30.0		Sept	246	3	32.0
1904	June	158	7	33.0		Aug	240	28	30.0
1905	June	175	24	33.0		Aug	239	27	33.0
1906	May	143	23	33.0		Sept	253	10	27.0
1907	June	153	4	31.0		Aug	231	19	30.0
1908	May	140	20	30.0		Aug	232	21	32.0
1909	June	158	7	30.0		Aug	240	28	31.0
1910	June	155	4	33.0		Sept	251	8	30.0
1911	May	148	28	31.0		Aug	239	27	32.0
1912	June	117	6	32.0		Aug	211	29	30.0
1913	May	138	18	31.0		Sept	248	5	31.0
1917						Aug	220	8	21.0

RECORDS OF MONTHLY PRECIPITATION, BASIN OF THE NORTH SASKATCHEWAN.

BARDO.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1901	0.23	0.54	0.14	0.75	1.59	4.22	13.76	0.48	5.96		0.33	0.78
1902	0.08	0.78	0.53	0.61	6.68	1.86	4.17	2.97	1.13	0.23	0.93	0.68
1903	0.43	0.23	1.15	2.95	0.56	4.94	4.82	3.06	1.88	0.62	0.65	0.70
1904	0.93	1.15	0.95	0.07	1.14	2.91	0.06	1.22	2.33	1.55	0.50	
1905	0.15											
1906									0.50	1.15	1.60	0.55
1907	0.40	0.24	0.21	0.15	0.95	2.80	2.35	4.68	3.44	S.	S.	0.33
1908	0.13	0.45	0.65	0.20	1.54	5.47	4.03	2.06	1.42	0.58		0.40
1909	0.30	0.35	0.20	0.58	2.75	0.55	4.34	0.59	R.	0.30	0.80	0.55
1910	0.05	0.20	0.33	0.10	0.65	2.41	1.84	2.43	2.03	0.56	0.30	0.35
1911	0.33	S.	0.10	0.20	1.45	3.90	4.11	2.28	0.40	0.53	0.40	0.15
1912	0.35		0.15	0.52	1.35	3.09	4.12	2.58	0.68	0.61	0.40	
1913	0.45	0.30	0.35	0.25	0.78	3.15	2.45	3.76	0.76	0.35	S.	S.
1914	0.25	0.40	0.30	1.18	3.18	7.85	1.39	1.33	1.74			
Sums	4.08	4.64	5.06	7.54	22.62	43.18	47.44	27.49	22.29	6.51	5.91	4.79
Means	0.31	0.36	0.42	0.63	1.88	3.60	3.95	2.29	1.71	0.59	0.54	0.48

## BI-MARK

Year	Jan.	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1906					0.86	4.83	2.80	3.99	2.56	0.33	3.28	0.82
1907	0.75	0.60	0.55	0.08	1.66	6.30	2.51	1.15	0.35	1.70	0.45	0.45
1908		0.46	1.88	R. %	0.88	1.85	3.15	0.73	0.34	0.67	0.74	0.47
1909	0.79	0.02	0.21	0.87	0.87	1.50	3.15	3.25	3.35	R. %	0.41	0.41
1910	0.28	0.50	0.24	R. %	1.67	3.85	4.46	4.47	2.21	0.67	0.70	0.70
1911	0.39	0.39	0.49	1.21	0.58	5.85	4.46	4.47	1.01	1.54	0.32	0.32
1912	0.56			0.57	0.29	1.91	1.95	1.81	0.28	0.35	0.05	0.05
1913	0.82	0.27	0.74	0.50		7.10	2.64		0.86	R. %	1.27	1.27
1914	0.75	R. %	0.37	0.29	1.40	7.89	5.82	1.33	0.87		0.60	0.21
1915	0.21	S. %	S. %	0.29	1.91	2.50	3.30	3.70	0.80	0.32	0.55	1.30
1916	0.25	0.58	0.42	0.30	1.02							
Sums	4.51	3.42	4.80	4.02	10.37	44.62	30.81	21.90	12.66	5.55	8.37	4.47
Means	0.50	0.38	0.49	0.40	1.15	4.46	3.08	2.77	1.27	0.62	0.76	0.45

## BITTERN LAKE.

1907	1.00	0.75	0.70	0.45	1.40	2.71	2.27	5.52	2.12	0.31	0.06	1.05
1908	0.08	0.86	1.53	0.07	2.55	4.84	3.00	1.72	0.68	1.56	0.92	0.70
1909	0.50	0.65	0.45	1.07	4.13	1.74	2.50	0.78	0.04	0.22	0.93	0.58
1910	0.50	0.23	0.24	0.01	1.37	3.60	0.95	4.55	4.91	0.22	0.60	0.90
1911	0.78	0.28	0.31	0.59	1.35	3.88	5.30	4.43	4.46	0.31	0.44	0.33
1912	0.95	0.20	0.27	0.51	2.63	2.68	4.39	3.82	1.96	0.85	0.50	0.05
1913	1.00	0.82	0.57	0.07	0.12	4.63	4.11	4.42	0.46	0.42	0.05	0.05
1914	0.80	0.80	0.30	0.56	3.95	7.80	1.68	1.56	1.26	1.19	0.74	1.43
1915	0.55	0.05	0.10	1.56	1.45	3.51	4.17	2.48	1.60	0.29	0.53	0.40
1916	0.90	0.48	0.45	1.53	2.14	2.12	2.64	3.89	2.96	0.32	0.38	1.13
1917	0.98	0.19	0.28	0.95	1.32	1.25	1.51	0.96	0.31	0.65	0.24	1.05
Sums	8.04	5.31	5.19	7.37	22.41	37.84	32.55	33.93	13.75	6.31	5.39	7.67
Means	0.73	0.48	0.47	0.67	2.04	3.44	2.96	3.08	1.25	0.58	0.49	0.70

## BOX ACCORD

1902						5.81	3.26	7.57	0.59	1.85	1.00
1903		0.31	0.73	2.25	1.72	1.98	6.11	3.03	1.27	0.60	0.98
1904	1.58	1.35	1.45	0.52	0.50	2.31	0.76	1.67	S.	0.31	0.67
1905	0.45	0.09	0.52	0.05	0.75	3.57	3.22	1.68	1.75	0.41	0.41
1906	0.68	0.18	0.30	0.71	1.71	5.63	1.98	0.81	0.56	0.50	2.35
1907	0.81	0.63	0.50	0.37	1.70	2.77	1.78	3.56	1.44	0.19	0.15
1908	0.28	0.71	1.08	0.29	1.89	6.73	2.28	3.67	1.05	1.07	0.61
1909	0.81	0.48	0.45	1.70	1.61	2.39	2.44	0.75	0.22	0.33	1.50
Sums	4.65	3.79	5.03	5.69	12.50	25.38	21.38	18.43	8.19	3.72	7.20
Means	0.78	0.54	0.72	0.81	1.79	3.63	3.05	2.30	1.06	0.46	1.03

## BRUDERIM.

1899								0.29	1.11	0.07	0.80
1900	0.43	1.71	3.20	3.03	5.47	4.37	2.69	4.80	2.91	1.81	0.08
1901	0.40	0.58	0.42	2.59	1.91	4.47	9.12	1.20	5.77	0.18	0.20
1902	0.12	0.80	0.35	0.67	6.83	1.26	5.82	3.49	1.23	0.65	1.05
1903	0.40	0.50	0.52	2.08	1.11	2.22	5.78	2.13	1.03	0.58	0.70
1904	0.60	1.70	2.00	R.	0.88	5.26	0.87	1.17	2.52	S.	0.05
1905	0.18	0.10	0.75	0.01	1.13	3.40	4.11	1.16	1.86	0.25	0.17
1906	0.32	0.05	S.	C. 51	1.62	5.81	2.71	0.64	1.16	0.51	1.85
1907	0.60	0.60	0.30	0.46	2.56	2.64	1.73	3.30	1.42	0.25	0.01
1908	0.20	0.90	0.65	1.55	1.41	4.98	2.09	3.60	1.00	1.05	0.69
1909	0.15	0.50	0.10	1.50	3.21	2.07	3.52	0.75	0.22	0.24	1.80
1910	0.20	0.60	0.42	0.27	1.43	3.94	2.17	1.61	1.63	0.82	0.65
1911	0.66	0.55	0.40	0.53	1.81	4.34	3.98	3.98	1.16	0.65	0.58
1912	0.80	0.25	0.33	1.32	0.11						0.25
Sums	5.96	8.85	7.44	14.52	29.51	44.76	44.00	27.53	22.20	8.13	7.90
Means	0.39	0.68	0.73	1.12	2.27	3.73	3.67	2.32	1.71	0.63	0.61

## CALMAR (KINNAIRD).

1915				1.09	1.52	7.15	6.13	0.91	1.60	0.22	0.74	0.22
1916	0.41	0.62	0.68	1.09	2.39	2.85	4.81	3.05	4.20	0.60	0.52	0.54
1917	0.77	1.28	0.13	4.81	2.99	2.55		3.48	1.40		0.28	0.62
Sums	1.21	1.99	0.81	4.01	6.90	12.57	10.94	7.44	7.20	0.82	1.54	1.37
Means	0.60	0.95	0.40	2.00	2.30	4.19	5.47	2.38	2.40	0.41	0.51	0.46

CLOVER BAR

Year.	Jan.	Feb.	March.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1906										0.41	2.05	1.95
1907	0.60	0.28	0.50		0.75	2.11	0.98	3.25				

CONJURING CREEK.

1906						2.3	4.09	0.34	0.44	0.46	2.27	0.90
1907	1.23	0.90	0.62	S.	1.75	3.93	1.71	5.08	2.14	0.32	0.11	0.75
1908	0.23	0.80	0.95	0.14	1.68	10.18	0.49	2.48		1.03		0.60
1909	0.66	0.63	0.55	1.66	2.31		4.07	0.88	0.09	0.51	1.05	0.50
1910	0.23	0.25	0.43	0.43	2.16	3.02	2.43	3.09	4.31	0.38	0.38	0.87
1911		0.23		0.35			3.19	4.39				
1912				2.81	3.21		5.30	6.08				
1913			0.67	R.	0.10					0.30	0.10	0.05
1914	0.75	0.53		0.82								
1915						3.19	4.77	0.09	1.64	0.21	0.63	0.23
1916			0.40			2.63	4.80	3.06	3.65	0.59	0.10	
1917	0.60											
Sums	3.70	3.09	3.44	6.21	11.21	25.59	31.78	26.39	12.30	3.80	4.94	3.50
Means	0.62	0.62	0.57	0.78	1.87	4.26	3.53	2.93	2.05	0.48	0.71	0.56

CORONATION.

1912				0.31								
1913				R.		0.78	0.80	0.20				
1914												
1916						1.55	2.25					

EDMONTON.

1883	1.21	0.40	1.30	0.11	0.54	1.86	2.13	0.17	R.	1.16	0.19	0.20
1884	0.48	0.45	0.45	1.02	1.45	4.03	2.93	1.10	2.56	0.04	0.50	0.70
1885	1.35	0.95	0.16	0.37	4.04	0.87	3.42	0.90	0.48	1.60	S.	1.16
1886	0.38	0.03	0.30	0.96	2.28	R.	0.15	2.37	2.63	S.	S.	0.12
1887	0.33	0.73	0.33	0.70	1.01	2.45	2.33	2.75	0.64	0.30	0.24	0.69
1888	0.75	2.33	0.75	1.46	0.62	5.95	5.36	1.70	S.	0.91	0.10	S.
1889	0.05	S.	0.07	1.17	0.22	1.30	1.85	1.15	1.45	0.08	0.51	0.31
1890	0.75	0.33	0.90	0.21	2.36	3.54	5.38	4.11	2.91	0.92	0.13	0.47
1891	1.26	0.15	1.72	0.60	0.90	2.60	6.63	2.03	1.26	0.44	0.31	S.
1892	0.15	1.30	1.18	0.98	0.19	3.54	2.38	2.83	0.70	1.10	1.68	0.82
1893	1.43	0.20	S. R.	0.61	3.06	3.22	4.26	0.49	1.00	0.04	0.32	3.21
1894	0.60	S.	0.70	0.10	2.92	3.55	1.40	2.03	1.82	1.86	1.03	0.12
1895	0.83	0.90	0.30	1.53	0.82	2.39	1.87	1.97	1.94	0.06	0.92	1.15
1896	0.40	0.63	1.20	1.16	1.94	2.62	2.07	2.04	0.22	0.17	2.59	0.20
1897	0.10	0.32	0.33	0.46	0.33	4.20	4.19	1.22	0.98	0.27	1.10	1.04
1898	0.24	1.22	0.86	0.64	0.20	2.80	2.00	0.85	0.82	1.06	0.52	0.28
1899	1.09	0.21	0.33	1.70	2.28	2.93	2.36	6.43	1.40	1.34	0.04	0.78
1900	0.78	2.18	1.93	2.60	2.71	3.77	3.91	4.18	3.16	1.16	0.18	1.25
1901	0.46	1.50	0.66	1.11	2.02	3.00	11.13	0.72	4.32	0.47	1.10	1.04
1902	0.42	0.80	0.22	0.69	7.67	1.95	3.74	1.72	1.28	0.30	0.82	1.05
1903	0.97	0.26	0.80	1.20	1.21	4.94	3.45	4.33	1.12	1.21	0.86	0.61
1904	1.91	1.96	1.81	0.29	0.70	4.39	2.79	1.58	2.06	1.13	0.16	1.09
1905	0.50	0.05	0.48	0.01	1.61	4.36	3.82	1.51	1.68	0.64	0.83	0.07
1906	0.19	0.22	0.63	0.44	1.45	4.07	3.60	0.81	0.54	1.81	3.57	1.97
1907	1.04	0.27	0.50	0.49	1.60	3.09	2.79	4.66	1.32	0.19	0.11	0.56
1908	0.31	0.57	1.17	0.57	2.58	2.61		1.71	0.59	1.48	0.91	
1909	0.49	0.49	0.11	0.91	2.96	1.85	3.25	0.89	0.06	0.36	1.23	0.34
1910	0.16	0.46	0.77	0.38	1.20	2.72	2.25	2.87	2.01	0.51	0.67	0.93
1911	1.18	0.31	0.39	0.45	1.95	3.80	5.83	4.49	0.98	0.51	0.52	0.26
1912	1.15	0.16	0.40	1.57	2.35	3.03	4.76	4.41	1.12	0.73	0.40	0.10
1913	2.49	0.63	0.55	1.02	0.79	3.66	4.55	4.81	0.50	0.50	0.06	0.18
1914	1.04	1.07	0.35	0.38	1.81	8.53	3.24	2.52	2.04	1.07	0.85	1.49
1915	1.04	0.02	0.10	0.92	1.30	5.46	4.24	3.24	0.97	0.21	0.60	0.54
1916	1.09	0.87	0.80	1.17	1.77	2.62	3.31	3.70	2.83	0.34	0.71	1.74
1917	1.89	1.19	0.12	1.05	0.90	1.72	3.15	2.77	0.41	0.67	0.18	1.20
Sums	28.51	23.16	22.77	28.43	61.77	113.42	120.32	85.12	48.70	24.64	23.95	25.67
Means	0.81	0.66	0.65	0.81	1.76	3.24	3.54	2.43	1.39	0.70	0.68	0.75

## DAYSLAND.

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1908		1 11	2 28	0 50	1 03	5 15	2 86	1 00	11	0 50	0 20	0 20
1909	0 60	S.	S.				11		11	S.	S.	S.
1910						3 75	0 71	4 35		1 35	0 30	
1911	1 40											0 45
1912	0 73	0 30	0 25	0 51	2 16	0 75	0 08	5 26	1 06	0 32	0 38	0 10
1913	1 00	0 43	0 35	0 32	0 73	3 23	3 01	4 66	0 62	0 67	0 05	0 05
1914	0 56	0 65	0 50	1 48	3 16	6 00	1 55	1 22	2 52	2 33	1 60	1 20
1915	0 70	0 10	0 30	0 62	2 27	5 53	4 01	0 66	2 07	0 82	0 12	0 50
1916	1 50	0 60	1 13	0 68	2 11	4 81	3 53	1 71	2 83	0 05	0 10	0 55
1917	2 43	1 34	0 30	1 28	1 42	1 33	1 68	1 86	1 22	0 08	0 60	0 03
Sums	8 92	4 55	5 11	5 39	12 96	30 55	27 33	23 72	10 32	6 02	3 65	3 08
Means	1 12	0 57	0 64	0 77	1 81	3 82	3 01	2 96	1 26	0 65	0 31	0 34

## DORNFEE (Hudson).

1906											2 20	1 40
1907	2 00	0 80	0 70	0 40	1 26	3 67	2 94	4 63	1 55	0 29	0 63	0 62
1908	0 33	1 10	1 40	0 30	9 22	6 62	3 10	1 20	1 50	S.	0 60	0 60
1909	0 80	0 40	0 15	0 70	5 70	0 83	2 70	1 18	0 63	0 80	0 75	1 10
1910	0 20	0 40	0 10	0 10	0 76		1 35		0 92	0 75	0 60	0 90
1911	2 00	0 30	0 45		0 99	4 26	0 08	5 20	1 35	0 40	0 75	0 55
1912	1 00	S.	0 20	1 04	2 18	2 63	4 07	2 59	1 19	1 00	0 45	
1913	0 50	0 80	0 60	0 10	0 14	3 00	2 65	1 95	0 40		0 02	S.
1914	1 15	0 60	0 55	1 00						0 50		
1915	S.	S.	S.									
1916	0 70	0 70	0 52	0 80	2 90	2 10	5 30	3 52	1 13	0 50	0 30	0 75
1917	0 90		0 08	0 90	1 56	2 25				0 30		
Sums	9 58	5 10	5 05	5 34	16 01	26 36	22 79	20 36	8 07	4 54	5 70	6 22
Means	0 87	0 51	0 46	0 59	1 78	3 17	2 85	2 91	1 01	0 50	0 63	0 78

## ELK POINT (Moose, Tyrol).

1912							2 55	1 60	0 85		0 30	0 32
1913	0 20	0 15	0 40		2 05	1 60	1 85	0 93		0 10	0 50	0 15
1914	0 45	0 21	0 65	1 17	2 55	4 16		1 66	3 69	1 19		
1915					0 90	2 31		0 30				0 15
1916	0 60	0 15					3 00	3 50				0 55
1917	1 18			0 50				0 88	0 59	0 45	S.	0 26
Sums	2 33	0 51	1 05	1 67	5 50	8 10	7 40	8 87	5 13	1 74	0 80	1 43
Means	0 58	0 17	0 53	0 84	1 83	2 70	2 47	1 48	1 71	0 58	0 27	0 28

## ENDIANG.

1910									0 25	0 10	0 45	0 10
1911	0 10	0 41	0 29	1 30	2 46	5 30	3 51	2 39	0 93	0 45	0 74	0 10
1912	0 30	0 15	0 05	0 77	2 44	3 26	4 07	5 08	0 88	0 48	0 30	S.
1913	0 60	0 45	0 60	0 30	0 62	4 26	3 36	2 22	0 52	0 21	0 05	S.
1914	0 80	0 45	0 90	0 72	1 94	4 42	1 24	1 87	2 30	3 27	0 50	0 80
1915	0 20	0 30	0 65	0 20	0 37	5 53	4 97	0 79	1 63	0 81	0 60	0 10
1916			0 80	1 84	2 70	3 80	6 24	3 38	3 02	1 05	0 25	0 75
1917	0 35	0 30		0 70	1 60	0 54	2 95	1 51	1 64	1 18	0 10	0 90
Sums	2 35	2 06	2 69	5 73	12 03	27 11	26 34	17 24	11 17	7 55	2 99	2 75
Means	0 39	0 31	0 45	0 82	1 72	3 87	3 76	2 46	1 40	0 94	0 37	0 36

## GILT EDGE.

1909										R.	0 77	0 18	1 05
1910	0 37	0 14	0 20	0 10	R.	1 19	2 83	1 69	R.	1 50	0 64	0 33	0 60
1911	0 21	0 30	0 15	0 55	R.	3 88	2	2 69	0 85				
Sums	0 58	0 44	0 35	0 65	R.*	5 07	5 71	4 38	2 35		0 81	0 51	1 65
Means													

\* Measurements not made by observer. Mean estimated.

## DALKIRK

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1907				0.35	0.61	1.34	1.78	4.11	1.68	0.49	0.21	0.80
1908	0.22	0.97	0.75	0.63	1.79	8.49	1.97	1.19	0.73	1.87	0.23	0.20
1909	0.80	0.31	0.36	0.15	3.17	1.47	3.16	0.15	0.22	0.90	0.27	0.29
1910	0.19	0.41	S.	0.02	1.32	1.92	1.75	3.65	1.61	0.05	0.37	0.14
1911	0.50	0.43	0.51	0.47	2.25	6.04	4.16	2.91	1.59	0.61	0.46	0.11
1912	0.46	0.02	S.	0.62	3.40	3.73	4.39	6.11	1.16	1.21	0.54	S.
1911	0.65	0.71	0.45	0.08	0.77	3.50	2.76	2.19	0.79	0.55	S.	S.
1914	1.10	0.48	0.30	1.15	1.35	5.12	1.52	1.42	2.57	2.82	1.37	1.00
1915	0.22	0.15	0.05	0.56	5.05	4.30	4.87	1.20	1.70	0.90	0.75	0.80
1916	0.87	1.03	0.82	1.59	2.46	3.82	5.60	6.62	3.47	1.00	0.44	0.65
1917	0.51	0.45	0.07	0.37	1.20	0.91	0.99	2.07	2.58	0.61	0.64	0.54
Sums	5.63	4.86	3.34	6.00	23.39	41.50	32.94	31.03	18.10	11.01	4.67	4.73
Means	0.50	0.49	0.33	0.55	2.13	3.78	2.99	2.82	1.65	1.00	0.42	0.23

## HARDISTY.

1914											0.80	1.15
1915	0.21	S.	0.15	0.29	1.87	3.67	3.97	0.71	1.22	0.37	0.55	0.15
1916	0.70	0.41	0.85	1.75	1.88	4.31	3.62	2.79	2.63	0.29	1.40	0.50
1917	1.27	0.41		0.40	1.23	2.08	1.38	1.40	1.04	0.23	0.47	0.10
Sums	2.18	0.82	1.00	2.44	4.98	10.08	8.97	4.91	4.80	0.80	3.22	1.00
Means	0.73	0.27	0.50	0.81	1.66	3.36	2.99	1.64	1.63	0.37	0.80	0.48

## ISLAY (Island Lake).

1906									0.31	0.33	0.65	0.70
1907	0.35	0.01	0.29	0.18	0.70							
1908			0.68									
1909		0.05	0.55	S.	0.77	0.60	2.00	0.04	R.	0.20	0.43	1.30
1910	2.60	0.10										
Sums	2.95	0.16	1.52	0.18	1.47	0.60	2.00	0.04	0.31	0.53	1.08	2.00
Means	1.47	0.05	0.51	0.09	0.74	0.60	2.00	0.01	0.16	0.27	0.54	1.00

## LA PEARL.

1912				0.25	1.33	1.01	4.31	3.31	1.37	0.79	0.40	
1913				0.12	0.79	1.61	2.31	2.28	1.12	0.40	S.	S.
1914	0.80	S.	0.14	0.62	1.08	2.99	0.20		2.39	2.50	1.02	
1915	0.40	1.10		0.61								
Sums	1.20	1.10	0.13	1.60	3.20	5.61	6.85	5.59	4.88	3.69	1.42	S.
Means	0.60	0.55	0.13	0.40	1.07	1.67	2.28	2.79	1.63	1.23	0.47	0.50

## LOVELAND-ARGYLE.

1910					2.63	7.07	5.55	15.69	3.11	0.31	0.80	0.50
1911	0.50	0.50	0.12	0.34	1.65	4.73	2.45	2.96	0.85	0.63	0.30	0.10
1912	1.55	0.30	S.	0.10	2.61	2.56	5.49	6.35	1.31	0.45	0.07	S.
1913	0.40	0.70	0.40	0.93	0.57	3.20	4.36	2.45	0.65	0.49	S.	S.
1914	1.50	S.	S.	1.15	1.17	8.00	0.98	0.54	2.99	2.72	1.30	0.90
1915	0.60	S.	S.	0.66	2.89	3.60	1.43	0.59	1.68	0.22	0.68	0.15
1916	0.40					5.00	3.94	3.63	2.45	0.68	0.13	1.00
1917				0.20	1.01	1.36	1.95	2.21	1.99	0.46	0.07	0.10
Sums	4.75	1.50	0.52	3.32	12.53	35.52	26.15	34.42	15.03	5.99	2.75	2.75
Means	0.79	0.30	0.10	0.55	1.79	4.44	3.27	4.30	1.85	0.75	0.34	0.34

## MANNVILLE.

1913				0.28	0.96	2.73	3.85	4.24	0.78	0.10		S.
1914	0.13	0.10	0.55	0.75	0.60	5.89	1.87	1.62	2.28	0.56		

## MORINVILLE.

Year.	Jan.	Feb.	March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1906											6.08	1.00
1907	0.20	0.15	0.13	0.38	3.06	2.73	1.83	2.85	0.60		0.05	0.20
1908	0.11	0.80	0.95	0.03	1.43	3.76	1.50	0.70				

## MONITOR

1915				0.73	3.58	2.69	3.38	3.10		0.81		0.53
1916	1.20	0.30		0.73	3.58	2.69	3.38	3.10		1.12		1.93
1917	0.78	1.00	0.10	0.75	1.57	1.90	1.53		1.15	0.23		

## NORDEGG.

1915								1.22	1.67	1.36	0.30	0.31
1916	1.56	0.66	1.93	1.32	3.14	2.50	5.28	3.73	2.51	1.84	1.01	0.90
1917	0.73	0.74	0.51	1.26	4.40	4.36	1.13	3.32	2.40	2.48	0.05	0.80
Sums	2.09	1.70	2.44	2.58	7.54	6.86	6.41	8.27	6.58	5.68	1.36	2.01
Means	1.04	0.85	1.22	1.29	3.77	3.43	3.20	2.76	2.19	1.89	0.45	0.67

## OYEN.

1912				0.51	1.85		2.91	2.45				
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## PAKAN (Victoria).

1903	0.67	0.40	0.12	0.72	1.59	2.59	6.03	1.83	0.91	0.42		1.07
1904	1.60	0.35	2.70	0.15	1.67	4.38	1.96	1.18	2.14	R.	0.32	0.55
1905	0.35	0.07	0.07	0.32	0.34	3.54	1.63	0.92	1.88	2.17	1.20	0.25
1906	0.75	0.59	S.	1.42	1.63	6.15	3.34	1.00	1.05			
1907		0.30	0.71	0.20	1.60	1.78	3.14	4.41	3.17	2.00	0.10	0.68
1908	0.30	0.93	1.35	2.10	1.84	4.48	2.03		7.00	3.75	3.00	0.58
1909	0.78	0.48	0.33	0.92	1.73	1.43	2.34	2.34	1.15	0.30	1.38	0.68
1910	0.13	0.73	0.48	1.53	1.25	3.04	4.63	0.98	1.32	0.98	0.30	0.98
1911	1.23	0.53	0.85	1.45	0.91	4.12	2.11	2.44	1.35	0.32	0.55	0.20
1912	0.50	0.38	0.90	0.91	1.10	3.38	3.89	3.48	0.63	0.25	0.38	
Sums	6.31	4.67	7.51	9.72	13.66	34.80	31.10	18.58	20.66	10.20	7.23	4.99
Means	0.70	0.47	0.75	0.97	1.37	3.49	3.11	2.06	2.07	1.13	0.90	0.62

## PONOKA

1906											3.70	0.27
1907	1.00	0.20	0.60	S.	1.37	5.77	2.21	4.65	2.63	0.30	0.40	0.75
1908	0.10	0.65	1.25	0.37	2.68	6.24	2.86	1.56	0.39	0.67	0.30	0.80
1909	0.70	0.10	0.30	0.85	0.78	1.35	3.79	0.75	0.06	1.01	1.35	0.35
1910	0.26	0.60	0.40	0.26	1.01	1.81	1.61	4.84	2.87	S.	0.75	0.70
1911	0.75	0.60	0.44	0.83	1.34	3.90	4.63	2.87	2.93	0.44	0.92	0.55
1912	0.86	0.75	0.45		0.15	2.93	5.12	2.82	0.93			
1913	0.91	1.15	1.25	0.45	1.35	2.45	3.26	3.59	0.65		0.05	0.06
1914	1.66	0.75	1.68	0.50	1.78	6.01	1.97	2.42	2.42	0.70	1.22	2.26
1915	1.11	0.30	0.55	0.70	3.11	5.12	2.19	0.20	1.20			0.43
1916	1.52	0.75	1.60	0.28	2.69		3.31	3.72	0.89		0.53	1.30
1917	1.04	1.02	0.48	0.24	2.82	2.44		0.96	1.10	0.96	0.37	1.70
Sums	10.11	6.87	9.00	4.48	19.08	38.12	30.95	28.38	16.07	4.08	9.23	9.17
Means	0.92	0.62	0.82	0.45	1.73	3.81	3.10	2.58	1.46	0.58	0.92	0.83

## RANFURLY.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1905	0.35	S.	0.50	1.45	1.27	3.24	1.64	3.09	2.27	0.92	0.53	0.06
06	0.81	1.15	0.46	3.73	1.62	6.51	4.49	0.75	0.79	0.19	3.07	2.27
1907	1.02	0.31	0.83	0.59	1.60	2.21	3.31	4.26	1.91	0.37	0.06	0.67
1908	0.25	1.27	1.93	0.17	2.61	5.21	2.17	3.87	0.88	1.69	1.70	1.12
1909	0.82	0.53	1.16	1.04	4.10	2.07	3.66	0.69	0.08	0.96	1.45	1.29
1910	0.98	0.55	0.37	0.14	0.88	2.79	2.46	1.82	1.91	0.86	0.29	0.78
1911	1.30	0.29	0.52	0.66	2.39	4.44	3.03	3.10	1.60	0.59	0.74	0.34
1912	0.77	0.41	0.30	0.52	0.92	2.80	5.04	3.14	1.39	1.02	0.49	0.23
1913	1.12	0.92	0.57	0.78	1.38	4.26	4.80	4.82	1.20	0.24	0.07	0.16
1914	0.40	0.53	1.03	2.02	3.72	5.27	1.50	2.60	2.77	1.49	0.59	1.03
1915	0.05	0.05	0.13	1.46	3.31	4.13	6.37	1.09	1.28	0.67	0.74	0.35
1916	1.06	0.24	2.17	2.09	1.31	6.10	5.54	3.47	2.39	0.69	0.38	0.96
1917	1.53	1.10	0.27	0.73	0.72	2.22	1.72	1.18	0.75	0.48	0.39	0.70
Sums	10.49	7.35	10.24	15.38	25.83	51.25	45.63	34.09	19.25	10.17	10.50	9.96
Means	0.81	0.57	0.79	1.18	1.99	3.94	3.51	2.62	1.48	0.78	0.81	0.77

## ROCKY MOUNTAIN HOUSE.

1915												
1917		0.28	0.95	2.24	6.55	2.11	0.29	3.31	3.85	2.34	0.65	1.40

## SADDLE LAKE.

1906						4.48	1.31	0.72	0.42	0.06	1.50	1.25
1907	0.10	0.03	0.40	S.	0.15	0.85	2.08	4.94	1.35	S.	S.	0.40

## SEDEGWICK.

1913												0.08
1911	0.20										0.26	
1915				1.70	1.46	4.84	4.35	0.33	1.43	0.18		
1916					0.87	3.38	1.37	3.35	2.02	0.40	0.10	1.20
1917					0.25	1.59	13	1.70				
Sums	0.20			1.70	2.58	8.81	7.85	5.38	3.45	.58	0.36	1.28
Means	0.20			1.70	0.86	2.94	2.62	1.79	1.72	0.29	0.18	0.64

## STRATHCONA (Beaver Hills West).

1897												0.57
1898	0.53	0.97	0.74	0.06	0.12	5.10	3.80	1.57	0.71	0.90	0.29	0.39
1899	1.08	0.29	0.36	1.26	2.07	4.04	3.72	6.43	0.93	0.56	0.32	1.03
1900	0.81	1.48	1.60	2.32	2.84	2.75	4.07	5.67	3.43	0.77	6.18	0.49
1901	0.38	0.94	0.61	1.24	2.21	3.39	9.16	0.82	4.24	0.52	1.05	0.83
1902	0.30	0.90	0.32	0.80	7.70	2.10	4.39	1.92	1.26	0.23	1.42	0.79
1903	0.72	0.17	0.89	1.39	1.37	5.13	4.75	2.59	1.45	0.81	0.76	0.50
1904	1.56	1.37	1.30	0.16	0.80	3.95	2.37	1.17	1.96	1.25	0.61	0.27
1905	0.29	0.08	0.59	0.09	1.19	4.05	5.14		1.40	0.40	0.43	0.49
1906	0.54	1.11	0.22	0.39	1.31	5.21	6.11	0.77	0.23	0.65	1.90	1.40
1907	0.95	0.38	0.48	0.39	1.49	2.90	2.42	4.61	1.50	0.04	0.03	0.89
1908	0.73	0.76	1.25	0.57	1.88	7.22	2.11	2.58	0.61		0.67	
Sums	7.69	7.45	8.36	8.67	23.07	45.83	48.04	28.16	17.72	6.13	7.66	7.65
Means	0.64	0.68	0.76	0.79	2.10	4.17	4.37	2.82	1.61	0.61	0.70	0.70

## ST. PAUL DES METIS.

1906							1.97	0.52	0.24	0.32		
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## VERMILION.

1913						2.23	3.87	3.70	1.22	0.10	S.	0.04
1911	2.81	0.25							2.78	2.17	0.41	1.38
1915	0.30	S.	S.	0.53	0.95							
1916				1.21	1.12	4.35	4.21	2.59	1.73	0.40	0.25	0.52
1917	1.42	0.31	0.15	0.53	2.18	1.46	0.70	1.00	0.68		0.29	
Sums	4.53	0.56	0.15	2.27	4.25	8.07	8.78	7.29	6.41	2.67	0.95	1.24
Means	1.51	0.19	0.08	0.76	1.42	2.69	2.93	2.43	1.60	0.89	0.24	0.97

## WABAMUM

Year.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1906						4.41	3.93	0.52	0.84	0.52	1.81	1.86
1907	1.30	1.16	0.74	0.44	2.17	4.52	2.71	4.20	1.27	0.41	0.18	1.20
1908	0.43	1.79	1.12	0.46	2.07	8.18	2.37	2.12	0.91	1.01	0.73	0.71
1909	1.23	0.92	0.81	1.40	2.00	1.69						
Sums	2.96	3.87	2.97	2.30	6.24	18.83	9.01	6.84	3.02	1.97	2.72	3.80
Means	0.99	1.29	0.99	0.77	2.08	1.71	3.00	3.28	1.01	0.66	0.91	1.27

## WASTINA.

1913			0.20		0.36	2.71	2.85	2.34	0.19	0.08	0.30	S.
1914	0.30			0.79	0.58	2.53	0.70	0.85	1.41	3.86		0.25
1915					3.01	4.53	2.59	0.74	1.26	0.46		
1916		0.26	0.15	0.52	2.89	3.92	4.95	2.50	2.42	0.60		
1917				0.35	0.66	0.61	1.30	1.32	0.43	0.66		
Sums	0.30	0.26	0.35	1.66	7.53	14.80	12.39	7.75	5.71	5.66	0.30	0.25
Means	0.30	0.26	0.18	0.55	1.51	2.86	2.48	1.55	1.14	1.13	0.30	0.25

## WLTASKIWIN.

1903	0.51	0.53	1.61	2.31	1.33	1.74	4.75	4.01	2.41	0.65	0.44	0.55
1904	1.91	1.43	2.31	0.05	1.17	3.64	1.04	1.81	2.38	0.63	0.73	1.01
1905	0.39	0.09	0.10	0.06	1.5	5.66	1.59	1.73	1.08	0.31	0.41	0.22
1906	0.56	0.32	0.52	0.11		4.19	3.31	0.38	0.04	0.44	2.38	1.56
1907	1.83	0.98	0.76	0.23		3.83	2.17	1.12	1.80	0.49	0.10	0.87
1908	0.28	1.35	1.03	0.24	1.39	7.45	2.86	1.53	0.41	0.84	0.60	
1909	0.55	0.34	0.58	0.56	2.81	1.70	5.79	0.32	0.06	0.06	0.72	0.52
1910	0.30	0.61	0.19	S.	1.18	4.16	2.60	4.50	2.59		0.49	0.79
1911	0.88	0.26	2.10	1.03	3.35	2.29	1.19	4.70	1.50	0.25	0.50	0.40
1912						4.25	5.16	2.91				
1913	0.89	0.48	0.45	0.18	1.47	4.25	2.10	5.10	1.25	0.35	0.01	0.01
1914	0.53	0.80										
1915	11	11	10	10	10	11	11	11	10	9	10	9
Sums	8.63	7.25	9.68	4.79	7.19	43.16	32.56	31.14	14.12	4.02	6.38	5.96
Means	0.78	0.66	0.97	0.48	1.72	3.92	2.96	2.83	1.41	0.45	0.64	0.65

## ABERFELDY, SASK.

1912				0.33	1.03	2.28	4.84	2.39	2.08	0.07		
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## ANGLIA.

1914	1.30	0.10	0.80	0.39	1.28	3.10	1.12	0.76	2.78	2.15	1.15	0.60
1915	0.30	S.	S.	0.20	3.03	4.47	3.09	0.23	1.58	0.27	0.40	0.32
1916	1.70	0.40	1.60	0.44	1.55	3.88	4.96	2.21	1.72	1.73	0.20	0.30
1917	0.90	0.30	0.10	2.80	0.07	1.18	0.54	1.02	0.55	0.60	S.	0.90
Sums	4.20	0.80	2.50	3.83	5.93	12.63	9.71	4.22	7.06	4.75	1.75	2.12
Means	1.05	0.20	0.62	0.96	1.48	3.16	2.43	1.06	1.76	1.19	0.44	0.53

## BOUTIN.

1911			1.05	0.62	1.39	5.22						
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## HALCYONIA (Borden).

1914					2.05	1.01	0.65	0.94	2.55	2.83	0.95	0.60
1915	0.60	0.10	0.05	0.22	1.01	1.75	1.90	0.34	1.59	0.32	0.75	0.70
1916	1.10	0.40	1.70	0.69	3.01	2.88	4.67	2.76	1.26	0.54	0.02	0.25
1917	0.70	0.80	0.31	0.35	0.35	1.38	0.76	1.35	1.06	0.40	0.40	0.80
Sums	2.40	1.30	2.06	1.26	6.62	7.02	7.98	5.39	6.46	4.09	2.12	2.35
Means	0.60	0.43	0.69	0.42	1.66	1.76	1.90	1.35	1.62	1.02	0.53	0.59

## HENRIETTA.

Year.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1895	0 20	0 35		0 37	1 75	2 03	4 21	1 57	1 10	S.	0 30	0 50
1896	0 15		0 70	1 65	3 09	2 80	2 01	2 68	0 56	R.	2 80	0 30
1897		0 30	0 30	0 35	0 24	3 98	1 78	0 84	3 06	0 40	0 90	0 68
Sums	0 35	0 65	1 00	2 37	5 08	8 81	8 00	5 09	4 72	0 40	4 00	1 48
Means	0 18	0 33	0 50	0 79	1 69	2 94	2 67	1 69	1 57	0 13	1 33	0 49

## JACK FISH LAKE (Glaslyn).

1909	0 45	0 40	1 65	1 15	1 27	1 09	3 41	0 83	0 35	1 74	1 04	1 60
1910	0 40	0 40	0 08	0 03								

## KINDERSLEY.

1910							0 99	1 19	1 37	0 05	0 23	0 77
1911	1 54	0 41	0 51	1 21	1 15			1 82	1 68	0 28		
1912								2 62	0 39	0 95		
1913				0 06	0 72	2 51	2 05	0 47	3 17	2 69		
1914				0 35	0 30	2 59	0 51	0 24	1 68	0 42		
1915				0 22	3 36	3 10	1 33	0 24	1 97	1 11	0 20	
1916				0 46	3 34	2 84	8 21	1 88	1 07	1 11		
1917				0 62	0 18	1 32	1 40	1 48	1 00	0 22		
Sums	1 54	0 41	0 51	2 92	9 05	12 36	14 55	9 70	11 20	5 75	0 13	0 77
Means				0 49	1 51	2 47	2 42	1 39	1 61	0 82	0 22	

## BATTLEFORD.

1890												
1891	0 42	0 29	0 65	0 31	0 51	2 88	1 78	1 64	0 43	0 23	0 11	0 01
1892	0 03	0 04	0 05	0 20	0 71	2 56	2 26	3 07	1 47	0 13	0 45	0 04
1893	0 03	S.	0 02	0 13	0 26	4 81	1 71	1 86	0 70	0 79	0 28	0 34
1894	1 37	0 14	0 70	0 87	0 97	3 59	1 72	1 61	1 44	0 41	0 23	0 42
1895	0 23	0 29	0 08	0 07	2 13	2 29	2 86	1 53	1 36	0 24	0 33	0 30
1896	0 37	0 01	0 86	1 41	3 69	2 26	0 94	1 16	0 30	R.	1 37	0 53
1897	0 06	0 60	0 10	0 30	0 24	3 83	4 67	1 57	3 27	0 19	1 10	0 50
1898	0 53	1 58	0 91	0 02	2 13	4 24	1 04	1 58	0 46	0 83	0 68	0 20
1899	0 37	0 06	0 83	0 70	2 58	3 41	2 21	1 32	1 82	0 85	0 70	0 57
1900	0 63	0 66	0 36	0 68	2 80	3 21	4 21	5 21	1 21	0 87	0 23	0 27
1901	0 85	0 26	1 15	0 36	2 42	4 45	1 46	0 91	2 73	0 68	0 23	0 57
1902	0 10	0 66	1 15	0 32	3 08	2 35	2 30	1 26	0 41	0 14	1 26	0 45
1903	0 89	0 04	0 82	1 15	3 70	2 00	2 50	2 25	1 01	0 31	0 79	0 57
1904	1 16	1 78	1 81	0 03	1 49	4 32	1 69	1 72	1 10	1 07	0 12	0 25
1905	0 62	0 07	0 07	0 10	1 82	3 13	2 35	0 79	0 70	0 82	0 01	0 04
1906	0 12	0 22	0 07	0 31	0 37	3 99	1 68	1 04	0 80	0 16	0 42	1 46
1907	0 13	0 07	0 52	0 13	0 30	1 54	2 26	2 58	2 13	0 04	0 01	0 40
1908	0 46	1 01	1 66	0 31	1 21	7 60	0 35	1 58	1 23	0 85	0 85	0 40
1909	0 22	0 20	0 20	0 40	1 49	2 88	3 37	0 33	0 58	0 63	0 82	0 70
1910	0 20	0 10	0 20	0 19	2 35	1 53	0 90	1 08	1 40	0 18	0 30	0 20
1911	1 30	0 50	0 10	0 50	2 60	7 14	3 39	2 23	1 29	0 11	0 81	0 50
1912	0 02	0 01	0 20	0 03	1 80	1 18	5 35	2 71	2 06	0 55	0 40	0 50
1913	0 50	0 20	0 30	1 02	0 46	1 70	3 56	2 64	1 07	0 18	0 10	S.
1914	0 70	0 40	0 80	0 54	2 86	2 47	1 28	2 30	3 97	2 26	0 74	0 82
1915		0 12		0 68	1 61	1 89	3 18	0 22	0 67	0 32	0 30	0 20
1916	0 76	0 02	1 00	0 73	2 77	3 66	2 11	4 70	1 05	0 71	S.	0 22
1917	1 08	0 20	0 30	1 23	0 36	0 76	0 79	1 88	0 53	0 18	0 18	0 71
1918												
Sums	13 15	9 53	14 97	12 75	46 74	85 17	62 23	53 83	35 31	13 82	13 15	11 23
Means	0 51	0 35	0 58	0 47	1 76	3 15	2 31	1 99	1 31	0 51	0 49	0 42

## LLOYDMINSTER, SASK

Year.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1904						3.23	1.31	1.31	0.98	1.08	0.23	0.04
1905	0.25	0.02	0.03	1.18	1.43	3.13	2.60	3.90	1.84	1.24	0.05	0.02
1906				2.20	1.65	3.65	0.91	1.48	0.28	0.42	0.51	0.74
1907	0.44	0.08	0.75	0.46	0.93	3.59	2.26	6.37	2.54	0.29	0.01	0.45
1908	0.21	0.85	0.90	0.27	1.00		2.22	3.29	0.55	0.71	0.32	0.38
1909		0.20	1.25	0.15			5.56	0.88	0.09	0.89	0.54	0.30
1910	1.80	0.20	S.	0.01	0.87	3.09	1.41	1.85	1.92	0.29	0.07	0.50
1911				0.50	1.02	3.61	3.92	1.25	1.73	0.32		
1912				0.45					0.23	0.23		
1913					5.15	2.09	4.56	0.38	0.17			
1914				1.00	0.86	0.28		0.67	0.93			S.
1915	S.			0.66	1.35	4.57	3.02	2.47	1.90	0.39	S.	0.60
1916	1.50	0.05	1.20	1.23	2.03	4.52	5.82	2.47	1.90		0.19	
1917	0.60			0.60	0.43	1.78	0.70	1.24	0.82			
Sums	4.80	1.40	4.13	8.71	17.62	33.54	34.29	25.29	13.78	5.86	1.92	3.03
Means	0.69	0.18	0.59	0.73	1.60	3.05	2.86	2.10	1.06	0.59	0.21	0.38

## LUSELAND.

1910				0.13	1.48	1.29	1.24	1.54	2.18	0.13	0.32	0.52
1911	1.00			0.19	1.99	5.78	3.59	3.57	0.75	0.06	0.91	0.80
1912	0.55	0.30		0.06	1.90	1.90	5.49	3.38	1.20	0.73	0.10	0.49
1913	0.75	0.35	0.35	0.48	0.68	2.06	3.96	2.42	0.93	0.12	0.40	0.15
1914	1.25	0.35	0.70	0.45	0.57	4.17	0.70	1.28	3.42	3.81	1.45	1.20
1915	0.50	0.15	S.	0.42	3.26	4.77	2.63	0.67	1.23	0.15	0.36	0.30
1916	0.85	0.40	1.50	0.42	2.91	5.54	4.46	3.22	1.96	0.75	0.20	0.55
1917	0.80	0.86	0.42	0.97	0.87	1.71	0.66	1.86	0.52	0.30	0.25	0.45
Sums	5.70	2.61	3.02	3.12	13.66	27.22	22.73	17.94	12.19	5.65	3.93	4.37
Means	0.81	0.42	0.50	0.39	1.71	3.40	2.85	2.24	1.52	0.71	0.49	0.55

## MACDOWELL (THE PINES).

1915	0.13	0.30			0.63	2.54	2.51	0.45	1.13	0.35		0.28
1916	0.72		0.58	1.42	4.39	2.39	3.59	1.78	2.24	1.29	0.20	0.20
1917	0.51	0.25	0.52	0.50	0.48	2.90	0.48	1.07	0.68	1.00	S.	0.66
Sums	1.36	0.55	1.10	1.92	5.50	7.83	6.58	3.30	4.05	2.55	0.20	1.14
Means	0.45	0.28	0.55	0.96	1.83	2.61	2.19	1.10	1.35	0.85	0.10	0.38

## OLIVER.

1910				0.20	0.89	1.78	1.02	1.36	1.58	1.06	0.14	0.70
1911	1.70	0.30		0.80	1.19		3.77	1.81	0.73		0.18	0.70
1912	0.60	0.50										
1913				0.11	0.05	5.40	3.64	1.87	0.59	0.21	0.50	
Sums	2.30	0.80		1.11	2.13	7.18	8.43	5.07	2.90	1.27	0.82	1.40
Means	1.15	0.40	0.62	0.37	0.71	2.59	2.81	1.69	0.97	0.63	0.27	0.70

## ONION LAKE.

1903						2.02	7.44	1.40	2.03	1.30	0.56	0.36
1904	0.72	0.79	2.60	0.60	0.31				0.90	0.32		
1905				0.60	0.25	1.69	1.53		1.64			
1906												
1907		S.	S.		0.52				2.04			
1908						6.08						
1909						0.59	0.79					
1910						1.93	2.90					
1911												
Sums	0.72	0.79	2.60	1.20	1.08	12.31	12.66	1.40	6.61	1.62	0.56	0.36
Means		0.40	1.30	0.60	0.36	2.46	3.16		1.65	0.81		

## LE PAS, MAN.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910									1.95	0.57	2.43	0.21
1911	0.40	0.20	0.52	2.64	1.21	2.23	4.67	2.35	1.92	0.45	2.30	0.70
1912	0.02	0.14	0.49	0.32	0.73	1.22	4.39	2.61	3.54	0.82	1.55	0.60
1913	1.17	0.27	0.06	0.76	1.51	3.22	2.42	2.92	0.99	0.61	0.33	0.13
1914	1.40	0.28	0.62	1.02	2.80	0.57	2.78	1.44	0.65	1.98	1.20	0.27
1915	0.36	0.07	0.25	0.47	0.81	2.98	0.82	0.51	0.28	0.77	0.63	0.65
1916	0.23	0.16	0.79	0.20	5.40	1.96	1.39	3.20	2.02	1.49	0.82	0.20
1917	0.35	0.20	0.68	0.61	0.51	2.97	1.02	1.87	0.72	2.35	0.22	0.93
Sums	3.93	1.32	3.41	6.02	12.97	15.15	17.49	14.90	12.07	9.04	9.48	3.69
Means	0.56	0.19	0.49	0.86	1.85	2.16	2.50	2.13	1.51	1.13	1.18	0.46

## PRINCE ALBERT, SASK.

1884										1.13	1.41	0.22
1885	0.22	0.44	0.17	0.25	2.05	2.56	0.17	0.25	0.09	0.88	0.91	1.15
1886	0.21	0.55	0.88	0.20	1.21	1.06	0.46	2.21	2.03	0.20	1.05	0.30
1887	0.95	0.46	0.46	0.99	2.68	3.57	1.39	1.08	0.42	0.17	0.55	0.95
1888	0.42	0.20	0.50	1.55	0.01	3.65	2.82	0.66	0.07	0.53	2.26	0.11
1889	0.74	1.67	1.50	1.21	0.78	1.00	0.37	R.	1.43	0.34	0.69	0.44
1890	1.38	1.26	1.96	0.57	1.59	3.49	2.40	2.18	0.78	1.97	0.29	1.20
1891	0.53	0.50	0.27	0.27	0.45	2.73	0.90	3.24	0.56	1.06	0.55	0.19
1892	0.38	0.59	0.27	1.03	1.49	1.89	2.66	1.51	1.06	0.31	0.48	0.39
1893	0.24	0.32	0.22	0.03	0.37	1.71	2.69	2.97	0.43	1.02	0.07	0.46
1894	0.80	0.47	0.89	0.94	0.44	1.48	1.42	0.72	0.69	0.80	0.38	0.21
1895	1.72	0.37	0.26	0.35	2.19	2.03	1.47	1.13	1.85	0.37	1.64	0.76
1896	1.50	0.64	1.49	3.37	2.40	2.40	3.09	1.39	0.83	0.16	1.41	0.82
1897	1.56	0.64	0.16	0.70	0.98	2.89	2.35	1.30	2.94	0.58	1.83	2.10
1898	0.74	1.86	1.10	0.06	0.51	2.39	1.95	1.84	2.21	1.89	0.90	0.29
1899	1.95	0.04	1.84	1.03	1.97	4.36	4.86	8.01	2.31	1.53	1.16	0.51
1900	0.95	0.79	0.47	1.16	1.94	1.73	3.76	6.04	1.94	1.33	0.59	1.70
1901	0.33	1.03	2.40	0.48	1.49	3.72	4.49	1.49	2.81	0.10	0.78	0.44
1902	0.26	0.97	1.05	0.60	4.87	4.19	2.16	1.98	0.63	0.13	3.06	6.11
1903	0.59	0.21	1.55	1.41	2.08	1.07	2.96	2.22	2.18	1.05	1.16	0.40
1904	0.35	1.24	2.56	R.	2.77	2.83	3.19	1.33	0.57	0.72	0.52	0.52
1905	0.20	0.32	0.40	0.35	1.56	1.79	0.95	7.49	2.29	1.80	1.40	0.72
1906	1.50	1.60	S.	0.76	1.20	3.28	1.78	1.13	1.32	0.81	1.66	0.61
1907	0.71	0.46	1.82	0.55	1.69	2.53	2.21	4.13	1.12	0.56	0.15	0.61
1908	0.40	2.15	0.35	2.82	0.58	1.36	0.36	3.03	0.53	1.63	1.13	1.81
1909	0.77	0.75	0.55	1.02	0.58	4.34	3.90	1.18	1.37	0.97	1.40	0.90
1910	0.81	0.45	0.31	0.40	0.69	0.34	1.37	0.69	0.79	0.16	1.21	0.18
1911	2.00	0.40	0.11	0.79	1.40	3.09	1.98	2.99	1.77	0.01	2.26	1.10
1912	S.	0.10	1.03	0.25	1.79	2.77	5.31	2.75	2.16	0.56	0.90	1.07
1913	0.80	0.80	1.20	0.17	0.79	1.98	4.76	3.59	2.53	0.88	0.31	0.11
1914	0.71	0.04	0.61	1.34	2.54	2.01	1.15	0.80	1.12	1.37	1.10	0.56
1915	0.11	0.25	S.	0.37	0.92	2.88	3.17	0.30	1.16	0.37	0.94	1.15
1916	0.96	0.06	0.98	1.21	4.38	2.60	3.88	1.66	1.00	1.88	0.65	0.26
1917	1.16	0.10	0.90	1.04	0.77	2.25	0.35	1.51	0.78	0.74	0.02	0.99
Sums	26.02	21.18	28.06	27.27	51.16	87.91	76.73	72.80	44.67	28.04	32.85	24.57
Means	0.79	0.64	0.85	0.83	1.55	2.66	2.33	2.21	1.35	0.82	0.97	0.72

## PRINCE (Meota).

1907							1.10	3.77	1.39	0.19	0.12	0.21
1908	0.15	1.40	1.50	0.27	0.86	5.04	1.71	2.55	1.02	0.61	0.98	0.20
1909	1.15	0.45	0.60	0.95	1.46	2.25	1.96	0.52	0.32	0.72	0.95	
1910	0.20	S.	0.80	0.27	2.01	2.24	0.74	0.94	1.11	0.36	1.40	0.85
1911	1.20	0.10	0.45	S.	2.02	7.41	3.30	1.58	1.42	0.10	0.89	0.50
1912	0.20	0.20	0.15	0.08	1.60	1.34	7.78	2.45	3.18	0.51	0.58	0.58
1913	1.07	0.20	0.24	0.04	0.34	1.31	3.50	1.23	1.28	0.66	S.	0.40
1911	0.40	0.10	0.10	0.08	2.46	1.78	1.50	2.00	2.31	2.96	0.75	0.80
1915	S.	0.15	0.10	0.21	0.62	1.69	1.84	0.82	0.71	0.27	0.40	0.77
1916	1.54	S.	1.71	0.35	2.25	4.31	4.33	3.09	1.52	0.79	S.	0.20
1917	0.42		0.22	0.88	0.20	0.93	0.24	0.55	0.51	0.20	0.40	0.40
Sums	6.33	2.60	5.87	3.13	13.82	28.30	28.00	19.50	14.77	7.17	6.47	4.91
Means	0.63	0.29	0.59	0.31	1.38	2.83	2.55	1.77	1.34	0.65	0.59	0.49

## RATHMULLEN.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910				0 30	0 84	1-21	1-71	0-99	1-63	0-29	0-28	0-63
1911	0 93	0 58	0 23	0 38	1-22	2-84	3-02	2-52	1-22	0-03	0-48	0-55
1912	0 40	0 15	0-10	0 06	2-00	3-36	3-28	2-37	1-47	0 45	0-12	0-05
1913	0 68	0 45	0 45	0-50	0 63	4-77	2-61	2-15	0-47	0 21	0 25	S.
1914	0 58	0 18	0-05	0-19	0 38	3-63	0-91	0-64	4 10	2 85	0 35	0-53
1915	0 33	0-03		0-17	3 12	3-62	1-33	0 84	1-90	0-27	0-10	0-20
1916	0 45	0-15	0-30	0-33	3-34	5-77	9-04	2-59	1-63	0-99	1-25	0-60
1917	0 20	0-05	0-25	0-60	0 93	1-67	1-27	4-52	1-13	2-00	0 10	0-50
Sums	3-57	1-59	1-38	2 43	13-36	26 87	23 81	16-62	13-55	7-09	2-93	3-06
Means	0-51	0-23	0-23	0-30	1-67	2-86	2-98	2-08	1 69	0-86	0-37	0-38

## OSETOWN.

1916					1 06	5 34	5 51	1 27	2 05	1-48	0 10	3 33
1917	1 26	0 56	0 36	1-10	0 17	1-93	0-87	1-00	0 91	0-59	0-20	0-71

## SCOTT.

1911					2 20	4 08	3-95	2-71	1-92	0 11	0 25	0-65
1912	0 37	0-80	0 23		2-46	2-19	6-16	2-93	2-01	0-15	0-20	0 27
1913	0-98	0-42	0 23	0-15	0-95	1-28	2-98	2 62	1-24	0-40	0-25	0-08
1914	0-65	0-03	0-20	1-36	1-15	2-37	1-80	1-41	3-51	3-77	0-60	0-95
1915	0-10	0 15	0-05	0-90	1-40	3-54	2 11	0-48	0-98	0-25	0 40	0 10
1916	1-25	0-50	1-05	0-52	2-52	4 23	4-02	3-87	1-77	0-50	0 05	0-50
1917	0-60	0 15	0-03	1-01	0-39	0-88	1-03	1-42	0-37	0-12	0-25	0-55
Sums	3-95	2-05	1-79	3-94	11-07	18-57	22-05	15-41	11-80	5-36	2-00	3-10
Means	0-66	0 34	0-30	0-79	1-58	2-65	3-15	2-21	1-69	0-77	0-29	0-44

## STURGEON FOREST RESERVE (Alingly).

1917											0-12	0-75
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## ST. WALBURG.

1915	0-17	0-05		0-82	0 94	1 80	2-82	0-10	1-33	0-40	0-73	0-47
1916	1-13	0-15	1-94	1-37	2-12	3-66	3-26	2-54	1-53	0-89	0-15	0-40
1917	1-52	0-40	0 22	1-39	0-19	0-76	1-37	0-89	0-89	0-10		
Sums	2 82	0-60	2-16	3-58	3-25	6-22	7-45	3-53	3-75	1-39	0 88	0-87
Means	0-94	0 20	1-08	1-19	1-08	2-07	2-48	1-18	1-25	0-46	0-44	0-44

## WASECA, SASK.

1907							1-51	3-98	3-02	0 22		0 40
1908	0 25	0-60	0 60	0 17	1-22	7-36	2-38	2-23	0-69	0-80	0-39	0-10
1909	S.	S.	0-10	0 10	1-20	2-89	3-93	0-68	R.	0-75	0-50	0-25
1910	0 30		S.	4	1-22	1-96	2-02	1-25	1-20	0 05	0-20	0 50
1911	1-15	0-35	0-25	0 30	2-22	4-11	1-99	0-80	1-12		0 58	0 45
1912	0-40	0-23	0-40	0-72	0-73	1-34	5-35	3-15	1-89	0 82	0-40	0 68
1913	0 30	0-60	0 12	S.	0 83	1-59	2-67	1-28	0-77	0-10	0 05	0-20
1914	0 65	0-25	0-85	0-46	2-38	2 51	0-22	0-73	2 09	2-05	0 38	0-92
1915	0-15	0-35	5	0-65	1-76	2-89	1-82	0-10	0-73	0-08	0-03	0-20
1916	1-40	0 20	1-20	1 03	3-09	5-12	4 45	3-40	1 70	0-48	S.	0-50
1917	1-70	0-15	7	0-53	0-17	2-02	0-52	0-98	0 70	0-29	S.	0-70
Sums	6-30	2 73	3-44	4 00	14 82	31-79	26-86	18-58	13-91	5 64	2-44	4-90
Means	0 63	0-30	0-34	0 40	1 48	3-18	2 44	1 69	1-26	0 56	0-24	0-45

## QUILL LAKE.

1911						2-33		3-20	1-50	0-70	0 06	0 20
1912	S.	0-49	0-11	0 55	4 37	2 99	3 98	3-23	3-35	1-67	0-14	1 07

## CHAGONESS (STAR CITY).

Year.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911										0.55	1.60	0.55
1912	0.50	0.55	0.80	0.45	3.59	2.91	3.61	3.52				

## CUMBERLAND HOUSE.

1911						3.69	3.95	3.95	3.60	0.60	2.55	0.90
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## FORT A LA CORNE.

1915	0.10	0.33	0.10		0.10	3.05	2.90	0.25	1.60	0.60	0.55	0.80
1916	0.78		0.80	1.61	5.26							

## MELFORT.

1901										0.43	0.90	0.55
1902	0.85	1.20	1.19	0.20	3.92	4.06	6.25	3.39	2.22	0.30	2.05	0.10
1903	0.25	S.	1.20	0.74	4.09	1.44	7.79	1.44	1.85		1.10	0.45
1904										0.51	0.43	0.15
1905	0.10	0.15	0.10	R	0.75	0.95	0.56	1.35	2.25	0.42	0.45	0.60
1906	0.30	0.13		0.30								
1907	0.40											
1908										1.17		
1909									0.74	0.40	S.	S.
1910	0.10	0.50	0.20	1.10	0.82	1.32	2.10	2.66	0.84	1.04	0.40	1.80
1911	0.80	0.20	0.20	1.57	1.60	3.07	1.94	2.65	1.62	2.00	1.77	0.40
1912	0.10	0.40	0.95	0.47	1.88	3.60	6.04	2.23	2.71	0.28	0.34	0.50
1913	0.95	0.15	0.55	0.50	1.44	1.28	3.98	2.27	0.96	0.47	0.20	0.15
1914	0.60	0.20	0.65	0.53	1.14	1.07	1.59	0.72	0.44	0.69	0.58	0.45
1915	0.15	0.25		0.32	0.72	2.12	3.55	0.46	1.42	0.31	0.80	
1916	1.35	0.05	1.05	1.80	4.20	2.89	5.40	1.38	0.61	1.75	0.20	0.40
1917	1.10	0.40	0.70	0.72	0.28	2.06	0.76	0.97	0.59	0.30	0.18	0.70
Sums	7.05	3.63	6.79	8.25	20.84	23.86	42.11	20.41	16.76	9.99	9.40	6.25
Means	0.54	0.30	0.68	0.69	1.89	2.17	3.51	1.70	1.29	0.71	0.67	0.48

## OONIKUP.

1889												0.65
1890	0.60	0.50	1.80	0.66	1.63	2.13	3.82	3.40	1.36	1.90	0.49	1.23
1891	1.37	0.80	0.63	0.99	0.88	5.08	0.29	1.44	0.66	0.32	0.93	0.57
1892	0.55	0.54	0.66	1.24	2.09	2.39	3.35	2.33	0.25	1.63	3.17	0.92
1893	0.90	0.72	0.88	0.82	1.64	1.96	1.50	1.11	2.61	2.00	1.55	1.35
1894							0.56		3.65	1.34	0.63	
1895					2.09							
Sums	3.42	2.56	3.97	3.71	8.33	11.56	9.52	11.93	6.22	6.48	6.14	4.72
Means	0.86	0.64	0.99	0.93	1.67	2.89	1.90	2.39	1.24	1.30	1.54	0.94

## PILGER.

1911										0.21	1.60	0.80
1912	0.37	0.11	0.50	0.18	3.60	4.48	8.05	2.77	3.72	0.20	0.22	0.46
1913	1.49	1.47	0.91	0.14	0.52	3.47	5.63	4.22	1.78	0.48	0.74	0.03
1914	1.03	0.40	0.30	0.47	1.00	0.87	1.20	1.04	0.83	1.15	1.59	0.16
1915	0.33	0.04	0.06	0.55	1.19	2.17	4.49	0.47	1.30	0.26	0.26	1.09
1916	2.58	0.21	0.91	0.61	3.58	2.99	8.17	1.63	2.40	0.98	0.26	0.62
1917	0.75	0.32	0.27	0.59	0.33	3.06	1.50	2.78	0.89	0.45	0.01	0.99
Sums	6.58	2.55	2.95	2.54	10.82	17.04	29.04	12.91	10.92	3.73	4.68	4.15
Means	1.10	0.42	0.49	0.42	1.80	2.84	4.84	2.15	1.82	0.55	0.67	0.59

## THE BASIN OF THE RED DEER RIVER.

**January.**—The most striking feature of the temperature of the Red Deer Basin is the comparative warmth of the divide which separates the western group of tributaries from the eastern group. This divide runs in a general north and south direction from Calgary to Red Deer. On the west rising in the mountains and flowing to the north are the Little Red Deer, Dogpound Creek, the James, the Raven, and the upper part of the main stream. They are met in latitude  $52^{\circ}$  by the south flowing Medicine River, when as one stream the waters round the northern end of the Divide and then turn sharply southeast. On this southeasterly course the stream receives the drainage from the easterly group of tributaries, the Ghostpine, Threehills and Kneehills Creeks and the Rosebud River. In both these eastern and western groups of valleys the temperatures average lower than on the divide. The southern end of the ridge is the warmer with a maximum temperature of  $24^{\circ}$  and a minimum slightly above zero near Calgary, while at the northern end the corresponding temperatures are  $19^{\circ}$  and  $-6^{\circ}$ . From any point on the divide, however, the temperature falls rapidly both east and west. On the western slope the maximum falls to  $17^{\circ}$  and the minimum to  $-8^{\circ}$  or  $-9^{\circ}$ , while on the eastern slope the corresponding temperatures are  $13^{\circ}$  and  $-8^{\circ}$ . Observations have not been continued long enough at all stations to determine the reason of this, but at present it appears that the stations on the eastern slope are more rapidly cooled by the cold-waves than the divide, while on the other hand when low-pressure areas pass over southern Alberta the western group of valleys experience much greater lowering of the minimum temperature than the divide. On the exchange of westerly and easterly pressure-gradients the divide always has the advantage of the valleys, while the western group have slightly the advantage of the eastern.

In the valleys of the Palliser Range where the headwaters of the Red Deer rise, the temperatures are probably the same as at Banff which are slightly higher than those of Calgary.

From the Wintering Hills to its junction with the South Saskatchewan River, the Red Deer flows through a country of broken hills with a normal mean maximum of  $13^{\circ}$  and a mean minimum of  $-8^{\circ}$ .

**February.**—Reference has been made in discussing the temperatures of the North Saskatchewan Basin to the comparative warmth of the higher valleys, and in the preceding paragraph mention was made of the effect of low-pressure areas in southern Alberta in depressing the minimum temperature in the western group of tributary valleys. In February instances of the latter kind are very frequent and comparison of the daily records made at Eckville with those made at Calgary, make it fairly evident that there are very large drops, indeed, of the minimum temperature in the valleys of the north-flowing streams when the barometric minimum lies just east of Calgary. In these cold dips Calgary and Didsbury partake only to a much lesser extent. Februaries of low mean pressure at Calgary are months of large ranges of temperature between Eckville and Calgary; those of high mean pressure are months when the mean temperatures of Eckville and Calgary approach parity. The magnitude of these differences in temperature, however, bears no relation to the absolute temperature but only to the pressure. In other words a cold wave advancing across the prairies produces a much slower fall of temperature in the upper reaches of the Red Deer than the presence of a low area in southern Alberta. The absolute temperature, of course, may be higher in the second case than the first.

At Didsbury the normal daily range is from  $4^{\circ}$  to  $26^{\circ}$  while in the lower Kneehill valley and at Elmore the corresponding normals are  $-5^{\circ}$  or  $-8^{\circ}$  and  $18^{\circ}$ . Further east at Sullivan Lake it is colder still. West of Didsbury the maximum decreases very little but the minimum to at least  $-4^{\circ}$ .

In the region lying just north of Strathmore and Gleichen, generally called the Wintering Hills, the month is a little milder with daily range from  $-3^{\circ}$  to  $16^{\circ}$ . From Drumheller to the confluence with the South Saskatchewan temperatures along the main stream are about  $-6^{\circ}$  to  $16^{\circ}$ , while on the slopes on the north side they are  $4^{\circ}$  to  $5^{\circ}$  lower but on the south side  $2^{\circ}$  to  $4^{\circ}$  higher.

**March.**—Lacombe, Innisfail and Didsbury have daily maxima of approximately  $36^{\circ}$  and daily minima of  $11^{\circ}$ . West of this line the temperatures decrease at first but appear to rise again slightly at about 5,000 feet. East of Didsbury and Innisfail the temperatures drop slowly in the Kneehills and Threehills valleys and from Drumheller to Jenner the daily range is from  $8^{\circ}$  to  $28^{\circ}$ . From Jenner to Empress there is a further decrease of  $6^{\circ}$ .

**April.**—At Didsbury the normal daily range is from a minimum of 27° to a maximum of 54°. Westwards the minimum temperature decreases but little while the maximum decreases by 6° to Harnattan. Eckville and Springdale, west of Lacombe have a maximum of 50° and a minimum of 24°. To the east towards Lake Sullivan the maximum is 48°. Strathmore and Rosedale are in a comparatively cool region beyond which the temperatures increase a little towards the confluence.

**May.**—In the Didsbury and Olds district spring seems to advance a little slower than at Edmonton and Wetaskiwin, the minimum remaining somewhat lower. From Jenner to Empress temperatures are higher, maximum 64° to 66° and minimum about 37°. West of the fifth meridian the advance of spring is very slow.

**June.**—East of the fifth meridian the temperature decreases towards the headwaters, but between Red Deer and Olds the maximum is 67° and the minimum 43°. Northward to Edmonton and southward to Didsbury and Calgary there is a small increase. Strathmore appears to be the centre of a rather cooler district.

Towards Lake Sullivan the maximum is 4° lower than at Edmonton but from Berry Creek to Jenner and Empress it is 70° to 72° with a minimum of 43° to 44°.

**July.**—At Didsbury the mean maximum is 73° and the mean minimum 46°. Westward to the Little Red Deer there is a decrease of 3° or 4° in the minimum but little change in the maximum. East of Drumheller the minimum increases to 48° or 49° while south of the River the maximum increases, so that at Empress the maximum is 76° and the minimum 51°.

**August.**—The minimum temperatures in the higher valleys west of the fifth meridian are between 38° and 40°, and at Didsbury and Lacombe are less than 44°. Eckville has a maximum of only 66°.

Near Lake Sullivan the maximum is 70° and the minimum 44° but along the River from Drumheller to Berry Creek the maximum averages 73°, and from Jenner to Empress 77°.

**September.**—On the upper portion of the Little Red Deer River the mean minimum is 33° but at Didsbury, Red Deer, and Lacombe it is 35°, and thence towards Empress there is little change. The maximum which is 60° on the Little Red Deer increases eastwards and southwards to 64° at Empress.

**October.**—Between Calgary and Olds the mean maximum is 54° or 55° with a mean minimum of 28° or 29°. Westwards these figures diminish to 48° and 23° and eastwards to 52° and 26° or 28°. Near Empress the temperatures are the same as at Calgary.

**November.**—At Eckville the normals are 33° and 9°, at Rocky Mt. House 33° and 7°, at Didsbury 37° and 14° and at Harnattan 37° and 9°, at Strathmore 35° and 12°. The curious warmth of the divide between the eastern and western tributaries which is characteristic of the winter months is therefore established early in November.

**December.**—The divide running from Calgary to Didsbury is relatively mild with normals of 29° and 12°. Westward to the Palliser Range there is a decrease to 24° and 8°, while eastward to Lake Sullivan the temperatures become 19° and 3° and at Empress the mean maximum is 22° and the mean minimum 2°.

#### RECORDS OF LAST AND FIRST FROSTS, BASIN OF THE RED DEER RIVER.

ALIX, ALTA.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day. Year.	Date.	Temp.
1906	May	142	22	30.0		Aug	233	21	32.0
1907	June	173	22	32.0		Aug	230	18	30.0
1908	May	139	19	29.0		Aug	231	19	30.0
1909	May	130	19	32.0		Aug	240	28	33.0
1910	June	155	4	31.0		Sept	251	8	32.0
1911	May	148	28	31.0		Sept	250	7	32.0
1912	June	157	6	32.0		Aug	242	30	33.0
1913	May	139	19	32.0		Aug	231	19	30.0
1914	May	149	29	29.0		Sept	244	1	27.0
1915	June	165	14	33.0		Sept	251	8	32.0
1916	June	164	13	33.0		Aug	223	11	30.0
1917	June	154	3	32.0		Aug	220	6	31.0

## BASSANO DAM, ALTA.

Year.	Late Frost				Early Frost			
	Month.	Day of Year.	Date.	Temp.	Month.	Day of Year.	Date.	Temp.
1915	June	163	12	31.3	Sept	254	11	24.7
1916	May	138	18	31.6	Sept	271	28	29.2
1917	June	152	1	31.0	Sept	273	30	33.0

## BLACKFALDS, ALTA.

1906	May	147	27	33.5	Aug	234	22	30.0
1907	June	155	4	30.0	Aug	218	6	33.0
1908	June	168	17	31.0	Aug	221	12	32.0

## BROOKS, ALTA.

1912	June	170	19	33.0	Aug	232	20	33.0
1913	May	142	22	29.0	Aug	228	16	33.0
1914	May	149	29	28.0	Aug	243	31	32.0
1915	May	137	17	30.0	Sept	254	11	25.0
1916	May	136	16	28.0	Sept	257	14	28.0
1917	June	180	29	30.0	Sept	248	5	30.0

## (2) BROOKS, ALTA.

1915					Sept	254	11	23.6
1916	May	137	17	32.0	Sept	257	14	26.0
1917	May	151	31	29.0	Sept	248	5	31.5

## CLEMENS, ALTA.

1913	May	140	20	31.2	Sept	248	5	32.4
1914	June	177	26	33.0	Aug	243	31	28.0
1915	June	177	26	31.0	July	184	3	30.0

## DELIA, ALTA.

1911	June	156	5	32.5	Frost every month.	July	193	12	31.5
1912	June	156	5	29.0		Aug	242	30	32.0
1914	May	151	31	22.0		Aug	243	31	32.0
1915	June	160	9	31.5		Sept	251	8	30.5
1916	May	151	31	30.0		Aug	222	10	30.0
1917	June	164	13	31.5		Sept	244	1	32.0

## DIDSBURY, ALTA.

1902	June	171	20	30.0		Aug	241	29	28.0
1903	May	149	29	29.0		Sept	246	3	32.0
1904	May	149	29	30.0		July	205	24	32.0
1905	June	174	23	28.0		Aug	239	27	32.0
1906	May	146	26	32.0		Aug	237	25	32.0
1907	May	151	31	30.0		Aug	231	19	28.0
1908	May	140	20	32.0		Aug	233	21	32.0
1909	May	140	20	32.0		Aug	240	28	30.0
1910	June	154	3	32.0		Aug	235	23	30.0
1911	May	148	28	30.0		Sept	263	20	32.0
1912	June	157	6	32.0	Frost every month.	July	195	14	32.0
1913	May	140	20	32.0		Sept	250	7	32.0
1914	May	149	29	30.0		Aug	243	31	32.0
1915	June	160	9	32.0		Sept	254	11	24.0
1916	June	152	1	32.0		Sept	253	10	32.0
1917	May	150	30	26.0		Sept	244	1	32.0

## ECKVILLE, ALTA.

1908	June	168	17	32.2	Frost every month.	July	208	27	32.7
1911	June	157	6	30.2	" "	July	193	12	30.2

GEM, ALTA.

Year	Late Frost.					Early Frost			
	Month	Day of Year	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1916	June	153	2	31.5		Aug	223	11	30.0
1917	June	163	12	33.0		Aug	217	5	33.0

HARMATTAN, ALTA.

1908	June	175	24	32.0	Frost every month.	July	208	27	32.0
1909	June	174	23	32.0	Frost every month.	July	185	4	31.0
1911	June	158	7	28.0	" "	July	184	3	32.0
1913	June	175	24	29.0	" "	July	203	22	33.0
1914	June	163	12	30.0		Sept	246	3	33.0
1915	June	174	23	33.0	Frost every month.	July	199	18	32.0
1916	June	174	23	30.0	" "	July	205	24	31.0

HILLSDOWN, ALTA.

1904	June	159	8	30.0		Sept	255	12	32.2
1905	June	174	23	31.2		Aug	239	27	32.2
1906	May	143	23	31.0		Sept	253	10	28.0
1907	June	155	4	32.0		Aug	231	19	31.0
1908	May	140	20	31.0		Aug	233	21	31.0
1909	June	158	7	33.0		Aug	240	28	32.0
1910	June	154	3	30.0		Aug	235	23	33.0
1911	May	148	28	32.5		Sept	263	20	33.0
1912	June	157	6	28.0	Frost every month.	July	195	14	32.6
1913	May	138	18	29.4		Sept	245	2	33.0
1914	May	151	31	33.0		Sept	244	1	29.0
1915	June	165	14	33.0		Sept	253	10	31.0
1916	June	174	23	33.0		Aug	223	11	32.0
1917	June	154	3	32.0		Aug	220	8	31.0

JENNER, ALTA.

1916	May	141	21	28.0		Aug	222	10	31.0
1917	May	149	29	25.0		Sept	247	4	33.0

KNEEHILL.

1897	May	141	21	23.0		Sept	245	2	30.0
1898	July	188	7	31.0		Sept	253	10	27.0
1899	June	170	19	32.0		Aug	240	28	33.0
1900	June	171	20	28.0	Frost every month.	Aug	222	10	30.5
1903	July	190	9	33.0		Sept	246	3	31.0
1904	June	181	30	33.0	Frost every month.	Aug	215	3	26.0
1905	June	174	23	24.5	Frost every month.	July	204	23	31.5
1906	July	208	27	31.5		Aug	229	17	31.0

LANGDON.

1915	June	164	13	30.0		Sept	254	11	27.0
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MUNSON.

1917	June	173	22	33.0		July	205	24	31.0
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NATHELLA, ALTA.

1914	May	149	29	22.0		Sept	244	1	31.0
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## OILDS

Year	Late Frost				Early Frost.			
	Month.	Day of Year	Date	Temp	Month	Day of Year	Date	Temp
1914	June	171	20	30.0	Aug	222	10	30.0
1915					Aug	222	10	32.0
1916	June	161	10	32.0				
1917	May	150	30	33.0				

## PERBECK

1913	May	140	20	29.0	Sept	245	2	32.0
1914	May	151	31	32.5	Aug	243	31	33.5
1915	June	165	14	33.0	Sept	251	11	19.0
1916	June	153	2	32.0	Aug	223	11	30.5

## RED DEER (Gray Hill).

1899	June	156	5	32.3	Oct	275	2	27.8
		118	28	33.2	Aug	237	25	32.1
1900	April	158	7	31.9	Sept	248	5	32.7
1901	June	168	17	32.3	Sept	259	16	26.6
1902	June	130	19	28.5	Sept	246	3	33.0
1903	May	204	23	32.3	Aug	229	17	33.0
1904		174	23	30.5	Sept	255	12	31.8
1905		147	27	32.2	Sept	253	10	30.0
1906	May	151	31	30.9	Aug	230	18	32.5
1907	May	178	27	32.0	Aug	233	21	29.1
1908	June							

## RED DEER (Town Police).

1909	June	158	7	33.0	Aug	233	21	33.0
1910	June	173	22	31.5	Aug	235	23	32.0
1911	June	165	14	30.0	Aug	239	27	32.0
1911	May	150	30	32.0	Aug	220	8	33.0
1915	June	165	14	32.0	Sept	245	2	30.0
1916	June	174	23	32.5	Aug	222	10	33.0
1917	June	161	13	33.0	July	211	20	33.0

## ROSEDALE.

1915	June	157	6	33.5	Sept	254	11	19.0
1916	June	157	6	32.0				

## SPRINGDALE.

1913	July	197	16	33.0	Frost every month.	Aug	230	18	32.0
1914	May	150	30	28.5		Aug	240	28	32.0
1915	July	183	2	32.0		Sept	250	7	31.0
1916	June	181	30	32.0	Frost every month.	July	185	4	32.0
1917	June	173	22	29.5	" "	July	201	23	29.0

## THREEHILLS CREEK.

1902	June	171	20	28.4		Aug	222	10	31.1
1903						Sept	246	3	31.0
1904	July	205	24	31.0		Sept	255	12	22.5
1905	June	174	23	27.0		Aug	239	27	29.0
1906	June	174	23	31.5		Aug	215	3	30.5
1907	June	174	23	28.0		Aug	218	6	31.0
1907	June	172	21	32.0		Aug	226	14	30.5
1908	June	177	26	33.0		Aug	218	6	33.0
1909	June	177	26	30.0	Frost every month.	July	208	27	33.0
1910	June	173	22	30.0					
1911	May	179	28	29.5					

## RECORDS OF MONTHLY PRECIPITATION - RED DEER BASIN

## ALIX

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1905	0.75	0.10	0.45	0.25	1.00	6.60	3.50	0.81	0.92	0.65	0.45	0.05
1906	0.95	0.10	0.20	0.40	3.20	3.5	2.11	1.09	0.21	0.26	2.45	0.85
1907	1.33	0.25	0.23	0.30	1.07	3.38	1.50	2.35	2.30	0.75	R.	0.47
1908	0.13	0.93	1.05	0.08	1.40	5.08	2.32	1.31	0.45	0.85	0.30	0.20
1909	0.95	0.40	0.38	1.28	3.68	2.07	2.69	0.48	0.39	0.83	0.40	1.00
1910	0.62	0.25	0.20	0.33	1.45	2.63	1.98	4.76	1.65	0.17	0.71	0.53
1911	1.20	0.48	0.92	0.28	2.25	5.16	4.11	3.24	1.82	0.71	0.75	0.25
1912	0.40	0.32	0.05	0.99	2.31	2.60	5.33	3.00	1.58	1.01	0.66	S.
1913	0.82	0.95	0.75	0.09	0.65	2.20	2.42	1.02	0.28	1.13	S.	S.
1914	1.59	0.88	0.45	0.21	0.90	4.12	1.41	0.90	1.94	1.62	1.33	2.35
1915	0.53	S.	0.23	1.11	2.34	5.45	3.24	0.85	1.56	1.01	0.90	0.80
1916	1.10	0.86	9.59	0.95	2.24	1.20	6.07	5.29	2.39	1.26	0.78	1.32
1917	2.27	0.58	0.10	2.60	2.28	1.93	0.52	2.00	1.34	1.54	S.	1.73
Sums	12.64	6.10	5.60	8.06	24.75	45.36	37.23	27.70	16.86	11.79	8.76	9.55
Means	0.97	0.47	0.43	0.69	1.90	3.49	2.86	2.13	1.30	0.91	0.67	0.73

## BERRY CREEK.

1912				3.46	2.14							
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## BLACKEALDS.

1905									1.14	0.62	0.65	0.08
1906	0.44	0.25	0.08	0.21	3.06	2.69	1.94	2.65	0.30	2.80	2.07	1.40
1907	1.23	0.30	0.32	1.06	1.39	4.61	2.34	4.21	3.18	0.71	0.09	0.33
1908	0.10	0.31	0.98	0.85	2.55	7.71	1.57	2.21	0.33	0.70	0.18	
Sums	1.77	0.86	1.38	2.12	7.00	15.01	5.85	9.09	4.05	4.56	2.99	1.81
Means	0.59	0.29	0.46	0.71	2.33	5.00	1.95	3.03	1.34	1.22	0.77	0.60

## BROOKS.

1910				0.35	0.27	0.55	0.47	1.86	1.77	0.72	0.62	0.37
1911	0.35	0.71	0.28	1.38	2.27	6.24	0.95	2.64	0.70	0.52	1.27	0.26
1912	0.31	0.20	0.13	1.35	2.70	1.91	1.65	0.54	1.54	1.04	0.21	0.08
1913	1.10	0.65	0.80	0.38	1.43	5.34	1.58	2.13	0.79	0.33		
1914	0.90	1.05	0.50	0.57	0.23	2.68	1.21	1.81	1.20	1.60	0.08	0.70
1915	1.75	1.20	0.18	0.13	2.92	5.41	1.55	2.07	0.65			0.55
1916	0.15	1.27	0.32	0.23	2.68	2.27	2.61	1.80	2.45	0.60	0.35	0.70
1917	0.43	0.31	0.15	0.83	1.01	0.89	1.06	2.50	0.82	0.48	0.10	2.40
Sums	4.99	5.42	2.36	5.32	13.52	35.32	11.08	15.35	9.92	5.29	2.63	5.06
Means	0.71	0.77	0.34	0.89	1.69	3.16	1.36	1.92	1.24	0.76	0.41	0.72

## CLEMENS.

1913			0.92	0.68	0.51	2.70	2.02	2.54	0.31		0.38	0.08
1914	0.99	S.	0.58	0.76	0.22	2.76	2.10	0.43	0.73	3.18	0.60	0.61
1915	0.31	0.33	0.85	R.	4.16	5.20	3.54					
Sums	1.30	0.33	2.35	1.44	4.89	10.66	7.66	2.97	1.04	3.18	0.98	0.69
Means	0.65	0.16	0.78	0.48	1.63	3.55	2.55	1.48	0.52	3.18	0.49	0.34

## DELIA.

1911						3.49	2.57	4.10	1.10	0.86	0.24	0.30
1912	0.58	0.08	0.20	0.45	1.85	3.18	5.15	3.41	2.25	0.72	0.55	0.20
1913	1.07	1.47	0.63	0.14	1.19	2.98	4.50	3.10		0.17	0.28	S.
1914	1.27	0.13	0.90	0.30	1.79	3.90	2.23	1.64	2.11	0.20	1.00	0.63
1915	0.39	S.	S.	0.66	2.24	7.34	4.25	1.33	1.74	0.52	0.60	0.50
1916	0.35	0.20	0.40	0.72	2.76	3.05	5.62	3.25	2.02	0.57	0.00	0.45
1917	0.54	0.63	S.		0.79	1.10	2.22	1.23	0.99			
Sums	4.20	2.51	2.13	2.27	10.62	25.04	26.54	18.66	10.21	3.01	2.73	2.08
Mer	0.70	0.42	0.35	0.45	1.77	3.58	3.79	2.58	1.70	0.51	0.45	0.35

DIDSBURY

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1902		0.80	0.05	0.10	6.01	7.91	7.97	3.94	1.25	0.12	0.70	0.20
1903	S	0.50	1.20	0.61	3.01	0.81	1.13	8.36	2.18	R	0.40	0.30
1904		0.70	0.70	1.10	1.27	3.79	1.20	1.18	1.78	0.94	0.10	0.80
1905	0.80	0.70	0.70	0.70	2.38	9.84	2.51	1.95	1.25	0.90	1.77	S
1906	0.20	0.10	1.25	0.07	7.09	3.41	0.58	2.85	0.47	0.95	1.50	0.50
1907	1.30	0.60	1.00	0.90	1.70	5.33	3.93	4.49	7.03	0.43	S	0.40
1908	S	S	1.00	0.55	3.63	10.38	1.77	2.15	0.15	1.86	S	0.40
1909	0.25	0.40	0.90	1.45	4.11	3.79	5.19	1.10	1.06	1.59	0.35	0.80
1910	0.30	1.00	0.70	S	1.20	3.17	1.95	5.25	1.84	0.15	0.70	0.40
1911	0.30	0.40	1.55	1.00	3.90	1.50	2.63	6.47	1.43	0.92	0.65	0.50
1912	0.10	0.10	0.10	1.62	2.89	2.68	5.46	3.95	2.23	1.91	0.70	0.20
1913	1.30	0.70	1.00	0.30	1.71	8.98	1.19	3.62	0.34	0.36	0.50	0.60
1914	1.30	0.10	0.80	0.40	0.79	3.74	1.55	2.11	2.46	1.50	1.40	0.60
1915	0.40	0.40	S	1.15	5.55	5.27	9.32	2.07	2.39	1.03	0.60	0.20
1916	1.30	0.50	1.00	1.60	4.75	4.42	5.60	8.32	3.51	2.48	0.45	1.20
1917	0.50	0.20	0.60	S	3.76	2.54	0.83	2.13	2.52	2.41	S	1.00
Sums	8.75	6.90	12.65	11.65	53.78	80.55	52.19	59.94	31.92	17.88	9.82	7.50
Means	0.58	0.43	0.79	0.78	3.36	5.04	3.26	3.75	1.99	1.12	0.61	0.47

RID DILL Gray Hill

1899	1.63	0.85	0.58	1.00	4.13	3.42	3.53	9.70	3.90	0.81	0.20	0.45
1900	0.52	0.61	1.00	2.22	2.30	1.31	4.31	3.19	4.08	0.85	0.55	0.20
1901	0.34	0.95	0.80	0.71	1.95	8.19	8.63	1.66	3.25	1.31	0.33	0.85
1902	0.07	0.33	0.68	0.36	7.52	4.24	3.54	2.66	1.34	0.10		
1904					1.83	1.83	0.89	6.21	1.51	0.32		
1905						1.21	3.16	1.19	0.82			
1906						1.21	0.90	0.70	1.34			
1907	1.35	0.35	0.73	0.65	1.43	3.43	1.64	3.72	2.85	0.53	0.20	0.72
1908	0.18	0.49	1.90	0.44	2.96	9.37	3.13	2.48				
Sums	4.09	3.58	5.09	5.38	22.18	38.81	30.03	31.51	19.09	3.92	1.37	2.22
Means	0.68	0.60	0.85	0.90	3.17	4.85	3.34	3.50	2.39	0.65	0.34	0.56

RID DILL Town Police

1909	0.20	1.00	0.45	1.30	2.88	2.09	3.10	0.13	0.59	0.74	0.90	0.30
1910	1.00	S	0.40	S	1.04	5.74	1.13	4.03	1.86	0.06		
1911					2.10	5.07	4.89	3.30	1.61	0.78		
1914	1.13	0.74	0.75	2.75	3.60	7.41	2.51	1.08	2.77	1.31	1.53	1.50
1915	0.95	0.01	0.01	0.48	1.30	4.81	3.36	0.69	2.40	1.94	0.50	0.03
1916	0.55	0.20	0.39	0.50	2.23	2.65	5.36	3.97	3.18	0.70	0.37	2.60
1917	4.60	2.00	0.28	1.60	1.36	0.98	0.41	1.64	1.61	1.10	0.05	0.85
Sums	8.43	3.95	2.28	6.72	19.51	28.75	20.76	15.13	11.02	6.76	3.35	5.28
Means	1.40	0.66	0.38	1.12	2.79	4.11	2.97	2.16	2.00	0.97	0.67	1.06

ROSEDALE

1911				0.20	2.15	5.42	2.65	0.94	1.17	0.92	0.45	0.60
1915				0.37	2.66	2.51					0.35	0.30
1916		0.43										

THREE HILLS CR11K Carlondale

1903	0.22	0.58	0.80	0.54	3.47	2.20	3.21	4.64	1.31	0.05	0.36	1.19
1904	0.35	0.74	1.31	0.37	0.53	2.81	0.81	1.09	1.17	0.72	0.54	0.81
1905	0.93	0.22	0.31	0.22	1.39	7.31	2.82	2.77	0.7	0.59	0.92	S
1906	0.45	0.20	0.13	0.78	4.72	3.56	0.31	2.34	0.18	0.69	1.10	1.00
1907	1.41	0.55	0.65	0.85		2.08	2.00	3.09	2.41	0.28	0.07	0.35
1908	R	S	0.60	1.25	0.41	0.39	6.33	1.09	1.28	0.16	0.83	0.20
1909	0.40	0.62	0.99	0.73	3.19	2.95	3.68	0.44	0.55	0.86	0.43	0.90
1910	0.20	0.53	0.26	0.07	0.55	1.39	1.73	1.79	1.27	0.24	0.50	0.28
1911	0.70	0.33	0.74	1.39	2.67	3.79	3.32	4.18				
Sums	4.69	4.37	6.44	5.06	16.91	32.39	18.97	21.59	7.77	4.26	3.97	4.73
Means	0.52	0.49	0.72	0.56	2.11	3.66	2.11	2.10	0.97	0.53	0.50	0.59

SPRINGDALE

Year	Jan	Feb	March	April	May	June	July	Aug.	Sept	Oct	Nov	Dec.
1913				0.23	0.84	1.16	2.65	4.66	1.19	0.60	0.02	S
1914	1.29	0.90	0.40	0.47	0.26	5.86	1.70	2.23	2.50	1.11	1.25	0.76
1915	0.71	0.05	0.36	0.81	1.59	8.00	4.24	1.80	2.43	0.64	0.43	0.23
1916	0.45	0.40	0.70	1.11	2.37	2.45	5.86	4.00	2.72	0.90	0.80	0.83
1917	1.33	0.63	0.58	1.90	3.31	1.98	1.76	1.80	1.17	1.03	0.08	1.35
Sums	3.78	1.98	2.04	1.52	8.37	22.05	16.21	11.19	10.01	4.97	2.58	3.17
Means	0.95	0.49	0.51	0.90	1.67	1.11	3.21	2.90	2.90	0.99	0.52	0.63

ECKVILLI..

1907												0.15
1908	0.44	0.88	2.65	1.60	4.35	9.81	1.55	1.51	0.70	0.69	0.15	S
1909	0.85	0.88	0.40	0.25	1.72	1.72	2.72	0.04	0.31	0.90	0.30	0.48
1910	0.20	0.45	0.90						1.20	0.33	0.30	0.20
1911	0.60	0.20	0.52	1.00	1.03	3.05	3.63					
Sums	2.09	2.41	4.47	2.85	7.10	14.58	7.90	2.15	2.21	1.92	0.75	0.83
Means	0.52	0.60	1.12	0.95	2.37	4.86	2.63	1.08	0.74	0.64	0.25	0.21

GEM.

1916						2.06	4.35	2.28	1.14	0.95	0.29	0.70
1917	0.75	0.65		2.20	1.70	1.74	0.61	3.42	0.71	0.68	0.30	2.15

HARMATTAN.

1908	S	0.65	1.10	0.22	1.12	7.15	0.81	3.03	R.	1.20	S	0.10
1909	0.25	0.40	0.55	11.	3.75	2.60						
1910	0.33	0.98	0.70	0.12	0.70	2.01	1.07	3.83	2.09	0.58	0.35	0.33
1911	0.48	0.65	1.28	1.35	1.35	3.46	2.93	5.47	1.67	0.95	0.60	0.28
1912	0.59	0.12	0.45	1.15	2.43	2.85	7.96	3.09	2.44	1.09	0.25	0.20
1913	0.75	1.25	1.33	0.20	1.66	6.05	1.79	1.08	0.90	0.35	0.30	
1914	0.80	0.63	0.30	0.56	1.21	3.22	1.56	1.79	2.67	1.66	2.05	0.25
1915	0.65	0.19	R.8	1.00	6.00	6.57	8.58	2.03	2.11	1.60	0.30	0.10
1916	0.70	0.30	0.70	2.83	3.61	3.99	5.54	6.28	2.97	1.76	0.70	0.60
1917	0.40	0.15	0.20	2.19	4.04	2.43	1.81	2.03	1.66	1.18	R	0.40
Sums	4.95	5.23	6.51	9.62	25.46	40.33	32.08	31.63	15.31	19.37	4.55	2.26
Means	0.50	0.52	0.65	0.93	2.83	4.03	3.56	3.52	1.70	1.15	0.51	0.28

HILLSDOWN

1904	0.55	1.02	1.44	0.72	0.99	3.59	1.00	1.71	1.59	0.46	0.25	1.90
1905	1.05	0.09	0.42	0.43	1.04	8.72	3.17	1.43	0.63	0.79	0.64	0.08
1906	0.92	0.10	0.46	0.58	5.88	2.47	1.44	1.76	0.18	0.41	2.17	1.43
1907	1.25	0.70	0.75	0.72	1.38	3.30	1.47	3.76	2.90	0.48	0.26	0.73
1908	0.25	0.70	2.00	0.29	2.54	7.98	2.10	2.01	0.53	0.91	0.23	0.30
1909	0.98	0.80	1.05	0.83	2.96	2.92	4.41	0.84	0.47	1.25	0.65	1.00
1910	0.80	0.45	0.77	0.22	2.38	4.28	1.90	6.53	2.35	0.16	0.83	0.59
1911	0.85	0.50	0.84	1.94	2.01	5.08	3.88	3.86	1.89	0.97	1.14	0.30
1912	0.50	0.35	0.50	1.41	2.38	3.30	6.33	2.66	0.77	1.18	0.96	0.34
1913	0.72	1.50	1.23	0.25	0.72	2.35	0.95	1.15	0.33	0.51	0.28	S
1914	1.10	0.90	1.05	0.37	1.23	2.91	1.86	0.72	1.70	2.69	2.70	1.40
1915	0.69	0.10	0.09	0.53	2.58	3.25	2.51	1.43	1.67	1.59	0.90	0.35
1916	0.70	0.55	0.08	0.75	1.83	2.26	3.29	2.30	1.04	0.86	0.75	0.60
1917	1.53	0.50	0.40	1.55	2.27	1.70	1.64	1.39	1.40	1.39	0.14	1.15
Sums	12.19	8.26	11.68	10.59	28.19	54.12	36.04	37	54	13.65	11.90	10.17
Means	0.87	0.59	0.83	0.76	2.01	3.87	2.57		0.95	0.98	0.85	0.73

INNISFAH.

1899				0.43	4.74	2.79	4.28	12.25	1.27	0.49	0.33	0.50
1900	0.26	0.58	0.79	2.45	2.39	4.18	3.88	2.99	4.31	1.05	0.50	0.28
1901	0.30	0.75	0.66	1.22	1.49	8.87	6.31	0.73	3.22	0.20	0.36	0.83
1902	0.13	0.81	0.15	0.02	5.98	4.96	4.89	3.94	0.72	0.02	0.88	0.10
1903	0.08	0.25	0.61	0.12	2.49	3.27	3.31	6.05	2.38	0.04	0.25	0.47
1904	0.23	0.68	0.80	0.84	0.88	3.54	1.16	1.59	0.57	0.37	0.25	0.64
1905	0.95	0.20	0.12	0.60	1.97	11.03	1.54	1.43	0.92	0.31	0.83	
1906	0.29	0.99	0.05	0.20	4.70	3.57	0.42	2.03	0.07	0.78	0.92	0.70
1907	1.09	0.27	0.50	0.45	3.34							
1908		0.50	0.50	0.56	3.85	10.39	1.48	3.11				
Sums	3.24	5.03	4.07	6.89	31.83	52.60	27.57	34.12	13.46	3.26	4.32	3.52
Means	0.40	0.56	0.45	0.69	3.18	5.81	3.06	3.79	1.68	0.41	0.54	0.50

## JENNER.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1915								0.78	1.60	0.29	R.	R.
1916	1.22	0.85	0.05	0.11	2.13	4.27	5.99	1.07	1.08	1.71	0.20	1.40
1917	0.40	0.58	0.28	0.23	2.87	2.63	0.56	3.70	0.61	0.89	S.	1.95
Sums	1.62	1.43	0.33	0.34	5.00	6.90	6.55	6.45	3.29	2.89	0.20	3.35
Means	0.81	0.71	0.16	0.17	2.50	3.45	3	2.15	1.40	0.96	0.07	1.17

## KNEETHILL.

1896											2.18	0.08
1897	0.50	0.59	0.93	0.91	0.52	4.78	3.80	1.04	1.65	0.89	1.28	0.85
1898	0.05	1.40	0.56	0.76	0.40	1.54	3.47	1.77	0.39	0.87	0.28	0.35
1899	1.03	0.58	1.08	1.49	3.51	2.21	1.13	9.68	3.64	0.05		0.23
1900	0.31	0.42	0.80	2.34	3.94	2.40	1.82	3.57	3.01	0.15		
1901				0.15	1.29	6.64				0.99	0.29	0.54
1902	0.22			0.47	6.11	5.49	2.21	2.21	0.81	0.05		
1903				0.19	0.59	1.37	2.15	4.74	1.40	0.46		
1904				0.36	0.45	2.75	1.02	1.08	0.87	R.		
1905				0.06	1.14	6.42	2.28	1.18	0.01	0.24	0.05	
1906				0.20	5.25	2.99	0.30	1.59	0.20	0.65		
1907				0.03	0.90	2.85	1.32	2.38	1.11	0.20		
1908				0.22	2.23	5.19	1.11	0.75		0.16		
Sums	2.11	2.99	3.37	7.18	26.33	44.63	21.51	29.99	13.09	4.71	4.08	2.05
Means	0.42	0.75	0.84	0.60	2.19	3.72	1.96	2.73	1.31	0.39	0.82	0.41

## LACOMBE (Experimental Station).

1908			1.04	0.26	2.91	8.22	2.10	2.39	0.30	0.41	S.	0.03
1909	0.72	1.43	0.35	0.28	2.41	2.24	4.28	0.91	0.13	1.05	0.37	0.82
1910	0.73	0.74	0.33	0.04	1.53	3.87	1.35	2.61	1.00	0.27	0.51	0.30
1911	0.55	0.48	0.10	0.12	1.51	5.63	4.39	2.67	2.50	0.62	0.78	0.19
1912	0.76	0.16	0.13	1.29	2.92	3.00	5.29	4.44	1.27	1.56	0.93	0.08
1913	0.93	1.53	0.08	0.02	0.48	2.98	3.43	2.43	0.59	0.68	0.05	0.05
1914	1.45	1.00	0.80	0.34	1.28	6.07	1.11	1.10	2.36	0.30	1.50	0.98
1915	0.30	0.03	0.75	0.32	1.25	8.28	2.79	0.81	1.83	0.53	0.30	S.
1916	0.40	1.38	0.52	0.60	2.04	3.57	4.31	5.22	3.06	1.01	0.40	0.45
1917	0.75	0.52	0.33	1.24	3.26	1.49	1.13	1.99	2.04	1.36	S.	1.25
Means	6.59	7.27	4.13	4.51	19.59	45.35	30.18	24.50	15.38	7.79	4.84	4.15
Sums	0.73	0.81	0.44	0.45	1.96	4.54	3.02	2.45	1.54	0.78	0.48	0.42

## LACOMBE No. 2.

1903				1.25	5.79	3.33			0.97	1.98	0.47	
1904	0.50	1.15	0.85	0.20	0.21	2.78	1.86	1.36	1.47	0.20	0.20	0.96
1905	0.74	0.15	0.05	0.10	1.54	5.47	3.62	1.51	0.90	1.15	0.30	0.05
1906	0.42	0.03	S.	1.50	2.93	2.75	1.01	0.79	0.14	0.20	2.32	0.60
1907	1.20	0.53	0.15	R.	0.34	5.50	3.23	4.10	3.00	1.10	0.01	0.20
1908	S.	0.35	0.30	0.32	2.29	7.84	1.47	1.09	0.34	1.32		
1909	0.30	0.32	0.20	0.15	1.01	1.01	2.56	0.36	0.34	0.70	0.50	0.67
1910	0.70	0.15	0.50	0.30	2.58	3.39	1.11	2.75	1.20	0.80	0.45	0.10
1911				1.29	0.85	1.43	4.07	2.23				
Sums	3.86	2.68	3.34	4.87	18.12	36.14	17.09	11.96	8.36	7.45	4.25	2.59
Means	0.55	0.38	0.42	0.52	2.01	4.02	2.14	1.71	1.05	0.93	0.61	0.43

## LANGDON.

1915						5.49	5.07	1.08	2.64	0.45		
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## MAYTON.

1906											1.35	0.80
1907	1.80	0.30	0.70	0.70	0.97	4.61	2.63	3.75	1.76	0.32		
1908			1.13	0.75	3.20	0.60	1.05	1.55	R.	0.40	0.15	0.10
1909	0.20	0.30		0.30								
Sums	1.50	0.60	1.83	1.75	4.17	5.21	3.68	5.30	1.76	0.72	1.50	0.90
Means	0.75	0.30	0.91	0.58	2.08	2.60	1.84	2.65	0.88	0.36	0.75	0.45

## NATEBY.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911					2 47	5 58	2 00		0 68	0 21	0 03	
1912				1 39	0 42	2 65	0 52		0 26	0 41	S.	
1913				0 47	0 18	2 15	0 87		0 63	1 74	0 45	
1914	0 51	0 31	0 30					0 61				0 0
Sums				1 84	3 07	10 38	3 39		1 51	2 36	0 48	
Means	0 51	0 31	0 30	0 92	1 02	3 46	1 13	0 30	0 50	0 79	0 16	0 40

## NATHELLA (Alaska).

1913						3 09	1 34	1 40	0 27	0 32	0 45	S.
1914	0 55	0 26	0 27	0 80	0 20	1 46	2 10		2 26	3 53	1 22	0 70
1915	0 20	0 40	S.		8 28							
1917						0 55	0 93	3 94	0 42	0 35	0 25	0 10
Sums	0 75	0 66	0 27		8 48	5 10	4 37	5 34	2 95	4 20	1 92	0 80
Means	0 38	0 33	0 14	0 80	4 24	1 70	1 46	2 67	0 98	1 40	0 64	0 27

## OLDS.

1914				0 29	0 81	3 49	1 22	0 85	2 43	1 50	1 10	0 95
1915						4 92	4 53	4 61	8 56	2 40	0 93	0 80
1916		0 45	0 80	0 60	4 86	1 88	0 87					0 90
1917	0 60											
Sums				0 89	10 59	9 90	6 70	9 41	4 83	3 16	2 44	2 10
Means	0 60	0 45	0 80	0 41	3 53	3 30	2 23	4 70	2 42	1 05	0 81	0 70

## PERBECK.

1913					1 17	3 98	1 38	3 56	0 47	0 15	S.	S.
1914	0 65	0 50	0 35	0 16	1 00	4 05	2 12	1 63	2 56	1 15	1 15	0 95
1915	0 35	0 20	0 05	0 32	4 33	7 03	5 84	2 30	2 07	2 60	0 50	0 20
1916	0 80	0 20	0 25	0 41	2 74	3 25	4 90	5 12				
Sums	1 80	0 90	0 65	0 89	9 24	18 31	14 24	12 61	5 10	3 90	1 65	1 15
Means	0 60	0 30	0 22	0 30	2 31	4 58	3 56	3 15	1 70	1 30	0 55	0 38

## THE BASINS OF THE BOW AND OLDMAN RIVERS.

**January.**—The western portion of these basins and a considerable proportion of the whole is mountainous country, yet agriculture is practised to some extent in valleys, where the elevation does not greatly exceed 4,000 feet. From such points and lower levels only have meteorological records of any length been obtained. For elevations above 5,000 feet only the records made for a short time on Sulphur Mountain and later at the Spray Lakes are available. The isotherms which appear on the maps must not be supposed, therefore, to depict accurately the local variations in the upper parts of these basins. The isotherms simply connect the mean temperatures as observed in a few of the numerous valleys. And it is thus shown that temperature in January increases with elevation and also with decreasing latitude. At Calgary the normal mean maximum is 24° and the corresponding minimum 1°. Further up the Bow Valley at Banff the temperatures are a degree or two higher. Frequent see-saws of temperature, however, take place between Banff and Calgary, and the isotherms merely express the fact that the advantage of the exchanges lies with Banff. Further south near the South Kootenay Pass and the headwaters of the Oldman, the Belly and St. Mary Rivers, the normal daily maximum is about 30° and the minimum about 5°. Along the Bow east of Calgary the temperatures fall rapidly to approximate those of the Red Deer Valley which is not far distant on the north. But near Bassano where the Bow begins to run to the southeast, the fall in temperature is checked. At Bassano the mean maximum is about 11° and the mean minimum about -4°. At the Grand Forks where the Bow and Belly meet, the temperatures are nearly as high as at Calgary.

**February.**—From Calgary and Banff down to the 49th parallel the normal daily maximum is 26° to 30° and the daily minimum zero to 6° at elevations approximating 4,000 feet.

In the lower portion of the Bow, Oldman and Belly valleys the temperatures are 8° lower. The region drained by the Little Bow River is colder than the region near Medicine Hat.

**March.**—The warmest portion of the region is the valley of the St. Mary River, with a maximum of 40° and a minimum of 18° at Cardston, and a minimum of 15° at Lethbridge. Macleod and Pincher Creek have a maximum of 38° and a minimum of 15°. The upper part of the Plateau drained by the Little Bow River has a lower minimum, 10°, than the remainder of the region. Medicine Hat is warmer than Lethbridge in the latter half of the month.

**April.** The warm region has moved further away from the mountains and includes the region from Cardston to Medicine Hat with a maximum of 56° at Macleod and 58° at Medicine Hat. The minimum varies little over the whole region from 28° but is near the freezing point at Medicine Hat.

**May.** In the places very near the headwaters of the streams, such as Pincher Creek, Cowley and Lyndon the mean minimum for the month is not far above the freezing point, although the day temperatures average a maximum of 60°. Downstream the temperatures steadily increase and at Medicine Hat spring is well established with an average of 68° and a minimum above 40°. Temperatures between 90° and 100° have often occurred during the latter part of May.

**June.** At Pincher Creek and Pekisko and other places of high elevation the mean minimum is 42° or less. Observations made near Lawrence and Sundial indicate an area with a mean minimum of less than 42° between the Little Bow and the Arrowwood, with however, a maximum of 74°.

Between Calgary and Medicine Hat there is an increase from 69° to 75° in the maximum and from 43° to 49° in the minimum.

**July.** Along the fifth meridian from Pincher Creek to Calgary the mean maximum is generally 74° and the mean minimum 45° to 47°. With increasing altitude the fall of the minimum temperature is quite marked.

Along the Oldman from Macleod to Medicine Hat, very high maximum temperatures are of frequent occurrence. The normal daily maximum is 80° or 82° but the mean minimum is 46° at Lethbridge, 54° at Medicine Hat. These may be compared with the corresponding July temperatures at Toronto, viz., 78° and 58°.

Observations at Lawrence indicate another area of high maxima just east of High River and Nanton with a minimum of 46°.

**August.** The warmest region is near Medicine Hat with maximum temperature in excess of 80° and minimum of 50°. At Lethbridge another smaller warm area with maximum in excess of 78° is centered.

West of Lethbridge is created the steep temperature gradient which is the forerunner of autumn.

Calgary has a maximum of 72° and minimum of 45°. Near Bassano and near the head of the Little Bow there is a curious lowering of the minimum temperature.

**September.** The mean minimum is 35° in the upper portion of the valleys southwest of Calgary, while the mean maximum is 60°. At Calgary the mean minimum is 37° while southward to Macleod and thence eastward to Medicine Hat there is an increase. At Macleod the mean minimum is 39° and near Medicine Hat 41°.

The Oldman from Macleod to Medicine Hat runs through a belt of comparatively high maximum temperature, which is 66° at Lethbridge and 70° at Medicine Hat.

**October.** The warmest region is that of the St. Mary River near Lethbridge with a mean maximum of 60° and a mean minimum of 32°. Medicine Hat has a slightly lower maximum. Calgary has a mean maximum of 55° and a mean minimum of 29° while at Banff the mean maximum is 48°. At altitudes of 4,500 feet the mean minimum is 26°.

**November.** The St. Mary River region has the highest mean maximum of 42° while the highest minimum is at Pincher Creek approximately 21°.

At Calgary the mean maximum is 37° and the mean minimum 16°. The corresponding temperatures at Banff are 33° and 17°, and at Medicine Hat 40° and 19°.

**December.** The warmest region is that in which Lethbridge is centred with a mean maximum of 34° and a mean minimum of 13°. Westward to the Livingstone Range the maximum falls 10° and the minimum about 8°.

At Calgary the mean maximum is 29° and the mean minimum 11°.

RECORDS OF MONTHLY PRECIPITATION, BASINS OF THE BOW AND OLDMAN RIVERS.

BANFF.

Year.	Jan.	Feb.	March	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1891												0.36
1895	1.07	1.18	0.98	1.09	1.86	4.43	3.26	1.29	2.49	0.47	1.73	2.54
1896	1.40	0.65	0.94	9.79	1.04	0.80	1.13	1.33	1.35	0.41	4.88	1.14
1897	1.44	0.27	1.05	1.07	1.37	5.06	5.31	1.34	0.59	1.31	3.58	0.98
1898	0.22	2.47	0.99	0.81	3.08	2.15	4.54	2.37	1.72	1.09	0.94	0.20
1899	1.88	0.30	1.83	1.22	4.02	2.96	2.70	5.47	1.89	0.84	1.26	1.97
1900	1.12	0.65	2.68	1.49	1.49	4.65	2.51	3.33	2.00	2.30	1.25	0.45
1901	0.88	0.80	1.33	1.57	2.39	1.00	2.84	0.82	2.05	0.33	1.32	0.92
1902	1.75	0.55	1.37	0.54	7.63	5.12	3.14	2.91	2.71	1.72	1.68	1.47
1903	0.94	0.48	1.00	1.07	0.94	1.90	5.70	3.75	2.68	0.72	2.00	0.54
1904	1.31	1.73	1.35	0.96	0.97	3.91	1.43	0.89	1.72	1.66	0.54	0.45
1905	0.55	0.30	0.93	0.56	3.06	3.91	0.89	2.26	0.54	1.95	0.87	1.50
1906	0.77	0.40	0.19	0.32	2.08	1.91	1.90	4.26	2.62	0.96	1.22	1.11
1907	1.64	0.56	1.55	1.63	3.33	2.61	1.09	1.74	1.41	1.87	1.15	1.71
1908	1.10	1.03	1.58	1.60	4.14	2.61	2.98	0.99	1.18	0.70	4.67	1.02
1909	3.94	1.38	0.78	0.92	1.49	0.51	2.98	0.99	1.18	0.70	4.67	1.02
1910	0.46	1.94	1.59	1.19	0.63	2.77	1.46	2.97	1.06	1.36	0.99	0.90
1911	3.12	0.65	0.54	1.15	1.35	2.84	1.28	3.76	1.14	0.56	1.64	1.04
1912	0.94	0.20	0.32	1.35	1.06	3.02	5.03	3.94	1.03	1.81	1.41	0.37
1913	1.21	0.45	1.42	1.58	1.34	2.29	0.91	2.85	2.24	1.23	2.38	0.05
1914	2.54	0.25	0.96	1.90	1.45	1.81	1.11	0.59	2.56	1.69	2.59	0.28
1915	1.05	0.75	0.30	1.00	2.34	6.05	3.96	1.47	2.69	1.73	0.48	1.53
1916	2.85	0.87	1.57	2.48	1.24	2.65	2.74	3.30	1.82	1.24	1.24	0.24
1917	0.72	0.34	1.13	0.78	3.28	2.95	0.46	1.87	1.10	1.09	0.30	3.42
Sums	32.90	18.29	29.34	27.13	54.87	69.52	57.04	54.99	39.33	27.31	39.05	25.47
Means	1.43	0.79	1.27	1.16	2.38	3.02	2.48	2.39	1.71	1.19	1.80	1.06

BASSANO.

1914												1.10
1915	0.70	0.30						1.25	1.39	0.98	0.15	0.13
1916	0.65	0.40	0.43	0.41	3.06	1.29	2.70	2.77	1.79	0.65	0.19	0.50
1917	0.25	0.20	0.63	0.24	1.49	1.90	1.17	2.76	0.69	0.45	0.20	3.00
Sums	1.60	0.90	0.46	0.65	4.55	3.10	3.87	6.73	3.87	2.08	0.54	4.73
Means	0.53	0.30	0.23	0.32	2.27	1.55	1.94	2.26	1.29	0.69	0.18	1.18

CALGARY.

1884							5.49	2.12	2.31	0.03	0.65	0.34
1885	0.65	0.96	0.84	0.40	0.41	2.15	3.70	R.	R.	R.	0.30	0.35
1886	0.18	0.28	1.03	1.16	1.72	3.30	0.20	R.	0.76	0.79	0.35	1.55
1887	0.92	0.19	0.35	0.22	0.70	2.15	3.34	2.19	1.54	0.13	0.99	0.77
1888	0.24	1.76	0.90	1.67	2.05	3.70	3.23	2.08	0.23	1.01	0.41	0.23
1889	0.92	0.75	1.50	S.	2.04	0.61	3.37	R.	1.84	0.07	0.12	1.37
1890	0.88	0.85	0.82	0.71	2.13	2.25	2.21	3.47	1.13	0.24	0.06	0.70
1891	0.20	0.50	R.S.	0.07	1.38	2.20	2.81	1.58	0.77	0.27	0.20	0.46
1892	0.03	0.03	0.67	0.60	2.47	1.11	1.07	2.40	1.10	0.50	0.66	1.30
1893	0.55	0.20	0.15	0.47	2.47	1.11	1.95	0.88	0.76	0.74	1.20	0.57
1894	0.41	0.03	0.67	0.96	4.05	1.10	0.10	1.47	1.30	0.11	1.10	0.40
1895	0.96	0.57	0.70	0.58	0.34	1.97	4.97	1.18	2.53	0.21	0.49	0.62
1896	0.90	1.94	1.13	0.64	1.94	1.22	1.84	1.66	1.46	0.70	2.26	0.36
1897	0.52	0.46	0.26	0.31	0.18	6.13	5.54	2.13	1.04	0.76	2.54	0.70
1898	S.	0.90	1.57	0.29	2.05	3.21	3.87	2.80	0.54	0.28	0.20	0.40
1899	0.85	0.30	1.13	0.40	5.44	3.52	2.11	9.40	0.99	1.31	0.36	0.44
1900	0.25	0.40	0.40	2.04	1.32	3.56	2.02	1.29	3.99	0.40	1.80	0.10
1901	0.40	1.02	1.15	0.90	1.61	7.00	2.90	0.71	2.95	0.12	0.40	1.85
1902	0.40	0.60	0.62	0.60	8.90	8.82	5.06	6.40	1.57	0.61	0.39	0.60
1903	0.05	0.50	1.00	0.46	4.25	2.05	4.10	7.70	1.81	S.	0.60	0.25
1904	0.15	0.15	0.86	0.14	1.56	1.99	1.74	2.75	0.69	1.35	0.20	0.31
1905	1.04	0.30	0.65	0.80	2.06	6.01	0.91	0.69	0.35	0.31	1.20	0.20
1906	0.04	0.14	0.70	0.37	6.96	2.35	1.15	3.00	0.04	6.90	0.34	0.25
1907	0.40	0.20	0.76	1.79	1.04	3.76	0.85	3.34	2.49	0.15	0.08	0.10
1908	0.08	0.29	0.55	0.87	4.59	7.26	1.73	1.52	0.58	0.55	0.03	0.20
1909	0.58	0.36	0.88	1.14	2.50	2.07	4.09	0.50	0.36	0.64	0.21	0.44
1910	0.20	0.88	1.12	0.30	1.08	1.54	0.44	3.97	1.59	0.48	0.34	0.17
1911	0.60	0.68	1.04	1.06	5.03	2.63	2.17	4.36	J.89	0.51	0.61	2.17
1912	1.28	0.56	0.34	2.05	1.42	4.31	5.20	2.75	2.80	1.09	0.68	S.
1913	0.93	0.15	0.76	0.60	0.52	2.64	2.52	2.18	1.11	1.82	2.72	0.75
1914	0.40	0.22	0.06	0.46	3.13	4.02	3.98	0.78	2.33	2.17	0.47	0.30
1915	0.79	0.61	0.76	0.85	3.10	1.46	1.49	2.03	0.84	1.20	0.28	0.50
1916	0.34	0.50	0.16	0.90	1.76	1.98	0.47	1.52	0.95	1.38	S.	1.48
1917												
Sums	16.58	17.24	23.23	24.11	77.80	103.07	87.76	85.80	43.82	21.65	23.85	16.82
Means	0.50	0.52	0.69	0.73	2.43	3.13	2.58	2.52	1.29	0.63	0.70	0.49

## CALGARY (Glenbow Ranch Irrigation Station)

Year.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1892	0 23	0 20	0 70	2 13	1 31	1 59	2 71	2 19	0 53	0 90	1 10	0 75
1893	0 70	0 40	0 20	1 30	3 62	0 89	1 65	0 78	1 13	0 72	1 00	0 80
1894	0 20	0 20	0 40	1 00	S	1 39	0 31	2 01	1 13	0 50	0 95	0 20
1895	1 40	0 80	0 60	0 53	0 52	2 20	5 05	1 43	2 18	0 05	0 50	0 30
1896	0 98	1 40	0 95	0 40	1 68	2 05	0 64	1 45	1 31	0 60	1 70	0 30
1897	0 53	0 43	1 25	0 41	0 46	7 12	5 28	1 69	0 98	1 35	1 75	0 50
1898	0 20	0 90	1 53	0 61	1 80	3 12	3 44	1 83	0 41	0 62	0 80	0 47
1899	1 20	0 08	1 20	0 24	6 59	3 32	2 32	0 88	0 90	1 21	0 52	0 45
1900	0 22	0 60	0 55	1 50	1 35	3 10	2 11	1 65	5 50	1 31	1 10	0 08
1901	0 33	0 79	1 20	0 78	1 86	6 92	5 71	0 33	2 72	0 42	0 53	1 15
1902	0 28	0 45	0 40	0 67	8 06	9 88	5 20	5 09	1 47	0 82	0 91	0 85
1903	0 13	0 55	0 95	0 37	2 37	2 12	4 59	6 67	3 12	9 01	0 42	S.
1904	0 05	0 13	0 75	0 88	1 50	7 08	3 38	3 06	0 89	1 30	0 30	0 60
1905	0 80	0 10	0 62	1 20	1 91	8 78	1 04	0 38	0 30	0 35	0 09	S.
1906	S.	0 05	0 85	0 30	7 49	2 67	1 74	3 83	0 17	0 50	0 40	0 50
Sums	7 25	7 08	11 65	12 32	40 61	56 33	45 56	40 62	22 74	10 36	12 07	6 65
Means	0 48	0 47	0 78	0 82	2 71	3 76	3 04	2 90	1 52	0 69	0 80	0 46

## GLITCHEN.

1885			0 93	1 24	0 48	1 90	3 10	1 75	0 52	R.	S	1 20
1886	1 04	0 05	0 70	0 60	1 52	1 49	1 27	R.	0 15	R.		
1903	0 08	0 30	0 65	0 60	3 02	0 87	2 91	5 53	1 08	0 12	0 30	0 37
1904	0 20	0 25	0 40	0 60	1 43	3 10	0 30	1 49	0 77	1 40	0 10	0 18
1905		0 10	0 10	0 13	1 13	3 80	3 37	1 07	0 11	0 27	0 20	S.
1906	0 25	0 48	0 30	1 28	6 40	2 49	0 63	3 62	0 22	1 38	0 45	0 23
1907	S.	0 10	0 35	0 59	0 90	3 63	1 02	1 23		R.	R. S.	0 05
1908	0 03		0 17	0 72	3 20	7 95	1 13	2 57	0 03	1 03	0 05	0 05
1909	0 40	0 23	0 30	0 70	5 17	1 87	7 95	1 02	0 08	0 55	0 40	0 80
1910	0 75	0 90	R. S.	R.	0 55	1 15	S.	2 48	2 73	1 15	0 15	0 30
1911		0 40	0 90	0 80	1 24	1 48	1 92	3 31	0 77	0 65		
1912				1 63	1 21	1 23	2 83	0 58	0 35	0 25		
1913	1 80			0 25	1 15	5 18	1 15	1 48	1 20	0 20		
1914	0 80	0 85	0 45	0 75	0 40	2 98	1 10	1 75		1 80	1 00	0 50
1916				0 38	2 50	2 50	3 05	3 25	1 55	1 10	0 30	0 30
1917		0 20	0 20	0 25	2 10	1 50	0 47	1 55	0 90	0 80		1 20
Sums	5 30	3 86	5 45	10 52	32 40	43 12	32 30	32 68	10 46	10 70	2 95	5 18
Means	0 53	0 35	0 42	0 66	2 02	2 70	2 02	2 04	0 75	0 67	0 27	0 43

## HIGH RIVER.

1902								4 21	1 59	0 06	0 75	0 45
1903	0 10	0 55	0 65	0 06	1 30	1 71	2 23	4 18	1 46	0 10	0 30	0 20
1904	0 50	0 05	0 47	0 56	1 63	1 05	1 64					
1906												0 3
1907	0 65	0 05	0 90	1 16	0 57	4 05	1 10	3 39	2 53	0 30	0 20	1 15
1908	0 20	0 94	0 51	0 73	3 57	5 57	0 76	1 05	0 80	0 76	0 15	0 20
1909	0 53	0 25	0 35	1 30	2 12	0 72	1 96	0 46	0 19	0 27	0 39	0 77
1910	0 78	0 65	0 37	0 20	0 71	0 83	0 26	1 84	2 75	0 35	0 30	0 50
1911	0 90	1 00	1 50	1 18	3 52	4 63	1 81	4 85	2 14	0 78	0 95	0 30
1912	0 80			2 30		3 06			2 35			
1913	0 85		1 25	S.	1 51	5 38	1 22	2 16		0 15	0 35	S.
1914	0 60	0 80	0 60									
1915								1 07	2 19	0 62		
1917	0 72	0 92	0 58	1 30	4 10	3 58	R.	2 14	1 18	1 75	S.	1 58
Sums	6 63	5 21	7 18	8 79	19 03	30 61	10 98	25 35	17 18	5 14	3 39	5 78
Means	0 60	0 58	0 72	0 88	2 11	3 06	1 22	2 54	1 72	0 51	0 38	0 58

## MEDICINE HAT.

Year	Jan.	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1883									R.	0.87	0.35	0.24
1884	0.10	0.50	0.86	0.19	1.39	2.21	2.64	1.19	3.84	0.25	0.96	0.40
1885	0.98	0.39	0.36	0.13	0.13	2.51	1.60	1.49	0.04	0.10	0.02	S.
1886	S.	S.	0.32	0.80	1.41	1.53	0.78	0.11	0.19	0.79	0.51	0.28
1887	0.30	S.	S.	0.63	0.12	5.75	0.29	0.98	0.41	0.46	0.25	0.70
1888	0.45	0.62	0.99	0.20	2.08	3.34	4.78	1.00	0.06	0.66	0.18	0.40
1889	0.10	0.20	0.43	1.00	2.66	0.23	1.92	R.	0.22	S.	0.43	0.77
1890	0.42	0.31	0.50	1.00	0.33	3.30	0.50	2.10	0.93	0.58	R.	0.13
1891	0.19	1.51	1.31	0.37	1.13	4.31	1.28	1.02	1.14	0.20	0.30	0.36
1892	0.16	0.40	0.31	1.48	1.03	0.89	1.89	1.00	0.22	0.04	1.40	1.42
1893	1.72	0.70	0.23	0.77	1.09	2.25	2.53	2.17	0.34	0.41	1.23	1.16
1894	0.58	0.92	0.99	0.54	1.33	3.45	0.81	0.39	2.18	0.81	1.08	0.06
1895	0.88	0.91	1.19	0.26	0.55	2.31	4.86	0.24	1.88	0.29	0.52	0.24
1896	1.38	1.24	1.01	2.26	3.10	1.59	1.11	1.79	1.74	0.55	2.12	0.29
1897	0.74	0.41	0.52	0.39	0.59	5.62	1.65	0.40	2.15	1.26	3.11	0.43
1898	0.45	1.07	1.62	1.42	0.48	1.51	2.45	2.22	1.07	1.71	1.23	0.67
1899	1.12	1.13	1.17	0.87	3.32	2.60	3.79	4.60	1.66	0.80	0.31	0.91
1900	0.47	1.04	1.05	1.25	1.62	2.26	2.67	5.65	1.92	1.02	1.95	1.15
1901	1.68	1.40	0.52	0.11	6.29	4.01	2.82	0.26	2.41	0.45	0.55	0.30
1902	0.98	0.65	0.20	0.10	3.18	3.17	2.64	0.80	0.22	0.39	0.80	1.15
1903	0.25	0.30	0.25	0.45	4.19	R.	1.39	1.80	0.65	0.05	0.45	0.12
1904	0.35	0.67	1.20	0.53	1.10	2.04	1.19	0.92	0.68	0.52	R.	0.50
1905	0.70	0.15	0.55	0.30	1.13	3.93	0.85	0.74	0.16	0.13	0.30	0.05
1906	0.50	0.19	0.05	0.23	4.37	2.64	0.09	2.16	0.05	0.44	1.04	0.95
1907	0.75	0.25	0.51	0.30	65	1.69	0.92	0.62	1.01	S.	0.01	0.15
1908	0.19	0.45	0.45	0.05	1.8	1.66	1.85	1.34	R.	1.22	S.	0.12
1909	0.35	0.33	0.20	0.30	2.67	1.69	0.20	0.42	0.13	0.52	0.79	
1910	0.29	0.45	0.02	0.20	1	9.29	1.63	2.24	0.54	0.30	0.50	0.60
1911	0.20	0.10	0.32	1.29	1	3.60	1.65	2.20	1.75	0.45	2.20	0.64
1912	0.70	0.18	0.31	0.94	1.6	1.19	0.98	1.58	1.34	0.88	0.29	0.36
1913	0.41	1.11	1.06	0.97	1.06	3.72	1.35	2.43	0.80	0.41	0.10	0.20
1914	1.22	0.80	0.59	S.	0.55	2.00	0.34	0.66	1.40	3.48	0.23	0.90
1915	0.38	1.15	0.02	R.	2.72	4.67	3.58	0.20	2.17	1.01	0.09	0.14
1916...	0.53	1.21	0.29	0.18	3.73	4.09	2.70	1.69	1.11	0.57	0.55	1.25
1917	0.72	0.55	0.14	0.83	0.17	1.79	0.52	0.77	1.43	1.25	0.02	2.94
Sums	19.85	21.20	19.65	22.34	60.62	80.85	61.14	48.96	36.13	22.48	23.60	20.77
Means	0.58	0.62	0.58	0.68	1.78	2.64	1.80	1.44	1.03	0.64	0.67	0.59

## MACLEOD, ALBERTA.

1895								0.94	0.08	S.	0.20	0.08
1896	0.15	0.53	0.70	0.40	2.74	0.48	1.27	1.99	2.23	0.44	1.70	0.10
1897	0.10	0.10	0.58	1.29	0.60	4.20	2.16	0.15	0.92	0.33	0.42	0.55
1898	0.30	0.41	1.00	0.27	1.59	1.60	1.57	4.01	0.85	0.58	0.15	0.81
1899	1.08	0.25	1.10	0.70	3.43	1.92	4.13	2.40	1.75	1.67	0.05	1.26
1900	0.13	0.70	0.34	0.60	0.81	0.28	2.67	0.64	2.39	0.78	0.60	0.05
1901	0.26	0.58	0.35	0.08	2.06	4.31	1.24	0.43	1.91	0.04	0.45	0.50
1902	0.48	0.55	0.63	0.20	2.65	2.90	1.20	0.22	0.51	0.04	0.70	0.40
1903	0.60	0.50	0.70	1.22	0.42	1.10	2.30	2.34	0.35	0.00	0.00	S.
1904	0.00	S.	0.90	0.10	0.15	0.65	0.65	1.36	0.90	0.35	0.00	0.28
1905	1.60	0.15	0.53	0.30	1.56	2.90	0.95	0.66	0.68	1.00	1.30	0.00
1906	1.10	0.70	1.23	0.51	6.56	3.54	1.68	3.26	0.14	1.10	0.80	1.20
1907	0.30	0.30	1.19	0.91	1.30	3.57	0.74	1.59	1.90	S.	0.05	0.45
1908	0.51	0.78	1.77	0.34	4.71	6.83	0.77	0.59	0.89	0.79	0.10	0.05
1909	0.74	0.50	0.65	1.33	3.51	3.02	3.19	0.11	0.19	0.33	0.52	0.92
1910	0.38	1.75	0.16	0.16	0.99	0.78	1.91	1.04	1.34	0.03	0.68	0.60
1911	1.20	1.15	0.70	0.45	2.76	4.61	2.77	2.79	3.14	0.34	0.63	0.70
1912	0.70	1.13	0.10	0.67	0.60	1.65	3.32	2.01	2.01	0.52	0.70	0.32
1913	1.10	0.80	0.50	0.25	0.50	3.22	1.99	1.48	0.52	0.20	0.20	0.00
1914	1.45	0.38	0.39	0.31	3.00	5.83	0.15	2.49	0.38	2.46	1.66	2.00
1915	1.05	0.80	1.15	1.12	2.32	3.24	4.40	2.22	0.61	5.10	0.65	0.26
1916	1.10	0.30	0.63	0.51	2.60	2.59	4.65	5.03	4.42	1.29	0.88	0.45
1917	1.30	1.00	0.63	1.71	2.07	1.98	0.63	0.75	1.16	1.80	0.00	1.40
	22	22	22	22	22	22	22	23	23	23	23	23
Totals	14.63	12.36	15.93	12.34	46.33	61.50	44.34	38.53	29.33	14.60	12.44	12.38
Average	0.67	0.56	0.72	0.56	2.11	2.80	2.02	1.68	1.28	0.63	0.54	0.54

## PEKISKO, ALBERTA.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1905							0.85	0.02	0.41	0.50	4.87	8
1906	8	0.70	0.90	0.50	5.50	2.15	1.47	3.63	0.14	1.56	0.00	1.55
1907	1.23	0.85	0.60	1.80	1.12	4.58	1.78	4.51	2.68	0.02	0	0.45
1908	0.15	0.40	1.20	0.89	5.24	8.02	0.87	1.48	0.42	0.52		
1911				1.00	5.02	2.68	2.61	5.51	5.05	0.58	1.41	0.55
1912	1.08	0.78	1.13	2.18	1.50	4.88	5.13	1.07	2.59	2.62	2.40	0.30
1913	1.17	1.72	1.50	1.51	1.90	5.21	2.58	5.21	1.25	2.30	1.65	8
1914	1.85	0.35	1.70	3.10	1.91	2.88	0.95	1.96	2.19	2.42	1.95	0.13
1915	1.33	1.35	1.28	1.47	8.92	10.02	4.07	1.88	3.40	1.73	0.10	1.55
1916	1.70	1.05	0.25	2.80	0.09	2.93	2.37	5.77	4.58	1.88	1.72	0.35
1917	0.70	0.75	0.3	4.08	5.02	3.83	0.25	2.37	1.80	1.05	0.00	1.42
Sums	9.51	7.95	11.40	20.42	43.38	47.48	23.23	33.11	21.51	15.58	11.83	6.50
	9	9	9	10	10	10	11	11	11	11	10	10
Means	1.06	0.88	1.28	2.04	4.34	4.75	2.11	3.04	2.23	1.42	1.48	0.65

## PRIDDIS, ALBERTA.

1911					2.01	3.49						
1912				0.95	1.13	3.25	5.59					
Means				0.95	3.14	6.74	5.59					

## STRATHMORE, ALBERTA.

1912							4.85	1.83	1.46	1.10	0.90	
1913	0.45	0.45	0.49	0.19	0.53	7.28	0.73	2.37	0.26	0.25	0.92	
1914	0.80	0.85	0.15	0.07	0.40	2.78	2.87	1.48	1.16	2.00	0.80	0.55
1915	0.00	0.45	0.05	0.12	3.12	4.77	0.80	1.46	2.58	0.71	0.30	0.20
1916	0.30	0.20	0.50	0.44	1.51	2.03	3.21	3.13				
1917		0.15	0.20	0.50	3.27	2.30	0.51	2.48	1.05	1.30	0.00	1.30
	1.55	2.10	1.69	1.38	12.13	19.16	13.09	12.75	6.51	5.39	2.92	2.05
Means	0.39	0.42	0.31	0.28	2.43	3.83	2.18	2.12	1.30	1.08	0.58	0.68

## JUMPING POUND.

1905									0.25	0.90	1.12	0.08
1906	0.14	0.26	0.56	0.19	6.68	3.00	2.73	3.07	0.02	1.13	0.28	0.93
1907	0.58	0.26	0.57	0.75	0.97	3.67	1.41	4.97	2.06	0.21	0.30	0.34
1908	0.15	0.13	0.17	0.97	1.06	0.44	1.18	2.97	1.29	0.85	0.06	0.34
1909	0.38	0.29	0.79	0.76	4.36	2.53	3.54	1.28	0.29	0.63	0.81	0.43
1910	0.48	0.80	0.87	0.64	1.54	2.88	0.28	3.78	1.12	0.49	0.23	0.16
1911	0.75	0.21	0.87	0.10	3.72	3.05	2.64	5.25	1.83	0.54	0.90	0.40
1912	0.35	0.40	0.40	2.43	1.95	4.52	9.49	2.97	2.47	6.12	1.47	0.20
1913	0.92	0.50	0.72	0.15	3.11	5.49	1.57	4	0.47	1.28	0.71	0.30
1914	0.98	0.59	0.69		1.00	3.35	1.83	2.4	1.13		2.65	
1915				1.12	3.50	9.04	7.43	2.69	4.05	1.53	0.50	0.45
1916	0.70	0.65	1.76	1.33	5.20	2.87	2.34	7.11				
Sums	5.43	4.09	7.18	8.45	36.09	46.84	31.44	41.12	15.28	13.68	9.03	3.63
Means	0.54	0.41	0.72	0.84	3.28	4.26	3.13	3.74	1.39	1.37	0.82	0.36

## LAKE LOUISE.

1915	2.60	0.88	0.43	1.66	1.48	5.70	4.56	1.29	2.28	3.65	1.97	2.41
1916	2.00	0.88	2.26									
1917						2.39	2.17	1.63	1.14	0.49	0.30	5.10

## LOCH SLOY.

1910				0.50	0.71	1.32	0.31	2.86	2.27	0.27	1.81	0.28
1911	0.58	1.51	0.80	1.10	3.31	6.31	1.29	5.13	2.25	0.02	0.68	0.50

OKOTOKS.

Year	Jan	Feb.	March	April	May	June	July	Aug	Sept	Oct.	Nov.	Dec.
1906					5 06	4 14	1 91	1 11	R	0 43		
1908	0 20	0 55	0 18	0 62	5 21	6 79	1 20	1 55	0 39	1 02	0 08	0 25
1909	0 45	0 45	0 38	1 03	3 73	1 16	4 11	0 53	0 38	0 15	0 50	0 65
1910	0 60	0 75	0 05	0 16	0 63	0 68	0 31	3 39	3 37	0 55	0 18	0 43
1911	0 18	0 63	0 32	0 40	2 86	3 55	2 31	3 50	1 93	0 10	1 05	0 25
1912	S	0 13	0 05	1 64	1 61	3 68	6 63	1 15	2 16	R	0 20	S
1913			0 30	0 04	1 62	3 28	2 29	1 00			S	0 37
1914	0 40	S		0 35	0 66	2 82	1 50	2 17	0 87			
1915	0 60	0 45	0 05	0 25	3 11	5 59	5 37	2 22	1 89	0 20	0 35	0 35
1916	0 30	0 30	0 45	0 64	4 15	1 53	2 50	2 39	0 99	1 05	0 28	0 40
1917	0 25	0 45	0 40	1 01	1 88	2 70	0 33	1 60	0 76	1 55	S	0 55
Sums	2 98	3 71	2 48	6 17	30 82	35 92	28 19	22 07	12 71	5 05	2 64	3 25
Means	0 33	0 41	0 28	0 62	2 80	3 45	2 56	2 01	1 27	0 51	0 27	0 36

SULLIVAN CRINK (LINEHAM).

1911	0 12	0 20	0 18	0 05	2 18	2 50	3 00	4 50	0 48		0 12	0 05
1912	0 13	0 87	1 00	0 96	1 60	4 15	8 61	2 30	3 22	2 03	1 23	0 40
1913	1 22	1 42	2 17	0 70	2 50	5 10	2 51	4 11	1 90	0 45	1 78	S
1914	1 38	0 58	1 62		1 71	3 10	0 63	1 65	1 55	4 10	2 60	1 13
1915	1 43	0 63	1 23	1 90	9 62	9 21	4 90	3 22	3 53	1 30	1 15	0 88
1916	1 40	1 12	2 22	1 85	6 62	5 63	2 51	6 66	2 97	1 70	0 90	0 55
Sums	8 68	4 82	8 42	5 46	21 26	29 12	22 16	22 41	13 65	9 58	7 18	3 01
Means	1 45	0 80	1 40	1 09	4 01	4 85	3 09	3 71	2 28	1 92	1 19	0 50

BEAVER MINES.

1912											0 51	0 61
1913	1 87	1 38	3 47	0 84	1 83	3 16	1 91	2 13	0 60	3 04	1 28	0 30
1914	3 41	0 70	1 90	1 52	1 50	2 76	4 20	5 66	1 40	3 54	1 92	0 20
1915	1 05	1 05	1 45	2 01	4 12	7 09	4 77	1 80	2 81	1 50	0 40	1 50
1916	2 50	3 30	1 25	2 47	2 81	4 50	1 84	2 35	1 49	2 30	1 50	0 50
1917	1 60	1 35	0 80	3 09	4 10	2 18	0 20	1 04	1 01	1 93	0 20	4 05
Sums	10 43	7 78	8 87	9 84	14 36	19 69	12 92	12 98	7 31	12 31	5 81	7 16
Means	2 09	1 56	1 77	1 97	2 87	3 94	2 58	2 60	1 46	2 46	0 97	1 02

BLAIRMORE.

1910.							R	1 25	2 64	2 21	2 67	0 01
1911.	0 65	0 18	0 20	0 25	5 88	1 95	1 38	3 18	5 05	0 03		
1912.	0 04	0 01	0 33									

CARDSTON.

1902.								1 24	1 35			
1903.	0 40	S	1 65	1 30	3 70	1 18	4 54	4 40	0 96			
1906.		0 70	1 00	0 50	6 71	1 81	1 40	5 07	R	1 31	1 24	1 80
1907.	3 60	0 20	1 20	1 80	3 39	3 76	2 55	2 48	4 40	0 01	S	
1908.	0 80	0 20	1 50	0 20	6 56	9 59						
1909.	2 00	0 50	0 70	3 99	7 29	1 17	2 75	R	R	R	1 40	1 80
1910.		1 30	0 40	0 80	2 05	1 25	0 19	1 02	4 65	0 24	0 80	0 50
1911.	2 80	1 40	0 30	0 90	4 42	6 32	2 82	4 03	4 81	1 37	1 50	1 20
Sums	9 60	4 30	6 75	9 40	34 12	25 08	14 25	18 24	16 17	2 93	3 70	5 30
Means	1 92	0 61	0 96	1 34	4 87	3 48	2 38	2 61	2 31	0 59	0 74	1 32

CLARESHOLM (1).

1912.										0 77	1 09	0 29
1913.	1 01	0 98	0 79	0 80	1 34	3 60	0 95	1 56	0 77	0 57	0 71	0 50
1914.		0 27	1 09	0 42	0 37	3 92	0 37	4 82	3 64	1 20	0 93	
1915.	0 70	0 66	0 25	0 35	3 53	7 82			2 88	0 80	0 20	0 15
1916.	0 73	0 55	0 95	0 73	3 26	1 78	1 75	1 70	4 51	1 26	0 30	0 50
1917.	0 23	0 58	0 49	1 25	3 64	3 23	1 54	1 40	1 44	1 23	S	0 43
Sums	2 67	3 04	4 17	3 55	12 14	20 35	4 62	12 48	13 24	5 83	3 23	1 87
Means	0 67	0 61	0 83	0 71	2 43	4 07	1 16	3 12	2 65	0 97	0 54	0 37

## CLARESHOLM (HART'S RANCH).

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1914.	0 75	0 68	1 45	0 68	2 80	3 11	0 40	3 66	0 12	3 37	1 48	0 80
1915.	0 60	0 95	0 58	0 50	3 30	4 48	2 23	1 95	1 57	0 97	0 50	0 29
1916.	0 78	0 80	0 65	0 54	2 99	1 34	2 46	2 53	2 90	1 67	0 56	0 64
1917.	0 90	0 78	0 72	1 43	3 97	2 50	0 80	1 26	1 91	2 99	N.	1 42
Sums.	3 03	3 21	3 40	3 15	13 06	11 50	5 89	9 40	6 50	9 00	2 54	3 15
Means.	0 76	0 80	0 85	0 79	3 26	2 88	1 47	2 35	1 62	2 25	0 64	0 79

## COLEMAN.

1912.										0 90	1 45	1 50
1913.	2 70	1 18	2 45	0 62	1 58	1 98	1 91	2 58	1 24	2 50	1 99	N.
1914.	3 03	0 55	4 55	1 43	0 96	1 79	0 97	2 89	2 20	4 49	3 19	0 70
1915.	0 55	1 88	0 74	0 40	3 18	3 16	1 92	0 79	1 41	1 19	1 10	2 07
1916.	1 22	1 75	2 30	1 83	2 10	2 62	1 19	1 11	4 70	2 29	0 36	1 35
1917.	1 55	1 40	1 10	2 83	2 80	1 63	0 65	1 88	0 76	0 94	0 40	1 67
Sums.	9 05	6 76	11 14	7 11	10 62	11 15	6 64	9 25	10 31	12 31	8 49	7 29
Means.	1 81	1 35	2 23	1 42	2 12	2 23	1 33	1 85	2 06	2 05	1 41	1 21

## COWLEY (CREEBANK RANCH).

1912.										1 00	1 86	0 64
1913.	2 34	0 91	1 77	1 67	1 79	2 01	1 88	1 92	0 62	1 36	1 05	0 08
1914.	2 18	0 91	2 59	1 53	0 48	3 06	0 95	4 74	1 17	3 58	2 92	0 85
1915.	1 05	1 63	0 76	1 04	2 60	6 80	2 42	1 81	1 73	0 91	0 73	0 83
1916.	3 10	2 38	1 40	1 00	1 90	3 43	1 70	2 55	1 76	1 88	1 51	0 83
1917.	2 05	1 10	0 43	1 95	3 26	1 63	0 83	1 52	1 51	2 27	0 22	4 15
Sums.	10 72	6 93	6 95	7 19	10 03	16 93	7 78	12 54	6 79	11 00	8 34	7 38
Means.	2 14	1 39	1 39	1 44	2 01	3 39	1 56	2 51	1 36	1 83	1 39	1 23

## GRASSY LAKE.

1906.							R.	1 99	R.	0 67	0 80	1 40
1907.	1 30	0 20	0 35	0 40	1 00	4 90	0 04	0 20	3 50	N.	0 05	0 10
1908.	0 03	0 30	0 63	R.	2 00	0 40	0 56	1 08	2 02	1 30	0 05	0 20
1909.	0 80	0 75	0 25	0 80	2 45	1 55	2 55	R.	0 25	1 00	0 70	0 20
1910.	0 20	0 63	N.	0 25	0 08	0 40	0 50	0 50	1 05	1 00	0 25	0 50
1911.	0 20	0 10	0 20	0 60	2 50	0 10	0 50	2 50	1 50	0 20	1 25	0 50
1912.		0 10	0 30	0 30	0 10	1 75	0 35	0 33	0 60			
1913.	0 20	N.		0 50	0 42	0 60	1 50	0 43	R.	0 10	0 40	0 40
1914.	0 60	N.	0 10	R.	R.	4 50	R.	0 40	0 55	1 45	N.	0 55
1915.	0 25	0 30		R.	1 45	3 00	5 00	R.		0 25	0 05	0 10
1916.	0 55	0 10				1 02		R.				
Sums.	4 13	2 48	1 83	2 85	10 00	18 52	11 00	7 43	9 47	5 97	3 55	3 95
Means.	0 46	0 25	0 26	0 32	1 11	1 85	1 10	0 68	1 05	0 65	0 39	0 44

## HILLSPRING (CALDWELL).

1910.											1 14	0 25
1911.	3 57	2 69	0 65	1 38	4 99	6 21	2 00	4 37	6 42	1 07	2 93	0 88
1912.	2 20	0 15	1 13	1 07	1 32	2 02	3 80	1 52	1 06	2 86	0 90	0 43
1913.	2 20	2 25	2 78	0 87	1 05	3 38	2 07	1 73	0 74	1 55	0 62	0 40
1914.	1 40	0 65	1 50	1 35	1 81	1 98	1 32	3 86	1 30	5 03	1 96	0 60
1915.	1 45	0 85	1 00	1 70	3 70	7 36	3 70	4 19	2 10	0 99	0 50	1 45
1916.	1 00	1 65	1 26	1 04	4 52	4 83	0 76	3 05	1 92	2 70	1 65	1 10
1917.		1 75	1 30	2 80	2 50	2 17	0 12	1 30	0 85	2 12	0 30	2 37
Sums.	1 182	9 99	9 62	1 021	1 989	2 795	1 377	2 002	1 529	1 632	1 000	7 48
Means.	1 97	1 43	1 37	1 46	2 84	3 99	1 97	2 86	2 18	2 33	1 25	0 94

KIMBALL.

Year.	Jan.	Feb.	March.	April	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1906				0.04	6.36	1.80	1.50	3.26	0.65			
1907								1.74	2.59	R.	S.	0.02
1908	0.70	0.70	2.00	0.40	2.67	4.02	1.07	0.72				
1914									1.01	3.18	1.33	0.90
1915	0.15	1.55	1.27	1.83	2.30	9.61	5.39	0.86	3.95	2.15	0.90	1.30
1916	3.00	2.80	1.10	1.23	4.31	4.85	1.20	2.07	2.06	2.70	2.30	2.10
1917	2.10	1.20	2.50	3.70	2.42	2.29	0.07	1.20	1.22	2.50	S.	3.70
Sums	5.05	6.25	6.87	8.10	18.09	22	9.23	10.75	10.88	10.53	4.53	8.02
Means	1.49	1.56	1.72	1.62	3.62	4.51	1.85	1.79	1.82	2.11	0.91	1.60

LAWRENCE (Parkland).

1906							1.86	2.96	0.31	1.57	0.91	1.20
1907	0.67	0.15	1.17	1.24	0.83	3.06	1.06	1.02	2.75	0.02	0.30	0.20
1908	0.25	0.33	1.00	0.68	3.94	6.86	0.37			1.01	0.11	S.
1909	0.95	0.65	0.60	0.55	2.58	0.81	2.21	0.44	0.50	0.85	0.90	0.65
1910	0.70	0.00	0.06	0.24	0.58	0.38	0.14	1.86	3.01	0.26	0.70	0.80
1911	0.80	0.70	0.52	0.65	2.28	3.57	1.68	2.23	1.64	0.39	1.25	0.40
1912	0.90	0.20	0.40	0.85	0.28	2.43	3.36	1.18	3.91	1.05	0.80	0.35
1913	1.00	0.65	0.60	0.10	0.35	6.41	0.72	1.47	1.32	0.40	0.45	0.40
1914	0.85	0.30	1.24	0.08	1.18							
1915	1.00	0.20	0.10	0.96	5.51	9.26	3.47	3.00	1.68	1.19	0.60	0.50
Sums	7.12	4.08	5.69	5.35	17.73	32.78	14.87	14.16	15.15	6.74	6.02	4.50
Means	0.79	0.45	0.63	0.59	1.97	4.10	1.65	1.77	1.90	0.75	0.67	0.50

LEAVINGS.

1906						0.39	23.4	3.15	R.	0.11	1.82	
1907							1.27	2.37				

EXPERIMENTAL FARM AT LETHBRIDGE, ALBERTA.

1908	0.50	0.73	0.79	0.59	2.60	7.01	0.37	0.90	0.58	0.77	0.00	0.36
1909	0.30	0.20	0.50	1.15	3.43	0.22	1.54	0.08	0.47	0.37	1.06	0.50
1910	0.24	0.83	0.17	0.28	0.79	0.54	0.09	1.07	1.99	0.60	0.43	0.94
1911	0.70	0.52	0.32	0.80	1.90	4.71	2.27	3.63	4.16	0.55	0.95	0.77
1912	0.69	0.40	0.44	0.20	0.66	1.73	2.78	1.41	2.61	1.07	0.99	0.23
1913	0.80	0.30	0.42	0.52	1.70	4.70	1.29	1.93	1.65	0.50	0.36	0.00
1914	1.55	0.96	2.02	0.54	0.29	2.48	0.93	3.59	1.07	2.17	0.63	1.35
1915	0.50	0.94	0.22	0.04	3.03	4.84	3.44	0.96	1.32	0.96	0.83	0.32
1916	1.09	1.14	0.91	0.46	3.77	3.54	3.33	2.97	4.76	2.89	0.48	0.58
1917	0.43	0.28	0.10	1.57	0.95	1.42	1.37	2.00	1.67	0.77	0.00	1.31
Sums	6.80	6.30	5.80	6.15	19.12	31.19	7.44	18.54	20.28	10.65	5.73	6.36
Means	0.68	0.63	0.59	0.62	1.91	3.12	1.74	1.85	2.03	1.07	0.57	0.64

LETHBRIDGE.

1886						0.52	0.87	0.85	0.75	0.77	0.35	0.45
1891			0.60	1.00					0.50	0.53	0.85	0.77
1892	0.32	0.45	0.65	4.30								
1902	0.87	1.04	0.48	0.02	11.27	5.68	5.95	0.69	0.84	0.02	0.43	0.84
1903	0.62	0.79	0.89	0.33	2.95	1.12	1.86	3.21	1.60	0.17	0.58	0.70
1904	0.50	0.90	1.03	0.41	2.86	1.80	0.96	1.19	0.52	0.85	0.03	0.25
1905	1.45	0.05	0.74	0.56	1.33	2.68	1.44	1.99	0.80	1.13	1.36	0.25
1906	0.22	0.20	0.54	1.30	8.60	2.31	0.83	4.70	0.16	1.93	0.81	0.88
1907	1.52	0.30	0.34	1.08	1.14	3.64	1.43	2.30	3.24	0.05	0.14	0.32
1908	0.27	0.75	1.10	0.67	2.78	7.64	0.41	0.89	0.43	1.16	0.02	0.25
1909	0.49	0.28	0.37	1.51	4.27	0.62	1.98	0.21	0.49	0.40	0.53	0.54
1910	0.08	0.80	0.10	0.32	0.78	0.64	0.08	0.68	1.88	0.63	0.43	0.84
1911	0.82	0.51	0.37	0.89	2.32	4.62	2.33	4.04	3.98	0.44	1.25	0.41
1912	0.98	0.33	0.42	0.45	0.69	1.91						
	12	12	13	13	11	12	11	11	12	12	12	12
Sums	8.14	8.22	7.63	12.84	38.99	33.18	18.14	20.75	15.19	8.08	6.78	6.50
Means	0.68	0.58	0.59	0.91	3.54	2.76	1.65	1.89	1.27	0.67	0.56	0.54

## LITCHFIELD

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1912									2 35	1 03	0 73	0 29
1913	1 10	0 57	0 51	0 51	1 52	3 84	1 41	1 86	0 05	0 49	0 24	0 29
1914	1 22	0 50	0 98	0 56	0 66	1 95	0 47	3 00	0 75	2 59	0 45	1 20
1915	0 75	1 00	0 29	0 06	2 56	5 59	2 49	0 05	2 35	1 16	0 60	0 20
1916	0 10	0 90	1 03	0 18	5 02	1 47	2 81	3 40	1 07	1 86	0 73	0 15
1917	0 40	0 15	0 10	0 42	1 14	1 97	0 71	1 19	1 60	0 45	0 10	1 20
Sums	3 77	3 32	2 94	1 93	10 90	16 81	7 59	10 70	12 99	7 78	2 76	3 24
Means	0 75	0 60	0 59	0 40	2 18	2 36	1 50	2 11	2 17	1 29	0 46	0 54

## LYNDON

1910											0 42	0 36
1911	1 07	1 11	0 55	1 01	0 59	1 18	0 24	6 29	5 77	0 61	1 41	0 56
1912	1 25	0 47	0 91	1 09	1 30	2 81	7 73	2 00	2 12	2 66	1 02	0 51
1913	1 39	1 55	1 43	0 94	1 36	0 08	3 53	1 06	0 96	1 51	0 76	0 52
1914	1 20	0 99	1 01	2 50	0 80	3 75	0 40	2 81	1 32	3 57	3 17	0 90
1915	0 52	0 51	0 13	0 15	6 21	11 79	4 33	0 71	2 46	0 60	0 60	0 75
1916	0 81	0 73	0 83	0 44	4 17	1 95	1 92	3 16	1 01	1 10	1 20	0 79
1917	0 60	0 41	0 70	1 29	11 30	7 25	0 52	1 98	0 81	0 87	0 08	1 55
Sums	6 86	6 02	5 96	7 95	27 73	34 71	18 07	20 31	17 47	10 92	8 66	5 64
Means	0 98	0 80	0 85	1 17	3 96	1 96	2 67	2 90	2 50	1 56	1 08	0 71

## MAGRATH

1905	1 02	0 08	0 31	1 40			3 27					
1906				0 59	6 02	2 05	0 51	3 21	R.	1 67	1 50	2 30
1907	2 30	0 50	1 30	1 70	1 64	3 25	0 49	1 03	3 70	0 17	0 05	0 30
1908	0 40	0 80	1 30	0 35	5 73	7 07	0 37		1 00	2 17		
Sums	3 72	1 88	2 91	4 01	13 39	12 37	4 64	4 24	4 76	3 81	1 55	2 60
Means	1 24	0 48	0 97	1 01	4 45	4 12	1 16	2 12	1 59	1 27	0 58	1 30

## MAYCROFT

1911	2 55	1 35	0 45	1 25	3 45	1 42	1 61	4 08	3 11	0 45	1 92	0 72
1912	0 71	0 60	0 48	1 21	4 10	2 95	4 44	0 99	1 35	1 88	2 08	0 46
1913	1 93	0 63	1 32	0 59	2 23	2 65	2 13	2 82	0 56	0 76	1 32	0 17
1914	1 86	0 45	2 45	1 62	1 21	2 85	0 81	2 94	1 65	2 26	2 31	0 68
1915	0 91	1 09	0 74	1 00	1 14	6 32	3 75	2 60	1 90	1 69	0 60	0 99
1916	1 28	1 45	1 12	1 02	2 70	2 80	2 53	2 23	1 75	1 60	1 15	0 58
1917	0 68	0 65	0 62	2 02	3 87	2 10	0 91	2 34	1 67	1 81	S.	4 00
Sums	9 92	6 22	7 18	8 71	18 70	21 09	16 18	18 00	11 99	10 45	9 38	7 60
Means	1 42	0 89	1 03	1 21	2 67	3 01	2 31	2 57	1 71	1 48	1 31	1 09

## MOUNT. IN VIEW

1912				0 97	2 20	4 06	3 77	3 95	0 99	0 05	1 20	6 30
1913	2 30	1 80	1 60	2 29	1 47	2 61	1 04	4 11	0 90	5 03	1 74	0 45
1914	0 90	0 75	1 35	1 94	3 01	10 87	5 15	0 45	3 46	1 80	0 40	1 40
1915	0 90	1 20	0 50	1 13	4 04	5 53	1 61	3 05	1 80	1 90	1 50	1 40
1916	1 60	1 60	1 95	1 13	3 46	2 89	1 26	2 38	1 19	1 97	0 00	3 10
1917	1 30	1 20	0 90									
Sums	7 00	6 85	6 30	6 33	15 08	25 96	12 83	13 94	8 34	12 56	5 45	6 90
Means	1 40	1 37	1 26	1 58	3 02	5 19	2 57	2 79	1 67	2 09	0 91	1 15

## NANTON

1912					0 82	3 88	6 72	1 06	3 32	1 90	0 30	0 00
1913	0 50	0 60	0 60	0 16	1 80	7 49	2 18	3 93	1 09	1 30	S.	0 50
1914	0 65	0 65	1 15	0 98	1 17	2 97	1 36	3 33	1 12	2 82	1 20	0 80
1915	1 00	0 20	0 10	0 96	5 51	9 26	3 47	3 00	1 68	1 19	0 60	0 50
1916			0 60	0 78	6 10	3 47	2 14	5 47	4 29	2 30		
1917	0 50	0 40	0 10	1 51	3 93	3 06	0 45	1 73	0 94	1 60		0 60
Sums	2 65	18 5	3 55	4 39	19 33	30 13	16 32	18 52	12 44	11 11	2 10	2 40
Means	0 66	0 46	0 71	0 88	3 44	5 02	2 72	3 09	2 07	1 85	0 52	0 48

PLAYLE CREEK (Furman).

Year	Jan.	Feb.	Mar.	April	May	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911				0 15	1 27	1 77	3 15	3 79	4 37		1 10	0 75
1912	0 98	0 40	0 65	1 35								
1913				0 75	2 31	2 88	1 58	3 20	0 96	2 20		0 30
1914	0 70	0 10	1 20	0 60			0 59	2 88	1 12	5 70	2 00	0 55
1915	1 00	0 73	1 43	0 87	5 12	6 83	4 54	1 32	1 50	1 58	0 73	0 87
1916	1 38	1 36	1 04	0 72	3 41	2 96	2 92	2 02	2 40	2 25	1 23	0 70
1917	0 91	0 99	0 95	2 09	4 22	2 44	0 77	1 91	1 07	1 38	0 05	1 69
Sums	4 99	3 58	5 27	6 53	18 35	16 88	13 55	15 12	11 51	13 11	5 11	4 86
Means	1 00	0 72	1 05	0 97	3 67	3 38	2 26	2 52	1 02	2 62	1 02	0 81

FISCHER CREEK.

1893								0 32	3 57	5 87	2 22	0 14	
1894	1 57	2 71	0 86	2 34	3 58	3 78	0 49	2 90	0 80	2 52	0 72	1 41	
1895	3 12	1 75	0 19	0 42	0 94	4 36	4 68	0 01	1 81	0 53	0 55	0 94	
1896	0 72		1 63	1 94	4 69	0 28	1 31			0 32	0 96	0 37	
1897	8	0 50	0 28	0 47	1 20	5 37	2 25	0 09	1 25	0 55	1 21	0 09	
1901		1 04	0 99	0 00	2 01	5 88	1 81	0 58	2 45	0 00	0 45	0 18	
1902	0 35	0 65	1 58	0 85	8 22	5 69	5 40	1 48	1 87	0 15	0 17	1 16	
1903	0 47	0 15	1 37	1 12	1 88	0 68	4 05	1 47	1 67	0 00	1 15	0 23	
1904	0 26	0 19	0 41	0 26	2 25	1 16	1 74	0 78	1 39	0 61	0 25	0 13	
1905	0 38	0 16	0 72	1 76	1 97	4 49	2 87	0 11	0 34	1 32	0 40	0 00	
1906	0 11	0 12	0 52	1 87	9 28	1 23	2 05	5 75	0 09	0 68	0 00	0 00	
1908							1 33	0 68	1 70	2 77	0 26	0 08	
1909	0 28	1 69	0 62	5 46	3 92	2 00	6 86	0 25	0 86	0 51	0 63	0 36	
1910	0 28	0 74	0 97	0 40	2 55	0 65	0 20	1 86	3 87	0 43		0 00	
1911					4 23	4 05	2 70	6 66	3 86	8	2 11	0 01	
1912	0 70						4 39	1 17	1 84	1 50	0 19	0 11	
1913					No	observations in 1913							
1914							2 65	0 61	4 51	1 37	3 79	1 30	0 70
1915	1 03	1 73	0 13	1 80	3 37	7 68	4 01	1 21	2 31	1 60	0 33	1 20	
1916	1 38	1 70	1 73	0 90	2 98	3 75	2 97	4 03	1 39	2 00	1 52	0 60	
1917	0 78	1 03	0 55	2 03	3 37	2 25	0 24	1 77	2 14	1 14	0 13	2 15	
	15	14	15	15	17	17	19	19	19	20	19	20	
Totals	11 76	14 16	12 35	21 62	56 44	55 95	50 56	39 26	34 61	26 29	14 61	9 89	
Average	0 78	1 01	0 84	1 44	3 32	3 29	2 66	2 06	1 82	1 31	0 77	0 50	

RAYMOND.

1910					1 60	1 30	0 14	2 00	2 71	0 89	0 25	1 10
1911	0 70											

STAVELY.

1906						0 4	0 96	3 44	0 00	1 00	0 60	
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SUNDIAL.

1911					1 81	2 91	2 03	2 71	2 11	2 75	0 50	
1912				0 41	1 14	1 54	3 03		1 69	0 75	0 20	
1913				0 32	1 34	5 47	1 03	1 65	0 22	0 43	0 03	0 60
1914					2 19	0 87	2 55	0 86	0 86	0 16		
1915				0 25	2 58	5 46	4 20	0 00	1 21	1 16		
1916				0 26	3 37	1 97	1 68	2 43	3 43	1 10		
Sums				1 24	10 24	19 54	12 84	9 34	9 52	6 35	1 03	0 60
Means				0 31	2 05	3 51	2 14	1 87	1 59	1 06	0 34	

TABER.

1907			0 59	0 76	0 95	2 30	0 96	1 07	1 93	0 01	0 16	0 35
1908	0 34	0 60	0 57	0 63	4 30		0 78					
Sums	0 34	0 60	1 46	1 39	5 25	2 30	1 74	1 07	1 93	0 01	0 16	0 35

## VAUXHALL.

Year.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913										0.22	0.87	8
1914	1.05	0.95	0.45	R.	0.09	2.02	0.59	1.57	1.04	2.08	0.65	1.23
1915	0.57	1.12	0.06	0.15	2.44	4.50	2.49	0.76	0.98	0.98	0.33	0.31
1916	0.58	0.71	0.25	0.19	2.35	3.17	4.69	1.70	3.99	1.11	0.30	0.40
1917	0.58	0.78	0.21	0.68	1.02	0.95	0.61	2.27	1.18	0.25	8	2.05
Sums	2.78	3.56	0.97	1.02	5.90	10.64	8.38	6.28	7.19	4.64	2.15	3.99
Means	0.69	0.89	0.24	2.50	1.47	2.66	2.09	1.57	1.80	0.93	0.43	0.80

WATERTON MILLS, ALBERTA. (Observations resumed at Waterton Park in September, 1916.)

Year.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1912.											2.23	2.30
1913.	3.50	2.42	4.32	1.54	2.31	3.03	2.72	2.18	2.04	4.02	3.27	0.50
1914	3.94	1.94	3.62	2.00	1.95	3.24	0.64	4.29	1.24	4.74	3.65	0.65
1915.	2.00	2.24	1.87	2.33	3.92	8.89	7.40	1.78	4.14	3.76	2.23	3.36
1916.	3.50	4.15	4.33	2.02								
Sums..	12.94	10.75	14.14	7.89	8.18	15.16	10.76	8.25	7.42	12.52	11.38	6.81
	4	4	4	4	3	3	3	3	3	2	4	4
Average.	3.24	2.69	3.54	1.97	2.73	5.05	3.59	2.75	2.47	4.17	2.85	1.70

RECORDS OF FIRST AND LAST FROSTS.  
Basins of Bow and Oldman Rivers.

## BLAIRMORE, ALTA.

Year.	Late Frost.				—	Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1911. ....	June	167	16	32.9	Frost every month..	July	186	5	27.7

## CARDSTON, ALTA

1903....	July	189	8	32.0		Sept.	246	3	32.0
1906....	June	174	23	33.9		Aug.	214	2	33.0
1907....	June	153	2	30.0		Aug.	229	17	32.0
1908....	June	170	19	33.0					
1909....	May..	140	20	30.0		Aug..	239	27	29.0
1910....	June	164	13	32.0		Aug..	234	22	30.0
1911....	May.	147	27	30.0		Aug..	233	21	30.0

## CLARESHOLM, ALTA

1914	July	202	21	33.0		Sept.	244	1	33.0
1915..	May.	140	20	33.0		Aug.	216	4	29.0
1916.	May	136	16	29.0		Sept	244	1	29.0
1917..	June	164	30	32.0					

## EXPANSE COULÉE, ALTA.

1914.	June	157	6	33.5		Aug.	243	31	32.5
1915.	May.	150	30	32.0		Sept.	254	11	28.0
1916.	June	156	5	33.5		Sept.	256	13	25.0
1917.	June	172	21	32.0		Aug.	238	26	33.0

## KIMBALL (Twin Lakes.)

1915	June	159	8	33.0		Sept.	253	10	32.0
1916	June	162	11	31.0		Sept.	252	9	33.0
1917.	June	163	12	33.0		Aug.	243	31	31.0

LAWRENCE (Parkland).

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1907..	June..	154	3	30-0	Frost every month.....	July.....	186	5	23-0
1908..	May..	143	23	28-0	Frost every month.....	July.....	208	27	22-0
1910..	June..	175	24	28-0		July.....	184	3	33-0
1911..	June..	158	7	32-0		Aug.....	241	29	33-0
1912..	June..	165	14	33-0		Sept.....	248	5	28-0
1913..	May..	127	7	33-0					

LETHBRIDGE.

1902..	June..	171	20	32-4	Aug.....	241	29	
1903..	May..	142	22	29-6	Sept.....	256	13	
1904..	May..	145	25	29-9	Sept.....	256	13	
1905..	June..	174	23	33-2	Sept.....	273	30	
1906..	May..	151	30	32-1	Aug.....	237	25	
1907..	May..	133	13	23-0	Sept.....	254	11	
1908..	May..	134	14	32-0	Sept.....	266	23	
1909..	May..	139	19	30-2	Sept.....	257	14	
1010..	June..	154	3	32-1	Aug.....	236	24	
1911..	May..	148	28	31-8	Aug.....	239	27	
1912..	June..	157	6	30-2				

LETHBRIDGE. (2)

1908..	May..	133	13	33-2	Sept.....	266	23	32-0
1909..	May..	140	29	29-8	Aug.....	240	28	29-8
1910..	June..	155	4	31-6	Aug.....	235	23	31-5
1911..	May..	148	28	29-6	Aug.....	239	27	29-4
1912..	June..	157	6	28-3	Sept.....	249	6	32-2
1013..	May..	135	15	33-1	Sept.....	255	12	32-0
1914..	May..	132	12	29-8	Sept.....	258	15	31-0
1915..	May..	136	16	32-6	Sept.....	254	11	31-2
1916..	June..	152	1	32-6	Sept.....	257	14	31-2
1917..	June..	155	4	31-0	Sept.....	244	1	32-0

MACLEOD, ALTA.

1896..	May..	141	21	32-0	Sept.....	253	10	29-0
1897..	June..	154	3	31-0	Sept.....	253	10	30-0
1898..	May..	141	21	33-0	Sept.....	253	10	33-0
1899..	May..	136	16	25-0	Sept.....	261	28	31-0
1900..	May..	150	30	33-0	Aug.....	239	27	30-0
1901..	June..	160	9	30-0	Sept.....	250	7	32-0
1902..	June..	170	19	31-0	Aug.....	241	29	31-0
1903..					Sept.....	245	2	32-0
1904..	June..	159	8	30-0	Sept.....	255	12	30-0
1905..	June..	175	24	31-0	Sept.....	259	15	32-0
1906..	June..	174	23	33-0	Aug.....	215	3	31-0
1907..	June..	154	3	31-0	Sept.....	254	11	33-0
1908..	May..	122	2	31-0	Sept.....	266	23	33-0
1909..	May..	138	18	32-5	Sept.....	257	14	31-5
1910..	May..	124	4	30-0	Sept.....	252	0	32-0
1911..	May..	148	28	32-0	Sept.....	254	21	33-0
1912..	June..	157	6	30-0	Sept.....	258	15	25-0
1913..	May..	136	16	35-0	Sept.....	250	7	32-0
1914..	May..	133	13	30-0	Sept.....	263	20	31-0
1915..	May..	136	16	33-0	Sept.....	254	11	25-0
1916..	May..	145	25	30-0	Sept.....	257	14	30-0
1917..	May..	150	30	29-0	Sept.....	248	5	30-0

PLAYLE CREEK.

1913..	June..	168	17	31-5	Frost every month ..	July..	193	12	32-0
1914..						Sept..	197	16	30-0
1915..	July..	195	14	33-0		Sept..	250	7	29-0
1916..	June..	162	11	29-0		Aug....	215	3	31-5
1917..	June..	163	12	31-0		July..	211	30	32-0

PINCHER CREEK.

Year.	Late Frost.					Early Frost			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1894	June	162	11	33.0		Aug.	230	27	31.0
1895	June	166	25	33.0					
1896	June	175	24	33.0					
1897						Sept.	253	10	29.0
1900						Aug.	238	26	32.0
1901	June	76	25	31.0		Sept.	250	7	32.0
1902	June	171	20	31.0		Aug.	241	29	33.0
1903	May	143	25	33.0		Sept.	252	9	31.0
1904	June	159	8	30.0		Sept.	263	20	29.0
1905	June	167	16	33.0		Sept.	258	15	32.0
1906	May	151	30	33.0		Sept.	255	12	26.0
1908						Sept.	266	23	33.0
1909	May	139	19	32.0		Aug.	218	6	33.0
1910	June	154	3	32.0		Aug.	228	16	33.0
1911	May	150	29	31.0		July	186	5	32.0
1912						Sept.	258	15	22.0
1914	May	147	27	33.0		Sept.	257	14	32.0
1915	June	165	14	33.0		Sept.	254	11	32.0
1916	May	144	24	33.0		Sept.	256	13	33.0
1917	June	155	4	32.0		Sept.	248	5	30.0

TABER.

1907	May	133	13	24.0		Sept	251	8	32.0
1908	May	121	1	32.0					

CALGARY.

1884					July 1st return	July	187	5	31.4
1885	June	166	15	32.6		July	199	18	31.7
1886	June	153	2	33.0		Aug.	242	30	28.1
1887	June	159	8	32.7	Frost every month.	July	193	12	32.7
1888	June	157	5	27.6		Sept.	255	11	28.2
1889	June	176	25	33.0		Aug.	218	6	32.0
1890	May	151	31	25.0		Aug.	230	18	32.9
1891	June	159	8	26.0		Sept.	254	11	27.7
1892	June	176	24	32.0		Sept.	245	1	32.0
1893	May	134	14	31.5		Sept.	253	10	32.0
1894	June	173	22	32.0		Aug.	226	14	33.0
1895	June	169	9	32.5		Sept.	252	9	31.0
1896	June	176	25	33.5		Sept.	245	2	31.0
1897	June	154	3	29.8		Aug.	211	29	33.0
1898	May	150	30	32.0		Aug.	240	28	30.0
1899	May	140	20	32.0		Aug.	229	17	33.0
1900	June	163	12	33.0		Sept.	250	7	32.0
1901	June	159	8	30.0		Aug.	241	29	32.0
1902	June	171	20	29.0		Sept.	245	2	32.3
1903	May	145	25	32.0		Aug.	233	21	32.0
1904	June	159	8	26.0		Aug.	228	16	33.0
1905	June	178	27	32.0		Sept.	253	10	26.0
1906	May	151	31	33.0		Aug.	239	27	31.0
1907	May	144	24	32.0		Sept.	251	8	32.0
1908	May	147	27	33.0		Aug.	239	27	33.0
1909	May	138	18	31.0		Aug.	236	24	30.0
1910	June	154	3	33.0		July	186	5	33.0
1911	May	148	28	29.0		July	195	14	33.0
1912	June	157	6	29.0		Sept.	250	7	20.0
1913	May	121	1	19.0		Sept.	265	22	30.0
1914	June	155	4	31.0		Sept.	254	11	24.0
1915	May	172	21	32.0		Sept.	257	14	28.0
1916	May	144	24	32.0		Sept.	241	1	32.0
1917	June	155	4	32.0					

CALGARY IRRIGATION STATION.

1901	June	176	25	32.5		Aug.	230	18	32.0
1902	June	171	20	28.5		Aug.	241	29	31.0
1903	June	180	29	32.6		Aug.	230	18	32.0
1904	July	199	18	31.0	Frost every month	Aug.	233	21	31.5
1905	July	199	18	29.5	"	Aug.	228	16	32.0
1906	June	167	16	32.5		Aug.	232	20	33.0

CANMORE, ALTA.

1914	June	176	25	32.2	Frost every month	July	202	21	32.8
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BANFF, ALTA.

Temp.	Year.	Late Frost.					Early Frost.			
		Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
31-0	1894	July	212	31	30-2	Frost every month.	Sept	253	10	30-0
	1895	June	170	19	32-2		Aug	221	9	30-5
	1896	June	176	25	28-0		July	204	23	30-0
20-0	1897	June	170	19	32-0		July	203	22	33-0
32-0	1898	June	174	23	32-8		July	188	7	30-5
32-0	1899	June	174	23	31-2		July	183	2	33-0
33-0	1900	June	163	12	27-7		July	185	4	31-8
31-0	1901	June	177	26	30-2		July	182	1	33-0
29-0	1902	June	172	21	33-2		Aug	222	10	30-8
32-0	1903	June	181	30	31-8		Sept	244	1	33-1
26-0	1904	June	171	20	33-0	Frost every month.	July	200	19	30-2
33-0	1905	June	169	18	31-1		Aug	234	22	30-7
33-0	1906	June	175	24	33-5		Aug	215	3	30-2
33-0	1907	June	174	23	30-3		Aug	224	12	33-2
32-0	1908	May	148	28	29-9		July	208	27	33-5
22-0	1909	June	177	26	31-7		July	195	14	32-6
32-0	1910	June	174	23	32-0		Aug	224	16	32-2
32-0	1911	June	155	4	29-3		July	186	5	30-5
33-0	1912	June	161	10	31-8		Aug	225	13	32-0
30-0	1913	June	168	17	30-8		Aug	228	16	30-2
	1914	June	152	1	32-7	Aug	243	31	28-0	
	1915	June	165	14	33-4	Sept	251	8	32-2	
	1916	June	173	22	31-8	Aug	223	11	33-0	
	1917	June	179	28	33-0	Aug	217	5	32-9	

GLEICHEN.

1903	Sept	255	12	33-0
1904	June	159	8	29-5
1905	June	174	23	27-5
1906	June	174	23	32-0
1907	June	155	4	30-5
1908	May	148	28	29-5
1909	June	177	26	32-5
1910	June	173	22	32-5
1911	May	149	29	33-0
1912	June	157	6	31-5
1913	May	140	20	32-0
1914	May	151	31	33-0
1916	May	141	21	31-0
1917	May	151	31	32-0
	Sept	255	12	33-0
	Sept	255	12	29-0
	Aug	239	27	31-5
	Sept	247	4	32-0
	Aug	231	19	28-5
	Aug	239	27	30-5
	Aug	217	5	33-0
	Aug	236	24	32-5
	Aug	228	16	32-0
	Aug	242	30	29-0
	Sept	263	20	32-0
	Sept	244	1	29-0
	Sept	257	14	28-0
	Sept	248	5	33-0

GLENBOW RANCH, ALTA.

1894	June	173	22	32-5	Sept	246	3	32-0
1895	June	160	9	31-8	Aug	226	14	32-5
1896	June	160	9	32-0	Sept	252	9	31-0
1897	June	154	3	29-0	Aug	241	29	33-5
1898	May	150	30	32-0	Sept	252	9	31-0
1899	May	140	20	33-5	Aug	240	28	30-5
1900	June	163	12	33-5				

HIGH RIVER.

1902	Aug	240	28	32-5
1903	July	189	8	28-0
1904	June	159	8	32-5
1907	June	173	22	33-0
1908	May	149	29	32-0
1909	May	140	20	32-5
1910	June	175	24	33-0
1911	May	149	29	33-0
1912	June	157	6	30-0
1913	June	172	21	33-0
	Aug	240	28	32-5
	Sept	246	3	32-0
	Aug	218	6	31-0
	July	199	18	30-0
	Aug	218	6	32-0
	July	206	25	32-5
	July	186	5	33-0

LAKE LOUISE.

1915	July	195	14	33-5	Aug	233	21	33-6
1917	June	181	30	27-0	July	185	4	32-0

## OKOTOKS.

Year	Late Frost					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1913	June	171	20	33.0	Frost every month.	July	197	16	31.5
1914	June	158	7	31.0		Sept	241	1	32.0
1915	June	165	14	32.0		Sept	254	11	27.0
1916	June	156	5	32.0		Sept	253	10	33.0
1917	June	155	4	33.0		Sept	244	1	32.0

## PEKISKO.

1906	June	176	25	33.5	Frost every month	Sept	218	4	33.0
1907	June	174	23	30.5		July	207	26	32.0
1908	June	174	23	33.0	"	July	188	7	33.0
1914	June	177	26	30.0	"	July	205	24	32.0
1915	June	181	30	33.0	"	July	183	2	32.0
1916	June	178	27	31.0	"	July	201	23	30.0
1917	June	179	28	"	"	July	182	1	32.0

## RONOLANE.

1914	May	133	13	30.2		Sept	257	14	33.0
1915	May	135	15	31.0		Sept	251	11	32.0
1916	June	152	1	32.0		Sept	257	14	29.0
1917	June	155	4	33.0		Sept	244	1	33.0

## STRATHMORE.

1912						Aug.	241	29	30.2
1913	May	140	29	32.0		Sept	252	9	31.5
1914	May	148	28	39.2		Aug.	243	31	31.2
1915	June	160	9	32.2		Sept.	252	9	33.2
1916	June	162	11	32.4					
1917	May	151	31	30.9		Aug	213	31	33.0

## SETTLED.

1914	May	149	29	28.0		Aug.	219	7	29.0
1915	May	141	21	32.8		Sept	254	11	30.8
1916	June	157	6	31.8		Sept	257	14	25.0
1917	June	163	12	31.0		Sept.	214	1	31.0

## SUNDIAL.

1911	May	147	27	28.5		Aug.	238	26	29.0
1912	June	156	5	30.0		Sept	257	14	23.5
1913	May	140	20	32.0		Sept	219	6	33.0
1914	May	131	11	25.0		Sept	264	21	30.0
1915	May	136	16	33.0		Sept	253	10	29.0
1916	May	142	22	30.5		Sept	256	13	29.0
1917	May	150	30	28.0					

## WHITLA.

1917	June	163	12	33.0		Sept	244	1	32.0
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## THE BASIN OF THE SOUTH SASKATCHEWAN.

**January.**—From the Grand Forks to Medicine Hat the daily range of temperature is normally from zero to 21° but beyond Medicine Hat the river running north cuts isotherms of successively lower order almost at right angles until the confluence with the Red Deer is reached. This point may be said to be the beginning of the Plains and as the river flows east the Plains lie to the north and the Hills region to the south. On the north side, therefore, there is a region of flat temperature-gradient (mean maximum 9°, mean minimum -8°, both decreasing slowly to the north) but on the south side the temperatures rise rather sharply towards the Cypress Hills (mean maximum 18° or 19°, mean minimum zero). North of Crane and Bigstick Lakes and south of the river there is a plateau from which no observations have been received.

Just beyond Swift Current the isotherms of minimum temperature which have previously been paralleling the River are deflected to the south and the gradient is increased. This change is caused by the fall in temperature in the Johnston Basin. This basin has no outlet, the numerous creeks draining to the lowest point, called Lake Johnston. In this great spoon-shaped depression the maximum temperatures rise after the passage of a cold wave nearly as rapidly as in the valley of the Saskatchewan, but the minimum temperatures often recover slowly.

Near Swift Current the South Saskatchewan turns to the north and passes through the Plains the maximum temperature falling to 7° and the minimum to -11° near Saskatoon. Beyond Saskatoon the temperatures are described in the remarks upon the Basin of the North Saskatchewan River.

**February.**—From Medicine Hat to the confluence with the Red Deer there is a fall of temperature of 12° or to the temperature of the plains. Thence running eastward the river may be said to form the southern boundary of the plains with a higher temperature beyond it to the south. Near Swift Current the isotherms bend southward into the Chaplin-Johnston Lakes depression, where the maximum and minimum temperatures are 16° and -6° respectively. From Elbow north to Saskatoon the climate is that of the plains.

**March.**—In March what is the coldest region of the central plains lies to the north of the river, the plateau upon which Kindersley is our observing station. Here the maximum is 22° and the minimum 2°. On the south the temperatures rise and at Swift Current the maximum is 30° and the minimum 12°, but in the western portion of the Johnston Lake region the maximum is 28° and the minimum 7°. At Outlook the maximum is 24° and the minimum 5°.

**April.**—From Medicine Hat to Empress there is a fall of 4° whence eastward the temperature changes but little to Saskatoon.

**May.** The high mean minimum of 40° near Medicine Hat is not maintained downstream to Empress and the maximum also diminishes, so that at Cabri the temperatures are 63° and 37°. At Swift Current the temperatures are a little higher. Northwards to Saskatoon they are much the same as at Cabri.

**June.**—Observations made at Empress indicate that it is frequently as warm as at Medicine Hat in the day-time but on the average subject to a minimum 1° or 5° lower. North of the River towards Kindersley the maximum is 4° lower or 68° while most of the region from Elbow to Saskatoon has a daily range from 47° to a maximum of 71°.

From Saskatoon eastwards to Humboldt and Pilger the temperature increases.

**July.** The very high temperatures at Medicine Hat do not appear to be maintained on the higher land on either side of the river's channel. From 76° and 51° at Empress the temperatures change little to Saskatoon, except that at Swift Current the maximum rises to 79°. The Lake Johnston region has an area of comparatively low minima near Pambrun.

**August.**—At Empress the mean maximum is 77° and the mean minimum 45°. From Cabri to Swift Current the minimum increases to 49°. Southward again the minimum falls to 45° or 46° at Pambrun.

From Elbow to Prince Albert the minimum is constant at 47° but the maximum falls to 74° at Saskatoon and to 71° at Prince Albert.

**September.**—At Empress the mean maximum is 63° and the mean minimum 36°. Thence to Saskatoon along the main stream there is very little change. But the Swift Current region has a mean minimum of 39° or 40°.

**October.**—The mean maximum of 51° at Empress diminishes to 51° at Cabri, and beyond Elbow to Saskatoon is 52° or 53° again. The minimum is generally 28° or 29°. In the Swift Current and Lake Johnston region the temperatures are a little higher.

**November.**—From mean maximum of 40° at Medicine Hat there is a decrease north-eastwards to 30° at Noremac and Kindersley and eastwards to 35° at Swift Current.

At Saskatoon the normal maximum is less than 32°.

The mean minimum of 19° at Medicine Hat and 17° at Swift Current diminishes northwards to 9° at Kindersley, 11° at Saskatoon.

**December.**—At Medicine Hat the mean maximum is 31° and the mean minimum 11°. Northward these temperatures decrease to 18° and 2° at Kindersley and Elbow. Thence to Saskatoon there is a further fall of 3°.

N.B.—Unless otherwise specified, "maximum" and "minimum" refer to the normal daily means of the highest and lowest temperatures.

RECORDS OF FIRST AND LAST FROSTS, BASIN OF THE SOUTH SASKATCHEWAN.

BOW ISLAND, ALTA.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1917	May	151	31	30 0		Sept	214	1	32 0

CABRI, SASK.

1915	June	167	16	33 0	Sept	251	11	28 0
1916	June	152	1	31 0	Aug	223	11	33 0
1917	May	151	31	29 0	Sept	208	25	29 0

DUCK LAKE, SASK.

1898	July	201	20	31.5	Sept	251	8	26 5
1899	May	137	17	29 0	Aug.	242	30	27 5
1902	June	170	19	27 5	Sept	245	2	32 5
1903	June	171	20	30 0	Aug.	239	27	32 5
1910	June	155	4	29 0				

HERBERT, SASK.

1917	June	165	14	33 0	Sept	252	9	30 0
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MEDICINE HAT, ALTA.

Year	Month	Day of Year	Date	Temp.	August 1 return	Month	Day of Year	Date	Temp.
1883						Sept	251	9	29 4
1884	May					Sept	246	3	30 6
1885	May	142	22	31 7		Sept	259	16	28 5
1886	June	153	2	32 6		Sept	256	13	32 0
1887	May	136	16	29 7		Sept	255	11	30 0
1888	June	157	5	32 7		Sept	248	5	31 3
1889	May	126	6	32 0		Sept	248	5	32 2
1890	May	150	30	22 7		Sept	255	12	32 0
1891	May	151	31	32 5		Sept	248	4	33 3
1892	May	151	30	28 7		Sept	249	17	32 5
1893	May	144	24	30 0		Sept	257	14	33 0
1894	May	131	11	33 0		Sept	249	7	31 6
1895	May	149	29	26 2		Sept	253	10	25 0
1896	May	127	7	33 5		Sept	258	15	33 0
1897	May	142	22	33 0		Sept	252	9	31 0
1898	June	152	1	31 4		Sept	271	28	32 0
1899	May	136	16	30 0		Sept	236	27	32 0
1900	May	130	10	33 0		Aug.	240	17	26 5
1901	June	157	6	31 5		Sept	232	20	33 2
1902	May	125	5	29 7		Aug	259	16	31 7
1903	May	141	21	29 7		Sept	278	5	26 7
1904	May	145	25	30 7		Oct	273	30	27 7
1905	May	139	19	31 7		Sept	255	12	30 7
1906	May	127	7	27 7		Sept	261	18	31 7
1907	May	133	13	21 7		Sept	267	24	32 0
1908	May	121	1	29 7		Sept	266	23	32 0
1909	May	128	8	30 0		Sept	255	12	33 0
1910	June	154	3	30 0		Sept	265	22	32 0
1911	May	121	1	30 0		Sept	245	2	33 0
1912	May	132	12	27 0		Sept	263	20	32 0
1913	May	126	6	30 0		Oct	278	5	33 0
1914	May	132	12	32 0		Sept	256	13	28 0
1915	May	126	6	32 0		Sept	257	14	29 0
1916	May	136	16	32 0		Sept	248	5	31 0
1917	May	150	30	31 0					

OUTLOOK, SASK.

1915	June	162	11	33 0	Sept	252	9	33 0
1916	May	149	29	33 0	Sept	257	14	25 0
1917	June	154	3	30 0	Sept	251	8	25 0

PRELATE, SASK.

1915	July	191	10	27 0	Sept	252	9	33 0
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ROSTHERN, SASK.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1911	May	143	23	32.4		Aug.	239	27	32.2
1912	May	111	21	31.2		Sept.	258	15	28.2
1913	May	140	20	30.5		Sept.	263	20	29.7
1914	June	176	25	33.3		Aug.	222	10	32.8
1915	June	167	16	24.2		Aug.	237	25	31.2
1916	June	152	1	29.5		Aug.	241	29	30.4
1917	June	155	-1	32.8		Sept.	251	8	25.2

SASKATOON, SASK.

1894	May	132	12	29.0		Sept.	256	13	30.5
1900	May	124	4	32.8		Aug.	235	23	26.5
1901	June	157	6	30.0		Sept.	246	3	28.0
1902	June	172	21	32.4		Sept.	246	3	31.2
1903	June	172	21	30.7		Aug.	240	28	32.0
1904	June	165	14	33.4		Sept.	245	2	30.8
1905	June	175	24	32.0		Sept.	255	12	24.5
1906	June	172	21	33.0		Sept.	252	9	33.0
1907	May	147	27	32.0		Sept.	264	21	33.0
1908	May	111	21	29.0		Sept.	265	22	30.8
1909	May	136	16	33.4		Aug.	229	17	32.5
1910	June	156	5	32.0		Sept.	250	7	23.4
1911	May	142	22	32.8		Sept.	258	15	27.8
1912	June	157	6	32.8		Sept.	263	20	30.2
1913	May	110	20	30.0		Sept.	258	15	32.6
1914	May	134	13	27.5		Sept.	253	10	32.0
1915	June	168	16	29.0		Sept.	257	14	25.8
1916	June	152	1	32.0		Sept.	251	8	30.0
1917	June	155	4	33.2					

SHAUNAVON, SASK.

1915	June	159		31.0		Sept.	253	10	33.0
1916	May	147		32.0		Aug.	223	11	31.0
1917	June	166		31.0		Sept.	244	1	30.0

SWIFT CURRENT, ALTA.

1886	June	133	2	29.2		Aug.	242	30	31.2
1887	June	134	3	26.4		Sept.	252	9	33.4
1888	June	137	5	32.0		Sept.	207	23	33.2
1889	May	144	24	26.0		Aug.	218	6	32.8
1890	May	130	30	23.6		Sept.	250	7	32.4
1891	May	151	31	31.2		Sept.	267	24	32.0
1892	May	152	31	31.4		Sept.	268	24	31.0
1893	May	146	26	32.0		Sept.	261	18	31.0
1894	May	132	12	31.4		Sept.	253	10	31.2
1895	June	160	9	30.0		Sept.	249	6	33.0
1896	May	127	7	32.0		Aug.	227	15	32.0
1897	June	158	7	33.4		Sept.	253	10	33.5
1898	May	128	8	33.0		Sept.	249	16	30.8
1899	June	156	5	33.0		Sept.	259	16	31.5
1900	June	161	10	32.0		Sept.	259	16	33.0
1901	June	157	6	33.0		Sept.	260	17	27.0
1902	June	170	19	33.0		Aug.	229	17	32.0
1903	June	174	23	31.0		Sept.	247	4	31.0
1904	May	145	25	28.0		Sept.	254	11	30.0
1905	June	174	23	32.0		Sept.	215	2	32.0
1906	May	146	26	32.0		Sept.	254	11	31.0
1907	June	155	4	33.0		Sept.	252	9	33.0
1908	June	164	13	33.0		Sept.	267	24	27.0
1909	June	157	6	31.5		Sept.	265	22	31.5
1910	June	156	5	32.0		Aug.	242	30	31.0
1911	May	142	22	30.0		Aug.	234	22	33.0
1912	June	157	6	33.0		Sept.	258	15	29.0
1913	May	140	20	30.0		Sept.	245	2	31.0
1914	May	149	29	32.0		Aug.	237	25	32.0
1915	June	167	16	31.0		Sept.	254	11	26.0
1916	June	152	1	28.0		Aug.	223	11	32.0
1917	June	165	14	33.0		Sept.	253	10	32.0

## MONTHLY PRECIPITATION—BASIN OF THE SOUTH SASKATCHEWAN RIVER.

FOSTER'S RANCH (Seven Persons)

Year	Jan	Feb.	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
1911	0.85			1.87	1.64	5.08	0.70	1.15	1.65	0.50	1.25	0.15
1912	0.40	0.15	0.30	0.79	1.33	0.89	1.05	0.19	1.80	0.55	0.20	0.15
1913	0.42	0.37	0.50	1.15	1.08	5.56	0.70	2.54	0.41	0.48	0.35	
1914	0.85	0.65	0.73	0.25	0.29	2.81	0.22	2.16	1.36	3.30	0.10	0.13
1915	0.45	0.68	0.13	2.00	1.68	4.11	4.07	0.92	2.30	0.89	0.35	0.50
1916	0.45	1.00	0.05	0.20	2.71	6.21	4.13	5.41	1.96	1.53	0.11	0.50
1917	0.65	0.35	0.20	1.06	0.19	1.45	0.57	0.40	1.73	0.50	8.	2.50
Sums	4.07	3.20	1.91	7.32	8.92	26.17	11.44	13.37	11.21	7.75	2.66	4.53
Means	0.58	0.53	0.32	1.05	1.27	3.71	1.63	1.91	2.03	1.11	0.38	0.65

## JOSEPHSBURG

1906					2.39	7.96	0.31	1.56	0.05	0.60	1.00	1.60
1907	1.25	0.50	1.00	0.63	1.84	3.07	0.78	1.53	1.16	1.	0.30	
1908			1.20	0.25	1.53	3.60	0.74	1.34	0.41	2.10	0.20	
1909					3.85	4.18	3.10	0.70				
1910					1.61	1.15	1.53	1.76	1.72	0.66		
Sums	1.25	0.50	2.20	0.88	11.22	19.96	6.16	6.89	3.37	3.66	1.50	1.60
Means	1.25	0.50	1.10	0.44	2.24	3.99	1.29	1.38	0.82	0.91	0.50	1.60

## STEEPLEFIELD.

1913									0.35	0.03	0.05	0.30
1914	0.60	0.30	0.55	0.02	0.12	1.15	0.37	0.74	0.65	1.31	0.10	0.75
1915	0.37	1.00	0.20	0.01	0.81	3.68	3.22	0.95	2.11	0.83		0.53
1916	0.55	0.33	0.43	0.06	4.07	2.60	7.20	1.77	1.18	0.77	0.25	0.70
1917	0.20	0.45	0.30	0.59	0.23	0.93	1.57	1.73	0.92	1.01	0.30	1.20
Sums	1.72	2.08	1.48	0.68	5.23	8.36	12.36	5.19	5.21	3.95	1.00	3.48
Means	0.43	0.52	0.37	0.17	1.31	2.09	3.09	1.30	1.04	0.79	0.25	0.69

## WHITLA

1917					0.46	1.16	0.59	0.45	1.52	0.63		
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## CABRI.

1915					4.21	6.12	2.59	0.28	2.15	0.68		0.25
1916	0.38	0.55	0.60	0.49	2.27	4.41	5.98	4.19	0.84	1.09	0.52	0.50
1917	0.30	0.65	0.49	0.59	0.24	3.29	0.51	2.68	1.09			
Sums	1.28	1.20	1.09	1.08	6.72	13.82	9.05	7.15	4.08	1.77	0.52	0.75
Means	0.64	0.60	0.54	0.54	2.24	4.61	3.03	2.38	1.36	0.88	0.52	0.38

## DUCK LAKE.

1894										1.03	S. R.	0.08	0.55
1895	1.50	0.52	0.30			1.45	2.76	3.47	1.55	1.30			0.05
1898						3.10	3.81	1.78	1.84	1.54	1.19	0.53	
1899	0.55	0.05	1.15	0.10		3.86	4.06	2.47	7.22	2.28	2.60		
1902				0.10		3.86	4.06	4.13	1.55	1.33	S.	1.10	0.15
1903	0.85	0.05	0.20	0.35		1.77	0.63	2.82	7.14	0.36			
1904	0.75	1.58											
1905						0.63	2.17	1.20	1.75	1.35	0.75	0.23	0.50
1906	0.90		0.30				6.00						
1908													
1909		1.30		0.70									
1913		2.20	0.05	0.05	3.50	3.95	3.30						
Sums	4.55	5.70	2.00	1.30	14.31	25.46	19.17	21.05	9.19	4.51	1.94	1.25	
Means	0.91	0.95	0.40	0.26	2.38	3.18	2.74	3.51	1.31	0.91	0.48	0.31	

## DUNDURN.

1905						3.15	1.35	0.35	1.95			
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HANLEY.

Year.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1905.				0 33	1 48	1 97	1 69	0 10	1 04			
1907				R	0 40	2 13	2 42	2 98				
1908				R	0 60	0 61	0 21	2 55	0 25			
1909				0 05	2 10	2 34	3 02	1 68	1 33			
1910				0 05	1 39	2 19	1 70	1 48	1 56	0 50		
Sums				0 43	5 97	9 24	9 04	8 79	4 18	0 50		
Means				0 11	1 19	1 85	1 81	1 76	1 04	0 50		

HERBERT.

1905.					3 06	3 94	4 90	0 61	0 71	0 32	0 91	0 30
1917				0 65	0 25	1 59		0 57	1 08			

ILLERBURN.

1910											0 45	1 85
1911	1 30	0 50	0 33	0 77	0 76	3 80	3 16	1 83	2 34	1 15	1 90	2 70
1912	0 88	0 80	0 38	0 20	2 78	2 25	2 34	2 00	1 02	1 88	0 35	0 13
1913	0 90	0 70	1 06	1 50	0 57	3 62	1 45	2 64	0 60	0 65		0 80
1914	1 43	0 08	1 15	0 32	0 55	2 70	0 19	1 15	2 74	1 80	0 33	0 93
1915	0 40	0 75	0 10	0 04	3 15	5 35	2 67	0 44	1 54	1 14	0 15	0 80
1916	1 00	0 80	0 50	0 43	2 74	3 70	5 07	2 54	1 07	0 92	0 20	0 78
1917	0 55	0 35	0 30	0 65	R	1 05	1 13	0 68	1 41	0 80	0 03	0 35
Sums	6 46	3 98	3 82	3 91	10 55	22 48	16 06	11 28	10 72	8 34	3 41	8 34
Means	0 92	0 57	0 55	0 56	1 51	3 21	2 29	1 61	1 53	1 19	0 49	1 04

LEITCHVILLE.

1911				0 71	1 64	3 58	1 51	1 77	3 45	0 87		
1912.				0 28	1 96	2 76	0 88	3 53	0 65	0 99	0 40	0 43
1913.	1 42	0 42	0 67	0 95	0 43	3 94	2 65	2 47	1 21	0 45	0 17	0 05
1914	0 80	0 37	1 03	0 30	3 59	2 89	0 33	1 90	1 37	1 62	0 30	0 40
1915.	0 35	0 68	0 05	S.	3 68	4 42	4 20	0 12	1 76	1 55	0 25	1 05
1916.	1 45	1 45	1 35	0 78	3 93	4 01	4 81	2 34	1 33	1 97	0 55	0 88
1917.	1 37	0 82	1 28	1 30	0 70	1 42	0 74	0 81	2 77	0 61	S.	0 88
Sums	5 39	3 74	4 38	4 32	12 93	23 02	15 12	12 13	12 54	8 06	1 67	3 69
Means	1 08	0 75	0 88	0 62	1 85	3 29	2 16	1 73	1 79	1 15	0 28	0 61

OUTLOOK.

1915.		0 05	S.	R	4 04	1 80	2 30	0 80	0 50	0 50	1 00	
1916.	2 43	0 70	1 00	0 45	0 95	2 67	6 20	1 40	0 90	1 60		0 40
1917.	1 95	0 20	0 20	0 45	0 25	1 18	0 75	1 15	1 05	0 25	0 02	0 20
Sums	4 38	0 95	1 20	0 90	5 60	5 65	9 25	3 35	2 45	2 35	1 02	0 60
Means	2 19	0 32	0 40	0 30	1 87	1 88	3 08	1 12	0 82	0 78	0 51	0 30

ROSTHERN.

1910.												0 60
1911	2 20	0 80	0 15	1 06	2 38	3 37	2 89	1 79	1 81	S.	1 20	0 85
1912.	0 30	0 20	0 60	0 67	2 20	2 81	5 25	2 15	2 76	0 22	0 82	0 50
1913.	0 55	0 50	0 35	0 27	1 26	1 87	3 80	2 87	2 89	0 29	0 34	0 10
1914.	0 65	S.	0 55	0 63	1 96	2 00	1 40	1 12	0 97	1 57	1 20	0 52
1915.	0 60	0 50	0 30	0 30	1 16	1 00	3 12	0 28	1 07	0 31	0 95	0 83
1916.	1 00	0 08	0 70	0 69	2 49	2 35	3 66	2 45	0 68	0 81	0 20	0 15
1917.	0 95	0 90	0 35	1 21	0 32	3 42	1 16	1 94	0 61	0 74	0 13	0 88
Sums	6 25	2 98	2 70	4 83	11 77	16 62	21 28	12 60	10 82	3 94	4 84	4 43
Means	0 89	0 43	0 45	0 69	1 67	2 66	3 04	1 80	1 55	0 59	0 69	0 59

SASKATOON.

Year.	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov.	Dec.
1892.				0 70		1 31	1 86	3 06	1 12	0 16	1 62	8
1893.	1 60		0 60	0 20	1 48	1 24	3 05	2 75		0 40		1 20
1894.				0 83	1 49	3 16	1 16	4 27	2 02	0 99	0 36	
1895.				0 25	1 30	1 00	3 16	0 57	3 77	0 84	0 12	
1896.	1 10	1 15	0 43	0 25	2 01	2 41	1 61	2 01	1 16	0 57	1 82	2 07
1897.		S		0 83	3 24	0 23	5 54	3 71	1 31	0 30	0 02	
1898.				0 30	2 01	2 41	4 54	1 19	2 63	1 25	0 15	0 60
1899.	0 95	1 30	2 20	0 25	1 95	3 26	0 76	2 07	1 10	0 60	R 8	0 30
1900.	0 15	0 25	0 47	0 15	0 77	2 71	2 20	2 59	1 15	0 46	1 08	
1901.	0 60	0 10	S	0 63	0 77	2 12	1 48	2 58	1 04	0 01	0 05	0 25
1902.	1 20	S	0 80	0 30	0 61	0 65	5 48	1 32	2 00	0 33	1 65	0 45
1903.	0 10	0 75	0 63	0 15	2 39	1 76	6 14	0 23	0 57	1 54	0 77	0 75
1904.	0 80	0 32	0 45	0 40	0 25	0 79	2 26	2 18	2 19	1 55	0 27	0 15
1905.	0 30	0 20	0 40	0 30	1 54	2 40	5 07	1 87	3 18	0 56	0 03	0 70
1906.	2 60	0 40	0 90	0 60	0 06	3 07	3 43	2 71	2 70	0 27	0 45	0 60
1907.				0 25	0 28	0 35	2 92	2 14	2 58	1 09	0 49	0 65
1908.	1 00	1 00	0 40	0 18	0 40	1 65	1 88	0 85	0 11	1 41	2 60	1 05
1909.	0 90	0 40	0 30	0 01	0 12	1 31	1 96	2 43	1 09	1 26	0 49	0 60
1910.	0 50	0 30	0 01	0 12	1 31	1 96	2 43	1 09	1 26	0 49	0 60	0 73
1911.	0 55	0 15	0 70	0 64	2 45	1 68	4 79	1 99	1 38	0 92	0 12	0 45
1912.	1 30	0 40	0 97	1 34	0 15	2 24	1 38	2 02	1 35	0 68	0 26	0 65
Sums	13 65	7 02	8 99	8 71	24 81	49 70	50 65	43 25	28 53	14 15	10 62	10 05
Means	0 91	0 47	0 56	0 46	1 52	2 48	2 53	2 16	1 50	0 74	0 53	0 63

SHANAVON.

1915.					4 80	4 09	0 22	1 42	0 91			
1916.			1 64	0 60	2 95	3 67	2 74	0 94	1 09	0 05		
1917.						0 98	0 75	0 35	2 01	0 45		
Sums			1 64	0 60	2 95	9 45	8 48	1 51	4 55	1 41		
Means						3 15	2 73	0 50	1 52	0 48		

STRONGFIELD.

1913.							2 01					
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STURBITON.

1916.				0 52	1 71	3 66	5 67	1 46	0 86	0 32	0 12	0 60
1917.	0 85	0 27	0 15	0 49	0 69	1 86	0 85	1 50	1 41	0 76	0 09	0 55

SWIFT CURRENT.

1885.													0 19
1886.	0 43	0 70	0 50	2 03	2 04	0 85	1 35	0 60	0 55	0 27	0 80	0 68	0 68
1887.	0 87	1 49	0 51	1 60	1 56	3 85	3 70	1 62	1 41	0 64	0 11	0 62	0 62
1888.	0 51	0 84	1 14	0 68	0 63	4 92	0 67	2 34	0 28	1 32	0 28	0 38	0 38
1889.	0 65	0 38	0 68	0 52	2 42	1 41	2 77	R	0 10	R	0 31	1 19	1 19
1890.	0 84	0 73	0 68	0 74	1 30	3 44	0 88	2 70	2 74	3 04	0 24	0 16	0 16
1891.	0 36	0 44	1 44	1 52	1 16	6 80	3 36	3 20	1 64	2 07	1 32	1 21	1 21
1892.	0 31	0 94	0 40	3 28	3 16	3 96	1 00	3 22	2 28	0 56	1 53	0 70	1 02
1893.	1 34	1 26	0 98	0 24	0 37	1 04	3 22	0 56	0 63	0 40	0 22	0 37	0 37
1894.	0 40	0 50	1 02	0 95	2 64	1 35	0 62	3 32	0 38	0 97	0 04	0 24	0 57
1895.	1 29	0 50	0 20	0 04	1 77	3 02	3 32	2 08	2 08	0 02	1 38	0 28	0 28
1896.	0 72	1 04	0 42	0 93	2 90	1 44	0 26	6 27	1 28	2 60	0 88	1 50	0 89
1897.	0 57	0 84	0 21	0 08	0 26	0 83	2 81	1 79	0 90	1 33	0 41	0 13	0 13
1898.	0 57	0 82	2 02	0 60	1 31	2 56	2 81	3 95	4 75	0 64	1 07	0 59	0 33
1899.	0 62	0 30	1 30	0 25	2 40	3 17	2 42	2 75	2 48	0 47	0 46	0 66	0 66
1900.	0 14	0 36	0 58	0 42	2 49	1 38	2 42	4 29	0 56	3 84	0 46	0 22	0 50
1901.	1 32	0 50	0 30	0 42	1 99	4 18	2 28	4 44	0 73	0 08	0 60	0 36	0 36
1902.	0 17	0 88	1 38	0 18	5 07	4 47	4 11	3 01	1 04	0 14	0 42	0 61	0 61
1903.	0 70	0 56	1 42	0 85	3 23	2 26	2 37	2 34	1 06	1 10	0 41	0 13	0 31
1904.	0 60	0 76	1 94	0 32	1 16	2 37	3 62	3 98	0 14	1 12	0 68	0 36	0 11
1905.	0 14	0 48	0 29	1 00	3 75	3 08	7 21	0 30	1 64	1 46	0 18	1 94	1 16
1906.	0 72	0 52	0 02	0 76	3 08	1 35	1 59	4 37	3 59	0 68	0 04	0 16	1 17
1907.	1 02	0 36	0 86	0 54	0 70	2 08	0 68	1 42	0 31	2 58	0 36	0 16	0 16
1908.	0 46	1 12	1 26	0 45	2 52	6 46	1 66	2 26	0 70	0 14	0 38	0 29	0 29
1909.	0 50	0 24	0 36	0 86	0 80	1 78	1 76	2 28	0 88	0 40	0 32	0 27	0 27
1910.	0 14	0 58	0 06	0 86	1 68	2 66	2 56	2 38	0 96	0 48	0 64	0 50	0 50
1911.	0 72	0 26	0 30	0 12	3 26	2 78	2 32	2 48	1 05	0 72	0 22	0 38	0 38
1912.	0 36	0 42	0 10	0 61	1 41	3 46	2 10	1 93	0 48	0 35	0 01	0 04	0 04
1913.	0 48	0 31	1 37	0 40	0 17	2 31	0 76	6 51	2 17	2 49	0 92	0 97	0 97
1914.	0 61	0 38	0 79	0 40	0 37	0 92	2 72	2 37	0 76	1 27	0 71	0 10	1 31
1915.	0 48	0 16	0 10	1 88	0 62	1 79	4 05	5 29	2 54	1 16	1 11	0 62	1 10
1916.	2 70	1 02	1 88	0 62	1 79	4 05	5 29	2 54	1 16	1 11	0 62	1 10	1 10
1917.	1 13	1 08	1 39	1 10	0 04	2 02	0 70	1 26	1 46	0 87	S	0 87	0 87
Sums	22 20	21 07	25 84	24 74	59 20	96 96	78 47	63 68	39 30	25 34	17 66	22 42	22 42
Means	0 69	0 65	0 81	0 77	1 86	3 03	2 45	1 99	1 23	0 79	0 55	0 67	0 67

## THE CYPRESS HILLS COUNTRY.

Under this name have been grouped the basins of the Milk River Tributaries, of Lake Pakovki, and of Crane and Bigstick and Many Island lakes. Much of this country is devoted to ranching and few meteorological observations have been made there. There is considerable uncertainty as to the exact course of the isotherms. The Pakovki basin if one can rely upon the few observations made there, is subject occasionally to marked fluctuations of temperature which are not simultaneously noted at either Lethbridge or Medicine Hat.

**January.**—This month is normally quite mild in the Pakovki depression with a normal daily maximum of 20° and normal daily minimum of 1° at the lowest point of the basin, and still milder along the western portion of the Milk River valleys. On the southern slopes of the Cypress Hills, and on the plateau between Battle Creek and Frenchman River, the daily minimum is nearly zero and the daily maximum 18° to 15°. At the head of Poplar River the normal minimum is probably -4° and the maximum 15° or less.

In the region about Maple Creek the normal temperatures as shown on the maps appear doubtful. After the records at Cabri have been continued for a few years it may appear that the isotherms should be displaced somewhat to the south, making the mean temperatures rather lower in the Lakes Basin than is now indicated. At present it appears that this region is one of much higher temperatures than the plains north of the Saskatchewan River. Thirty-five years of observations at Swift Current confirm the comparative warmth of the southeastern portion of the region.

**February.**—The course of the isotherms in this region is somewhat doubtful, but in general the country from the Cypress Hills southwest to the Milk River has a maximum of 20° to 22° and a minimum of nearly zero. Northeast of Crane Lake, the temperature falls to that of the Plains. From Shaunavon to Pambrum there is a fall of the maximum temperature of 3° and of the minimum temperature of 6°.

**March.**—The maximum at the head of the Milk River is 38° and the minimum 16°, while the Pakovki basin is perhaps 2° to 4° colder. East of the Cypress Hills the temperature appears to fall most rapidly on a northeast line to Prelate and Cabri.

Shaunavon has a mean maximum of 32° and a mean minimum of 11°. Westwards to Govenlock the temperature rises a little. Eastwards to Wood Mountain it falls, the daily range at Willowbunch being from a minimum of 9° to a maximum of 27°.

**April.**—At the headwaters of the Milk River the maximum is 50° and the minimum 27° while the maximum is probably a little higher in the Sweet Grass Hills.

In the Cypress Hills the maximum is 50°, and the minimum 22° at Ft. Walsh. The minimum at Bigstick Lake may be as low as 25°. In the Wood Mountain district the maximum is 52° and the minimum 30° at Willowbunch.

**May.**—A comparatively cool belt extends from the head of the Milk and St. Mary Rivers through the Pakovki basin to Shaunavon and Pambrum. In this belt the mean minimum is 31° or 35°. To the north and to the south the temperatures are considerably higher. South of Govenlock the mean maximum reaches 61° and south of Wood Mountain is probably 66°.

**June.**—The regions near the headwaters of the Milk River, the Cypress Hills, and north of Crane Lake are relatively cool with minima of 41°. Govenlock has a maximum of 74° and a minimum of 17°. Shaunavon has a minimum slightly higher and a maximum 2° lower.

**July.**—At the headwaters of the Milk River the maximum and minimum are respectively, 77° and 45°. Near Fort Walsh they are 74° and 49°, and perhaps the normal minimum will prove to be less than 48° at Klintonel.

North of Crane Lake the minimum is less than 50° and towards Wood Mountain the maximum is 79°.

**August.**—The higher altitudes at the headwaters of the Milk River are subject to rather low minimum temperatures while the remainder of the region is quite warm.

**September.**—The region from Shaunavon to Klintonel has a mean maximum of 66°, and the Wood Mountain region the same or higher. The upper portion of the Milk River has a minimum of 37° while the maximum which is 60° at Twin Lakes increases toward the east.

**October.**—The lowest temperatures are in the area between Shaunavon and Fort Walsh where the mean maximum is 50° and the mean minimum 26°.

At the head of the Poplar River the corresponding normals are probably 54° and 33°.

**November.**—East of the Sweet Grass Hills near the International Boundary, the mean maximum is in excess of 38° with a minimum of 16° or 17°. The Shaunavon-Fort Walsh district is 3° or 1° cooler, and towards the Wood Mountain region also the minimum is lower, although the maximum is 37° at the head of Poplar River.

**December.**—A comparatively cold area is situated in the Milk River Basin between the Sweet Grass Hills and Wood Mountain and the lowest mean minimum less than 4° occurs near Nashlyn and Govenlock in Canadian territory with a similar area a little to the east extending into United States territory. Westwards to the St. Mary River and northward to Medicine Hat and Swift Current the minimum increases considerably; but the mean maximum increases to a much lesser extent and it averages about 28°.

N.B.—Unless otherwise specified, "maximum" and "minimum" refer to the normal daily means of the highest and lowest temperatures.

RECORDS OF FIRST AND LAST FROSTS, MILK RIVER AND PAKOVKI BASINS,  
FOREMOST, ALTA.

Year	Late Frost				—	Early Frost.			
	Month.	Day of Year	Date.	Temp.		Month.	Day of Year	Date	Temp.
1915						Sept.	252	9	30.0

## MANYBERRIES, ALTA.

1915						Sept.	246	3	25.0
1916	May	148	28	32.0		Sept.	256	13	30.0

## MILK RIVER, ALTA.

1915						Sept.	254	11	32.0
1916	June	152	1	32.0		Aug.	225	13	34.0
1917	June	154	3	21.0		Aug.	239	27	29.0

## ANEROID, SASK.

1916	June	152	1	31.0		Aug.	223	11	33.0
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## CHAPLIN, SASK.

1894	May	129	9	33.0		Sept.	251	8	27.0
1895	June	174	23	32.0		Aug.	242	30	28.0
1896	April	113	23	30.0		Sept.	247	4	33.0
1897	May	132	12	27.0		Sept.	252	9	27.0
1898	April	120	30	30.0		Sept.	250	7	30.0
1899	May	133	13	30.0		Sept.	257	14	31.0
1900	June	164	13	30.0		Sept.	256	13	30.0
1901	May	124	4	33.0		Sept.	258	15	27.0
1902	May	147	27	30.0		Aug.	240	28	30.0
1903	May	140	20	32.0		Sept.	246	3	28.0
1905	June	175	24	32.0		Sept.	258	15	31.0
1906	May	116	26	33.0		Aug.	237	25	31.0
1907	June	154	3	33.0		Sept.	251	8	33.0
1908	May	132	22	33.0		Aug.	233	21	59.0
1909	June	175	24	33.0		Aug.	239	27	32.0
1910	June	163	12	33.0		Aug.	236	24	32.0
1911	May	148	28	33.0		Aug.	233	21	33.0
1912	June	166	15	33.0		Sept.	241	1	33.0
1913	June	153	2	29.0		Sept.	250	7	31.0
1914	May	134	14	30.0		Aug.	222	10	31.0
1915	June	167	16	29.0		Sept.	254	11	22.0
1916	May	146	26	33.0		Aug.	222	10	32.0
1917	June	155	4	33.0		Sept.	253	10	33.0

## CRANE LAKE, SASK.

1899						Sept.	271	28	30.0
1900	May	122	2	28.0		Sept.	259	26	31.0
1901	June	157	6	30.0		Sept.	259	16	30.0
1902	June	171	20	33.0		Sept.	256	3	31.0
1903	May	143	23	32.0		Sept.	217	4	32.0
1904	May	145	25	27.0		Sept.	256	13	32.0
1905	June	175	21	33.0					

## GULL LAKE, SASK.

1917	June	165	14	32.0	Aug. last return.				
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## WAPASHOE, SASK.

1915	June	167	16	35.5		Sept.	254	11	30.0
1916	May	147	27	30.8		Aug.	223	11	31.2
1917	June	166	15	32.9	Frost every month...	July	211	30	31.1

LARCHMOUNT, SASK., (PAMBRUM P.O.).

Year	Late Frost				Frost every month	Early Frost			
	Month.	Day of Year	Date.	Temp.		Month.	Day of Year	Date.	Temp.
1911	May	119	29	30.7	Frost every month February last return	July	191	10	31.7
1912	June	168	17	30.2		Aug.	242	30	33.0
1913	May	141	21	32.6		July	208	27	31.0
1914	May	119	29	30.0		Aug.	222	10	30.0
1915	June	170	19	33.0		July	185	4	31.0
1916	June	153	2	32.0		Aug.	223	11	28.0
1917									

EAST END, SASK.

1910	June	155	4	33.0	Aug.	237	25	31.0
1912	June	166	15	33.0				

NASHLYN, SASK. (KELVINHURST).

1913	May	110	20	29.0	Frost every month..	Sept.	245	2	32.0	
1914	June	171	23	33.0		July	203	22	33.0	
1915	July	185	4	30.0		Sept.	251	8	32.0	
1916	June	53	2	32.0		Aug.	223	11	30.0	
1917	June	165	14	31.0		Aug.	217	5	32.0	

KLINTONEL, SASK.

1910					Frost every month..	Aug.	237	25	31.0
1911						Aug.	221	9	31.6
1912	June	168	17	31.6		Sept.	253	10	31.2
1913	June	157	6	32.6		July	208	27	33.0
1914	June	178	27	33.3		July	199	18	33.2
1915	June	167	16	30.0		July	200	19	32.2
1916	June	181	30	31.2		July	183	5	33.2
1917	June	100	29	33.0	July	182	1	32.0	

WILLOW CREEK (POLICE DETACHMENT) (GOVENLOCK, P.O.)

1915	July	184	3	32.0	Frost every month..	Sept.	252	9	33.0
1916	June	157	6	33.0		Sept.	256	13	22.0
1917	June	181	30	20.0		July	212	31	26.0

WILLOW BENCH.

1908	June	160	9	33.0	Sept.	256	23	33.0
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RECORDS OF MONTHLY PRECIPITATION MILK RIVER BASIN AND CYPRESS HILLS COUNTRY.

N.B. - See also Foster's Ranch and Josephsburg, page 55.

CLARINDA.

Year.	Jan.	Feb.	March	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913					1.00	3.37	0.74	2.55	1.37	0.90	0.50	S.
1914	0.45	1.00	0.75	0.35	0.88	1.55	0.55	1.66	1.14	3.90	0.20	2.00
1915	1.00	0.20	S.	0.16	0.82	2.84	2.37	0.75	1.50	0.56	0.60	0.60
1916	1.45	1.20	0.91	0.73	1.93	1.85	2.39	0.35	2.34			
Sum	2.90	2.40	1.66	1.24	4.62	9.71	8.05	5.21	6.25	5.96	1.30	2.60
Means	0.97	0.80	0.55	0.41	1.16	2.43	1.51	1.33	1.59	1.34	0.43	0.87

## COTTIS, ALTA. (Name changed to "Writing-on-Stone" in 1912 and to "Masinastu" in 1917).

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1900.	0.20	0.32	0.73	1.82	1.82	1.16	0.72	1.03	3.49	1.32	1.00	1.63
1901.	1.65	1.15	0.55	0.20	1.58	2.58	0.69	1.15	1.96	0.00	0.05	1.08
1902.	0.35	1.10	0.82	0.00	0.08	7.53	5.10	1.80	0.73	0.10	1.00	
1903.				0.20	1.21	1.02	1.11		0.90			
1904.	S.	1.60	S.	S.	2.11	1.00	S.	S.	0.00	0.30	1.20	
1905.		S.	0.32	0.30	0.70	1.86	1.68		0.00		S.	1.55
1906.	0.20	0.60	0.90		4.35			0.50	3.45	0.25		0.05
1907.	2.60	0.60	0.90	1.30	3.85	1.17	2.00		0.13		0.63	
1908.	0.58	0.60	0.75	0.65	2.65	0.60	0.13		0.02	0.60	0.40	
1910.				0.01	1.00	0.43	0.25	S.	1.00	0.57	0.36	0.55
1912.	0.90	0.55	0.55	0.63				0.68	1.45			1.60
1913.				1.00	6.00	1.19	0.65					
1917.											4.01	6.46
Sums..	6.48	6.52	5.52	6.81	28.85	18.75	12.65	6.98	12.23	2.54	4.01	6.46
Means.	0.81	0.72	0.61	0.62	2.62	1.88	1.26	0.87	1.36	0.36	0.50	1.08

## MILK RIVER.

1910.					0.25	0.73	0.20	1.00	1.63	0.23	0.05	
1915.							1.71	0.45	2.01	1.23	1.10	0.80
1916.	1.50	0.60	0.20	0.45	3.09	3.53		2.11	2.81		1.10	0.50
1917.	0.60			1.30	0.85	2.55	0.45	0.93	1.38	1.40	0.00	
Sums..	2.10	0.90	0.20	1.75	4.19	6.81	2.45	1.50	7.86	2.86	2.25	1.30
Means.	1.05	0.90	0.20	0.87	1.40	2.27	0.82	1.12	1.96	0.95	0.56	0.65

## BATTLE CREEK The Meadows.

1912.				0.52	1.38	1.60	0.35	1.64				
1913.				0.05	1.02	2.22	2.98	2.23		0.00	2.75	1.35
1914.						1.70		1.10				
1915.					1.68	3.50	3.80	0.13	2.15	0.11	0.30	1.35
Sums..				0.57	3.98	8.82	7.13	5.16	3.15	2.86	0.00	1.35
Means.				0.28	1.33	2.20	2.38	1.29	1.58	1.13		

## EAST END.

1907.				0.05							1.25	7.57
1908.	0.30										0.52	0.40
1909.	0.95	1.55			0.73	1.51	1.14	0.99				0.55
1910.			0.15	0.44	1.77	2.20	0.92					
1912.								0.99			1.77	8.52
Sums..	1.25	1.55	0.15	0.49	2.50	3.71	2.06	0.99				
Means.												

## FORT WALSH Collected.

1911.	0.95	0.38										
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## GOVENLOCK See also Willow Creek.

1915.							1.42	0.74	1.28	0.66	0.08	0.23
1916.	1.40	0.90	0.87	0.47	1.43	2.43	2.92	1.57	1.13	1.07	0.40	1.10
1917.	0.77	0.50	S.	0.33		1.08	0.24	0.29			S.	2.13
Sums..	2.17	1.40	0.87	0.80	1.43	3.51	7.58	2.60	2.41	1.71	0.48	3.46
Means.	1.08	0.70	0.44	0.40	1.43	1.76	2.53	0.87	1.20	0.80	0.16	1.15

## KLINTONEL.

Year	Jan.	Feb.	March.	April.	May	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.
1910					R.	40.20		1.88	0.31	0.44	0.10	1.20
1911.						3.72	1.82	1.87	5.19	1.31	1.37	0.66
1912.	0.58	0.48	0.25		4.12	4.81	1.90	1.34	1.17	1.00	0.13	0.25
1913.	0.45	0.38	1.08	0.56	0.65	4.31	2.59	1.04	0.57	0.55	S.	S.
1914.	1.22	0.15	0.83	0.05	0.83	2.87	0.21	1.86	3.27	1.57	0.79	1.00
1915.	0.81	0.30	0.45	1.27	6.63	5.39	2.36	0.10	2.23	3.30	1.10	0.70
1916.	1.44	1.17	1.01	0.88	3.56	3.57	3.98	0.05	2.22	2.43	0.45	1.70
1917.	1.52	1.27	1.78	2.56	0.11	1.79	0.31	0.74	2.92	1.81	S.	2.26
Sums.	6.08	4.05	5.40	5.32	15.90	26.69	13.20	13.18	17.88	12.41	3.94	7.77
Means.	1.01	0.68	0.90	1.06	2.27	3.34	1.99	1.65	2.24	1.55	0.49	0.97

## NASHUAN (Kelvinhurst).

1910				0.40	1.47	1.33	0.94	1.56	6.35	0.22	0.05	0.10
1911.	0.50	0.15		0.26	1.77	1.75	1.05	1.38	0.57	0.22	0.25	0.45
1912.				0.60	1.26	3.61	3.38	1.64	0.49	0.20	0.40	0.10
1913.	0.65	0.05	0.65	0.10	R.	0.22	2.13	0.08	2.01	1.05	2.51	0.20
1914.						4.51	2.67	2.81	0.32	1.78	0.34	0.10
1915.				0.41	2.65	1.95	3.38	1.14	1.15	1.13	0.05	0.90
1916.	0.80	0.60	0.73	0.82		1.29	0.47	0.48	2.08	0.10	S.	1.65
1917.												
Sums.	2.70	1.15	1.48	2.49	11.88	11.73	12.11	8.53	13.47	4.72	1.70	3.50
Means.	0.67	0.29	0.49	0.42	1.98	2.10	1.73	1.22	1.92	0.67	0.21	0.58

## RAVENSBAG.

1916.					4.11	2.77	3.37	1.15	1.39	1.69	0.10	2.10
1917.	1.20	1.45	0.32	1.58			1.87					

## WILLOW BUNCH.

1902				1.27	4.37	0.83	6.50	9.66	0.50	2.02	0.45	0.80
1903	0.28	0.40									0.73	0.63
1904	0.82		0.80		2.23	7.23	0.25	1.32				
1906		0.80	0.80	0.85	3.80	0.45	0.33	0.09	0.14	0.65	0.70	
1908												
Sums	1.10	1.20	1.60	2.12	10.40	8.51	7.08	11.07	0.64	2.67	1.88	1.43
Means	0.55	0.60	0.80	1.06	3.47	2.84	2.36	3.69	0.32	1.33	0.63	0.71

## WILLOW CREEK.

1910												0.65
1911	0.40	0.35		1.32	0.32				4.09	0.48	0.63	0.20
1912	0.55	0.00		1.15	1.95	2.47	0.97	1.84	0.94	0.30	0.25	0.25
1913	1.65	0.01	1.33	0.78								
Sums	2.80	0.36	1.33	3.25	2.27	2.47	0.97	1.84	5.03	0.78	0.88	1.10
Means	0.93	0.12	1.33	1.08	1.14	2.47	0.97	1.84	2.52	0.39	0.44	0.37

## FOREMOST.

1916				0.17	2.61	3.05	3.80	3.94	0.25			
1917					0.74	1.09						
Sums					3.35	4.14						

## MINDA (Manyberries Ranch).

1910												0.70
1911	0.18	0.05	0.15	0.60								
1915					2.62	4.51	5.15	3.28	0.48	2.19		
1916												
1917*												

\*Precipitation not measured.

## RAYMOND.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910					1 60	1 30	0 11	2 00	2 71	0 89	0 25	1 10
1911	0 70											

## STIRLING.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1901		0 40	0 50	0 10	2 05	5 30	S	0 93	3 93	0 00		0 40
1902	0 20	1 20	0 00	0 00	8 81	7 61	4 95	1 28	0 56		1 00	1 00
1903				0 50	4 74	0 90	1 32	2 95	1 10	0 00	0 60	1 00
1904	S	0 70	1 80	0 70	1 08	1 26	0 34	1 04		0 70	0 60	0 30
1905	1 65	0 10	0 76	0 40	1 26	2 19	2 93	0 29	0 72	1 05	0 00	
1906	0 60	0 00	0 50	1 16	7 44	2 16	0 40	4 22	0 06	0 93	0 74	0 70
1907	1 10	0 20	0 80	0 90								
Sums	3 55 5	2 60 6	4 36 6	3 76 7	25 38 7	19 42 6	9 94 6	10 71 6	6 37 5	2 68 5	2 94 5	3 40 5
Means	0 71	0 43	0 73	0 54	4 23	3 24	1 66	1 78	1 27	0 54	0 59	0 68

## WELLS SIDING, ALBERTA.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910							0 15	1 01	2 71	0 33	0 25	1 10
1911	0 85											

## CHAPLIN, SASKATCHEWAN.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1905					2 70	2 72	2 91	0 68	0 62	0 71	0 68	0 30
1906	0 90	0 60	0 30	1 87	2 60	5 18	0 55	1 04	1 53	0 13	2 91	1 90
1907	3 20	1 10	1 80	1 65	1 80	3 36	3 75	5 28	0 65	0 01	0 19	1 20
1908	0 50	1 20	1 60	0 88	0 99	4 06	0 49	1 99	0 46	1 53	0 70	0 71
1909	0 90	0 70	0 60	0 74	2 65	4 02	6 50	1 07	1 17	0 33	1 25	1 60
1910	0 30	0 80	1 78	0 22	2 47	3 10	1 04	2 53	1 00	0 24	1 00	1 60
1911	0 27	0 11	0 15	0 33	3 59	3 82	2 05	2 81	1 05	1 20	0 07	0 06
1912	0 90	0 07	0 04	0 21	3 91	1 91	2 87	3 50	2 08	0 61	0 10	0 04
1913	0 08	0 06	0 50	0 40	0 48	2 13	2 25	2 88	0 27	0 82	0 02	0 02
1914	1 05	0 45	0 85	1 03	0 36	3 28	0 59	0 92	0 96	2 02	0 98	0 45
1915	0 20	0 08		0 39	4 33	3 47	2 48	0 97	1 36	0 63	0 18	0 65
1916	1 88	0 50	1 80	0 41	1 47	4 75	5 06	1 56	1 58	1 86	0 30	0 45
1917	0 38	0 35	0 27	1 41	0 00	4 15	0 65	1 44	1 24	1 22	0 00	0 30
Sums	10 56	6 02	9 69	11 54	27 44	45 93	30 99	27 27	13 97	11 31	8 38	9 28
Means	0 88	0 50	0 88	0 96	2 11	3 53	2 38	2 09	1 07	0 87	0 64	0 71

## GRAVELBOURG.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911							2 83	2 27	1 20	.....	.....	.....

## LARCHMOUNT (Pambrum).

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911	1 25	0 67	0 83	0 73	2 34	4 93	2 10	1 96	3 79	1 73	2 20	0 85
1912	0 40	0 10	0 10	0 41	2 79	1 74	2 08	3 12	1 04		0 20	0 10
1913	0 67	0 10		1 52	0 77	3 55	1 49	1 44	0 20	0 25	0 14	R.S.
1914	1 55	0 20	1 60	0 24	0 47	3 44	0 69	1 88	1 39	1 66	0 60	0 80
1916	2 15	1 45	2 07	1 45	2 52	4 80	4 31	1 10	1 05	2 10	0 32	0 60
1917	1 20	1 20										
Sums	7 22	3 72	4 60	4 35	8 89	18 46	10 67	9 50	7 47	5 50	3 46	2 35
Means	1 20	0 62	1 15	0 87	1 78	3 69	2 13	1 90	1 49	1 38	0 69	0 47

## CARMICHAEL.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910											0 78	1 20
1911	1 67	1 48	0 55	.....	0 39	2 89	1 86	.....	.....	.....	.....	.....

## CRANE LAKE.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1899							4.62	3.93	1.07	0.64	0.69	0.46
1900	0.20	0.35	0.60	1.24	1.68	0.69	1.01	4.81	2.55	1.47	0.68	0.73
1901	1.25	0.68	0.31	0.72	3.42	2.71	3.04	2.16	2.75	0.21	0.68	0.58
1902	0.30	0.33	0.28	0.44	4.31	4.77	2.04	1.14	0.44	0.18	0.65	
1903		0.30	0.47	0.09	3.57	1.37	2.41	2.42	1.08	0.11	0.53	0.25
1904	0.70	0.50	1.40	0.44	1.46	1.51	1.04	1.27	1.73	0.64	S.	0.65
1905	0.37	0.41	0.50	1.15	3.47	3.17	1.23	0.58				
1915						2.67	2.50	0.93	2.02	1.04	0.05	
1916	1.00		1.01	0.34	2.88							
Sums	3.82	2.57	4.57	4.42	20.49	16.89	17.89	17.24	11.66	4.29	3.28	2.67
Means	0.61	0.43	0.65	0.63	2.93	2.41	2.24	2.15	1.67	0.61	0.47	0.53

## MAPLE CREEK.

1886	1.05	0.18	0.50	0.46	1.02	0.17	0.88	0.40	0.40	0.24	0.81	1.44
1887	1.45	1.75	0.10	0.35	0.20	5.02	0.75	0.47	0.47	0.37	0.15	0.43
1888	1.05	0.18	0.50	0.15	1.20	5.05	1.28	1.64	0.63	0.58	S.	0.60
1889	0.25	0.18	0.34	0.55	3.54	1.05	1.67	R.	0.38	R.	0.23	0.55
1890	0.35	1.10	0.20	0.35	R.	2.51	0.15	1.73	2.68	0.46	0.10	0.10
1891		0.25	0.95	0.76	1.77	2.42	3.29	1.12	1.01	0.51		
1892	0.05	0.40						1.02				
Sums	4.20	4.04	2.59	2.62	7.73	16.22	8.02	6.38	5.57	2.16	1.29	3.12
Means	0.70	0.58	0.43	0.44	1.29	2.70	1.34	0.91	0.93	0.36	0.26	0.62

## WAPASHOE.

1910						0.54	1.62	1.70	1.26	0.52	0.48	1.25
1911	0.83	0.68	0.31	1.18	1.23	3.91	2.34	1.61	2.91	0.72	1.03	0.48
1912	0.26	0.23	0.10	0.23	0.02	3.02	1.56	3.35	0.95	0.93	0.30	0.20
1913	0.25	0.28		0.95	0.49	2.47		1.04	1.19	0.33	0.03	0.14
1914	0.64	0.18	0.43	0.23	0.46	1.32	0.34	1.29	3.00	3.39	0.28	0.60
1915	0.20	0.45		0.16	4.33	3.44	3.46	0.70	1.96	0.92		0.47
1916	0.53	0.55	0.42	0.19	2.68	4.93	2.20	3.13	0.80	1.20	0.42	0.80
1917	0.58	0.90	0.30	1.14	0.40	2.40	1.10	0.84	0.84	1.32	S.	0.63
Sums	3.25	3.27	1.56	4.08	9.52	22.03	12.62	13.66	12.91	9.33	2.54	4.57
Means	0.46	0.47	0.31	0.58	1.36	2.50	1.80	1.71	1.61	1.17	0.36	0.57

## THE BASIN OF THE QU'APPELLE AND ASSINIBOINE RIVERS.

**January.**—Over the western portion of this basin from Moosejaw on the south to Watrous on the north the isotherms are spread out widely, the maximum changing from 11° at Moosejaw to 8° at Watrous, and the mean minimum from -7° to -9°. The eastern portion however, which contains the Touchwood, Beaver and Pheasant Hills is a region of curious variations of temperature. In the Beaver Hills north of Hubbard the mean maximum and minimum temperatures are, respectively, 5° and -16°. There is, however, a drop of over 6° in the minimum temperature between Moosejaw and Qu'Appelle. Beyond the Beaver and Pheasant Hills the maximum rises about 2° in the vicinity of Yorkton but falls again in the south near Brandon. The part that these hills may play in the temperature control of this region has already been referred to in dealing with the temperature of the North Saskatchewan Basin. During the latter part of its course (as the Assiniboine) the river flows from Carberry to Winnipeg through a region of small temperature-gradients, the maximum about 8° and the minimum about -12°.

**February.**—The isotherms in this region are bent to the south and roughly conform to the contours of the Touchwood and Beaver Hills. Thus the Beaver Hills are as cold as Prince Albert.

The plateau upon which our station at Qu'Appelle stands appears to have a higher minimum than the river valley 500 feet below at Fort Qu'Appelle and Fishing Lake. Their maxima are approximately the same.

Yorkton and Crescent Lake have the advantage of the lee of the Beaver Hills and the isotherms turn northward there, but fall again with the Assiniboine on the west side of the Duck and Riding Mountains watershed. Minnedosa is therefore as cold as Prince Albert with a normal daily range from  $10^{\circ}$  to  $-12^{\circ}$ . In fact in passing from Prince Albert to Souris southeast across the hill country there is no gain in warmth through  $4^{\circ}$  of latitude. From Brandon to Winnipeg there are some curious but unimportant changes in temperature.

**March.**—The steep temperature gradients which are characteristic of this hill country in the winter months are very much reduced in March. From the Quill Lakes to Duck Mountain the maximum temperature is  $22^{\circ}$  and the minimum zero or  $-2^{\circ}$ . Southwestwards to Qu'Appelle these temperatures increase to  $28^{\circ}$  and  $6^{\circ}$  but down the Assiniboine Valley there is no rise in temperature until the confluence with the Qu'Appelle is reached. South of the confluence there is a rise to  $26^{\circ}$  and  $2^{\circ}$  at Brandon. Thence to Winnipeg there is little change except a slight increase in the minimum temperature.

**April.**—At Moosejaw and Regina the daily range of temperature is from  $25^{\circ}$  to  $50^{\circ}$  or  $54^{\circ}$  but further east the maximum temperatures are  $4^{\circ}$  or  $5^{\circ}$  lower and north of Yorkton the minimum also decreases. In the Porcupine Hills the maximum is  $42^{\circ}$  and the minimum  $20^{\circ}$ . At Minnedosa the daily range is from a minimum of  $25^{\circ}$  to a maximum of  $59^{\circ}$ , thence east to Winnipeg there is little change.

**May.**—Most of this region has a maximum of  $63^{\circ}$  or  $64^{\circ}$  and a minimum of  $36^{\circ}$  and  $37^{\circ}$ . The Beaver and Touchwood Hills are  $2^{\circ}$  or  $3^{\circ}$  colder.

**June.**—The northernmost portion of the Assiniboine Basin has a normal daily maximum of  $68^{\circ}$  or  $69^{\circ}$  and a daily minimum of  $43^{\circ}$  to  $44^{\circ}$ . South of Riding Mountain these figures have increased to  $73^{\circ}$  and  $74^{\circ}$ .

The Qu'Appelle River as far as Indian Head runs through territory with a maximum of  $72^{\circ}$  and minimum of  $47^{\circ}$  or  $48^{\circ}$ . Beyond Indian Head it is a little cooler till the confluence is reached. From Brandon to Winnipeg the maximum is generally  $73^{\circ}$  to  $75^{\circ}$  with a minimum of  $48^{\circ}$  to  $51^{\circ}$ .

**July.**—The valley of the Qu'Appelle has a maximum of  $77^{\circ}$  and a minimum of  $51^{\circ}$  or  $52^{\circ}$ . The main valley of the Upper Assiniboine has the same temperatures. But in the Beaver and Touchwood Hills the minimum is  $49^{\circ}$  and near the Porcupine Reserve  $47^{\circ}$ . South of the Qu'Appelle there is a much smaller decrease of temperature.

From Brandon to Winnipeg the maximum is  $78^{\circ}$  or  $79^{\circ}$  with a minimum of  $53^{\circ}$ .

**August.**—Most of this region has a mean maximum of  $75^{\circ}$  and a mean minimum of  $47^{\circ}$  except the Beaver Hills Country from Melville north to the Porcupine Reserve. The greater part of this area has a maximum exceeding  $71^{\circ}$  but with a minimum between  $41^{\circ}$  and  $46^{\circ}$ .

**September.**—Along the Qu'Appelle from Moosejaw to Broadview the mean maximum is  $65^{\circ}$  and the mean minimum  $38^{\circ}$  but from Broadview to Brandon a cooler area intervenes. From Brandon to Winnipeg there is a rise in the minimum temperature of  $2^{\circ}$  or  $3^{\circ}$ .

The upper region of the Assiniboine has a mean maximum of  $61^{\circ}$  and a mean minimum of  $34^{\circ}$  or  $35^{\circ}$ .

**October.**—While the distribution of the temperature is very irregular the mean maximum and minimum do not greatly differ from  $51^{\circ}$  and  $29^{\circ}$  as far as Brandon. Beyond Brandon it is slightly warmer.

**November.**—In the Qu'Appelle basin the normal maximum temperature is  $30^{\circ}$  to  $32^{\circ}$  as far as Indian Head. The basin of the Assiniboine is cooler especially near its headwaters. Beyond the confluence the maximum is much the same as at Regina but the minimum increases to  $12^{\circ}$  or  $13^{\circ}$  at Portage la Prairie and Winnipeg.

**December.**—The low temperatures in the Porcupine area (Central mean maximum  $8^{\circ}$ , mean minimum  $-11^{\circ}$ ), dominate the Upper Assiniboine Valley.

In the Qu'Appelle Valley the Regina-Qu'Appelle region is comparatively warm with a mean maximum of  $19^{\circ}$  and mean minimum of zero to  $-2^{\circ}$ .

From Brandon to Winnipeg the corresponding temperatures are  $17^{\circ}$  and  $-3^{\circ}$ .

RECORDS OF THE FIRST AND LAST FROSTS, BASIN OF THE QU'APPELLE AND  
ASSINIBOINE RIVERS.

BROADVIEW, SASK.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1905	May	147	27	32.0					
1906	July	195	11	25.0	Sept	255	12	31.0	
1907	May	150	30	21.0					
1908	June	160	9	30.0	Aug	225	13	33.0	
1909	May	136	16	33.0	Aug	211	29	33.0	
1910	June	157	6	32.0	Aug	243	31	32.0	
1911	June	178	27	31.0	Aug	234	22	32.0	

BROWNLEE, SASK.

1910					Aug	237	25	31.7
1911	May	148	28	31.8				

CARON, SASK.

1915	June	167	16	26.0	Sept	253	10	32.0
1916	May	148	28	33.0	Aug	239	27	31.0
1917	July	183	2	33.0	Sept	244	1	30.0

FORT QU'APPELLE, SASK.

1912	June	167	16	33.0	Sept	258	15	26.0
1913	June	157	6	26.8	Sept	245	2	32.1
1914	May	147	27	33.1	Aug	222	10	32.4
1915	June	167	16	29.6	Sept	254	11	26.5
1916	June	152	1	33.0	Aug	239	27	33.3
1917	June	172	21	29.2	Sept	252	9	22.0

FOXLEIGH, SASK.

1904	May	149	29	33.0	July	207	26	33.0
1905	June	169	18	32.0	Sept	251	8	33.0
1906	May	146	26	28.0	Aug	238	26	25.0
1907	June	155	4	32.0	Aug	214	2	30.0
1910	June	156	5	31.0	Aug	228	16	31.0

GOVAN, SASK.

1910	June	156	5	30.6	Sept	251	8	33.2
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GRENFELL, SASK.

1894	June	156	5	30.0	Sept	253	10	28.0
1895	June	178	27	33.0	Aug	232	20	32.0
1896	April	119	29	33.0	Aug	228	16	33.0
1897	June	160	9	33.0	Aug	227	15	33.0
1898	July	201	20	30.0	Aug	224	12	33.0
1899	May	138	18	32.0	Sept	259	16	30.0
1901	June	158	7	32.0				
1902	May	132	12	33.0	Sept	253	10	26.0
1903	June	161	10	31.0	Sept	247	4	32.0
1904	May	144	24	25.0	Sept	254	11	30.0
1905	May	146	26	33.0	Sept	254	11	32.0
1906	May	147	27	29.0	Sept	255	12	29.0
1907	May	150	30	29.0	Sept	254	11	30.0
1908	May	142	22	33.0	Aug	225	13	31.0
1909	May	135	15	31.0	Sept	246	3	32.0
1910	June	157	6	32.0	Aug	229	17	33.0
1911	June	178	27	33.0	Aug	231	22	32.0
1912	June	166	15	33.0	Sept	245	2	33.0
1913	June	158	7	30.0	Sept	245	2	33.0
1914	May	143	23	33.0	Sept	246	3	30.0
1915	June	167	16	27.0	Aug	236	24	32.0
1916	June	152	1	32.0	Sept	257	14	27.0
1917	June	172	21	28.0	Aug	240	28	30.0

HUBBARD, SASK (Drumagne)

Year.	Late Frost				Early Frost			
	Month	Day of Year.	Date.	Temp.	Month.	Day of Year	Date.	Temp.
1908	June	181	30	30.0	Aug	225	13	28.0
1909	June	164	13	33.0	Aug	241	29	33.0
1910	June	157	6	33.0	Aug	229	17	30.0
1912	June	167	16	32.0	Sept	258	15	22.0
1913	June	157	6	30.0	Sept	258	15	30.0
1914	May	131	31	33.0	Aug	237	25	32.0
1915	July	182	1	33.0	Aug	238	26	33.0
1916	June	153	2	30.0	Aug	240	28	30.0
1917	June	172	21	28.0				

IMPERIAL, SASK

1912	May	141	21	31.0	Sept	257	14	22.0
1913	June	153	2	32.5	Sept	262	19	25.0
1914	June	153	22	23.0	Aug	221	9	33.5
1915	June	181	30	31.0	July	205	24	33.0
1916	June	154	3	32.0	Aug	221	12	32.5
1917	June	172	21	29.0	July	183	2	30.0

Frost every month

Frost every month

LEMBERG, SASK

1906	May	147	27	32.0	Sept	255	12	28.0
1907	May	149	29	33.0				

LANIGAN, SASK.

1910	May	145	25	32.5	Sept	251	8	33.3
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MOOSELAW, SASK.

1894	May	138	18	30.0	Sept	253	10	24.0
1895	June	178	27	32.5	Aug	239	27	33.0
1896	May	139	19	31.0	July	203	22	32.0
1897	June	158	7	29.0	Aug	241	29	33.5
1898	June	165	14	29.5	Sept	251	8	28.0
1899	May	142	22	32.0	Sept	246	4	32.0
1900	June	164	13	32.5	Aug	256	13	28.0
1901	June	157	6	33.0	Sept	249	6	32.5
1902	May	146	26	32.0	Aug	242	30	29.0
1903	June	161	10	26.0	Sept	247	4	33.0
1904	June	165	14	32.0	May 21 Aug 21	233	21	28.5
1905	June	161	10	30.5	May 26 Sept. 19	255	12	30.0
1906	May	147	27	29.0	May 27 Sept. 12	237	25	32.0
1907	June	155	4	32.0	May 26 Sept. 12	251	8	33.0
1908	June	160	9	32.0	Sept. 21	234	22	32.0
1909	June	176	25	33.0	May 10 Oct. 6	247	4	30.5
1910	June	155	5	31.5	June 2 Sept. 9	229	17	31.5
1911	May	147	27	32.0	May 12 Sept. 25	240	28	32.0
1912	May	158	6	30.0	May 18 Sept. 15	259	15	22.0
1913	May	139	18	27.0	May 18 Sept. 30	255	11	30.0
1914	May	152	31	33.0	April 30 25 Oct 13	223	10	30.0
1915	June	168	16	27.0	June 16 Sept. 11	254	10	32.0
1916	May	138	18	27.0		257	14	24.0
1917	June	172	21	32.0		252	9	32.0

MUNSTER (St. Peter's Monastery)

1904					Aug	240	28	30.6
1905	June	154	3	32.5	Sept	255	12	28.0
1906	June	159	8	30.0	Aug	225	13	30.0
1908	June	158	7	32.0	Sept	247	4	29.0
1909	June	164	13	31.0	Aug	229	17	32.0
1910	June	147	27	32.0	Aug	238	26	33.0
1911	May	168	17	33.0	Sept	256	13	32.0
1912	June	157	6	28.0	Sept	245	2	33.0
1913	June	175	21	30.0	Aug	218	6	31.0
1914	June	185	4	30.0	Aug	237	25	33.0
1915	July	153	2	32.0	Aug	241	29	31.0
1916	June	153	2	32.0	July	183	2	28.0
1917	June	172	21	33.0				

Frost every month

Frost every month

PI NSU SASK (Gatesgarth).

Year	Late Frost			Temp	Frost every month	Early Frost			
	Month	Day of Year	Date			Month	Day of Year	Date	Temp
1895	June	178	27	31.0		Sept	262	19	30.0
1896	May	136	16	33.0		Sept	248	5	30.0
1897	June	178	7	33.0		Sept	259	16	21.0
1898	June	165	11	26.0		Sept	252	9	25.0
1899	May	112	22	32.0		Aug	242	30	32.0
1900	June	161	13	33.0		Sept	256	13	30.0
1901	June	160	9	33.0		Sept	249	6	31.0
1902	July	189	8	33.0		Aug	242	30	33.0
1903	June	161	10	28.0		Sept	247	4	30.0
1904	June	165	11	31.0		Aug	233	21	30.0
1905	June	175	24	32.0		Sept	250	7	31.0
1906	May	147	27	29.0		Aug	238	26	31.0
1907	June	174	23	33.0		Sept	255	12	28.0
1908	June	169	9	31.0		Aug	225	13	32.0
1909	June	177	26	28.0		Aug	240	28	30.0
1910	June	164	13	32.0		Aug	229	17	30.0
1911	May	148	28	28.0		Aug	231	22	31.0
1912	June	166	15	29.0		Sept	257	14	22.0
1913	May	137	17	27.0		Sept	253	10	31.0
1914	May	148	28	32.0		Aug	221	9	31.0
1915	June	164	15	25.0		Sept	251	8	33.0
1916	May	137	17	30.0		Sept	256	13	26.0
1917	June	171	20	33.0		Aug	216	4	32.0

QU'APPELLE, SASK.

1883	June	153	2	25.5		Sept	247	4	32.0
1884	May	139	18	31.9		July	181	1	33.2
1885	June	172	21	29.3		Aug	236	21	24.8
1886	May	135	15	32.2		Aug	243	31	27.2
1887	May	116	16	30.0		Sept	252	9	33.0
1888	June	153	1	32.0		Sept	271	27	25.5
1889	May	119	29	28.5		Sept	250	7	33.3
1890	June	152	1	30.6		Aug	233	21	29.5
1891	June	154	3	28.0		Sept	256	13	27.2
1892	May	152	31	27.0		Sept	257	13	30.5
1893	May	141	21	22.5		Sept	262	19	19.5
1894	May	147	27	33.0		Sept	253	10	33.0
1895	June	160	9	33.2		Aug	243	31	28.0
1896	May	146	26	31.9		Aug	228	16	33.0
1897	June	161	10	31.8		Sept	253	10	24.6
1898	June	165	11	21.7		Sept	251	8	26.4
1899	May	139	19	32.0		Sept	259	16	33.0
1900	May	124	4	31.0		Sept	256	13	27.5
1901	June	157	6	30.6		Sept	259	16	32.3
1902	June	155	1	32.5		Sept	254	11	28.0
1903	June	161	10	28.8		Sept	248	5	31.8
1904	May	149	29	33.3		Sept	254	11	29.5
1905	May	145	25	30.0		Sept	255	12	30.0
1906	May	147	27	31.2		Aug	238	26	33.5
1907	May	151	31	33.2					
1908						Sept	260	17	33.0
1909	May		25	33.0		Sept	247	4	33.0
1910	June	156	5	31.0		Sept	251	8	32.0
1911	May	147	27	31.0		Aug	238	26	30.0
1912	June	167	16	33.0		Sept	258	15	22.0
1913	June	157	6	33.0		Sept	265	20	28.0
1914	May	124	11	31.0		Aug	222	10	32.0
1915	June	159	8	26.0		Sept	263	11	26.0
1916	June	151	1	31.0		Aug	241	29	33.0
1917	June	172	21	31.0		Sept	216	3	30.0

QUILL LAKE, SASK.

1911	June	167	16	33.0		Sept	258	15	24.0
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## REGINA, SASK.

Year.	Late Frost					Early Frost			
	Month	Day of Year	Date	Temp.		Month.	Day of Year	Date	Temp.
1884	May	142	22	33.0		Aug	231	19	43.0
1885	June	165	14	32.5		Aug	236	24	28.5
1886	June	153	2	30.0		Aug	243	31	23.0
1887	June	155	4	32.0		Sept	252	9	32.5
1888	June	153	2	30.0		Sept	258	15	31.5
1889	May	149	29	33.0		Sept	245	2	31.0
1900	June	164	13	33.0		Sept	256	13	31.0
1901	June	160	9	32.5		Sept	259	16	32.0
1902	July	189	8	31.0	Frost every month	Aug	242	30	28.0
1903	June	161	10	23.0		Sept	247	4	32.0
1904									
1905	June	175	21	33.0		Sept	250	7	32.0
1906	May	147	27	30.0		Aug	238	26	31.0
1907	June	153	2	32.5		Aug	233	21	31.5
1908	June	160	9	30.0		Aug	225	13	33.0
1909	June	176	25	31.0		Sept	247	4	31.0
1910	June	157	6	33.0		Aug	229	17	32.0
1911	May	148	28	32.0		Aug	240	28	32.0
1912	June	167	16	32.0		Sept	241	1	30.0
1913	May	140	20	32.0		Aug	254	11	30.0
1914	May	147	27	32.0		Sept	232	10	31.0
1915	June	167	16	26.0		Sept	252	9	31.0
1916	May	139	19	32.0		Sept	257	14	29.0
1917	June	177	26	33.0		Sept	252	9	33.0

## STRASBOURG, SASK.

1910	June	156	5	32.0		Aug	242	30	29.0
1911	May	147	27	32.0		Sept	248	5	31.0
1912	June	156	5	31.0		Sept	257	14	25.0

## WHITEWOOD, SASK.

1914	June	142	22	32.0		Aug	222	10	33.0
1915	June	167	16	30.0		Aug	214	2	31.5
1916	May	139	19	32.0		Aug	241	29	32.0
1917	June	172	21	30.0		Aug	240	28	31.5

(Esterhazy, Fairfield)

## YARBO, SASK.

1908	June	160	9	29.0		Aug	225	13	30.0
1909	June	164	13	30.0		Aug	241	29	29.0
1910	June	157	6	31.0		Aug	229	17	33.0
1911	May	149	29	23.0		Aug	238	26	28.0
1913	June	156	5	29.0		Sept	244	1	33.0
1914	June	176	25	33.5		Aug	222	10	26.2
1915					Jan. and Feb. only, received.				

## ALMASIPPI, MAN.

1902	June	172	21	33.0		Sept	247	4	32.0
1903	May	141	21	33.0		Sept	251	11	30.0
1904	May	135	15	32.0		Sept	255	12	26.0
1905	June	172	21	33.0		Aug	243	31	31.0
1906	May	148	28	29.0		Aug	233	21	32.0
1907	June	156	5	31.0		Aug	236	24	31.0
1908	June	165	14	30.5		Sept	260	17	33.0
1909	June	165	14	33.0		Aug	240	28	28.0
1910	May	149	29	32.0		Sept	251	8	32.0
1911	June	178	27	30.0		Sept	266	23	33.0
1912	June	157	6	30.0		Sept	251	8	33.0
1913	June	168	17	33.0		Sept	247	4	30.0
1914	June	170	19	28.0		Aug	236	24	31.0
1915	June	170	19	33.0		Aug	244	12	33.0
1916	June	171	20	32.0		Sept	245	2	30.0
1917	June	172	21	32.0					

Summer Station

BURTLE, MAN.

Year.	Late Frost					Early Frost.			
	Month.	Day of Year	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1904	June	178	27	30.0		Sept	255		29.0
1905	June	172	21	33.0		Sept	255	12	28.0
1906	May	148	28	26.0		Sept	254	12	31.0
1907	June	181	2	33.0		Aug	244	11	33.0
1908						Sept	261	2	31.0
1909	May	137	17	33.0		Sept	247	18	33.0
1915						Aug	236	4	33.0
1916	June	170	19	32.0		Aug	224	24	33.0
1917	June	172	21	30.5	Frost every month	July	183	12	31.0
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BRANDON, MAN.

1891	June	156	4	28.1		Aug	210	27	29.5
1892	June	182	30	29.8		Aug	242	29	29.5
1893	May	117	26	31.6		Aug	225	12	33.4
1894	June	156	5	28.6		Sept	257	10	31.6
1895									
1896	May	148	28	32.8		Aug	229	17	33.0
1897	June	158	7	27.0		Sept	253	10	29.9
1898	June	165	14	29.0	Frost every month.	July	201	20	33.0
1899	May	139	19	32.0		Sept	255	12	33.4
1900	June	162	11	30.1		Aug	240	28	32.6
1901	June	158	7	26.5		Sept	251	8	33.1
1902	May	130	10	30.1		Sept	247	4	32.5
1903	May	145	25	31.5		Sept	247	4	33.0
1904	May	147	27	31.1		Sept	254	11	28.0
1905	June	172	21	31.2		Sept	255	12	27.0
1906	May	147	27	33.1		Sept	254	11	32.0
1907	June	156	5	28.5		Aug	215	3	32.5
1908	June	165	14	33.0		Aug	226	14	30.0
1909	June	165	14	28.0		Aug	241	29	30.5
1910	June	157	6	30.0		Aug	243	31	31.0
1911	May	149	29	32.5		Aug	240	28	32.0
1912	June	157	6	29.8		Sept	261	18	32.0
1913	June	157	6	32.0		Sept	254	11	33.1
1914	June	170	19	31.5		Aug	239	26	29.2
1915	June	170	19	31.5		Aug	237	24	29.0
1916	June	155	1	30.0		Aug	226	13	33.5
1917	June	172	21	29.0	Frost every month..	July	181	3	32.5

CARBERRY, MAN.

1905						Sept	255	12	24.0
1906	May	146	26	21.0		Aug	239	27	30.0
1907	June	177	26	31.0		Aug	231	19	33.0
1908	June	175	21	30.0	Frost every month	July	201	23	32.0

CAROLAN, MAN. (Summer Station)

1904						Aug	241	29	31.0
1905						Sept	255	12	24.0
1906	May	148	28	32.0		Sept	269	25	24.0
1907	May	147	27	31.0		Aug	233	21	31.0
1908	June	166	15	28.0		Aug	231	19	33.0
1909	June	165	14	32.0		Sept	263	25	30.0
1910						Aug	241	29	32.0
1911	May	132	12	27.0		Sept	238	25	27.0

CYPRESS RIVER, MAN. (Summer Station.)

1905	June	172	21	31.0		Sept	245	3	30.0
1906	May	147	27	31.0		Sept	272	29	27.0
1907	June	154	3	33.0		Sept	252	9	32.0
1908	June	166	15	30.0		Sept	266	23	30.0
1909	July	181	3	33.0		Sept	235	22	30.0
1910	June	153	2	32.0		Aug	237	25	33.0
1911	May	149	29	32.0		Aug	234	22	32.0
1912	June	157	6	30.0		Sept	251	11	33.0
1913	June	160	9	33.0		Sept	265	22	13.0
1914	May	135	15	32.0		Aug	238	26	30.0
1915	June	167	16	31.0		Aug	240	24	28.0
1916	June	170	19	29.0		Sept	245	2	32.0
1917	June	172	21	29.0	July last return				

ELKHORN, MAN.

Year	Late Frost			Early Frost				
	Month.	Day of Year.	Date	Temp.	Month	Day of Year	Date	Temp.
1900	June	163	12	31.0	Sept	250	16	27.0
1901	June	158	7	26.0	Sept	251	8	30.0
1902	May	146	26	31.0	Sept	247	4	31.0
1903					Sept	248	5	31.0

FORT ELLICE, MAN.

1894	June	157	6	30.0	Aug	215		33.0
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HAMIOTA, MAN.

1915	June	170	19	30.0	Aug	236	21	30.0
1916	June	155	4	31.0	Aug	221	11	32.0
1917	June	172	21	29.0	July	183	2	32.0

Frost every month

HILLVIEW, MAN.

1896	May	139	19	33.0	Aug	239	27	33.0
1897	June	158	7	21.0	Aug	242	30	31.0
1898	June	139	19	30.0	Aug	220	8	28.0
1899	May	162	11	28.0	Aug	241	29	31.0
1900	June	158	7	27.0	Sept	239	16	27.0
1901	June	130	10	27.0	Sept	251	8	29.0
1902	May	141	21	31.0	Sept	247	4	31.0
1903	May	147	27	31.0	Sept	248	5	29.0
1904	May	147	27	33.0	Sept	254	11	29.0
1905	May	147	27	28.0	Sept	255	12	29.0
1906	May	147	27	28.0	Sept	256	13	29.0
1907	June	160	9	32.0	Sept	257	14	29.0
1908	June	153	2	32.0	Aug	244	22	31.0
1909	June	149	29	33.0	Aug	243	29	31.0
1910	May	157	6	33.0	Aug	240	28	31.0
1911	June	144	21	32.0	Sept	262	19	32.0
1912	May	134	14	23.0	Sept	266	24	31.0
1913	May	167	16	32.0	Sept	259	18	33.0
1914	June	159	19	33.0	Aug	238	26	32.0
1915	May	172	21	32.0	Aug	236	21	32.0
1916	June	172	21	32.0	Aug	225	13	31.0
1917	June	172	21	32.0	Aug	240	28	32.0

MINNEBOSA, MAN.

1883	June	155	4	33.2	Aug	235	23	31.2
1884	May	142	21	32.2	July	183	1	32.7
1885	June	173	22	31.0	Aug	230	18	32.7
1886	June	168	17	28.4	Aug	218	6	30.7
1887	June	155	4	27.8	Aug	200	18	31.5
1888	June	158	6	26.8	Aug	222	9	32.0
1889	June	172	21	32.8	Aug	216	4	32.0
1890	May	147	27	21.0	Aug	221	9	31.0
1891	June	168	17	31.0	Aug	221	22	29.3
1892	June	182	30	24.5	Aug	242	29	29.0
1893	May	146	26	31.8	Aug	242	28	31.0
1894	June	157	6	33.5	Aug	239	15	31.0
1895	June	157	6	33.5	Aug	232	20	30.0
1896	May	150	30	28.0	Aug	229	17	31.4
1897	May	124	4	33.3	Aug	232	30	33.0
1898	June	159	8	32.0	Aug	232	8	30.0
1899	June	149	29	29.5	Sept	251	8	30.0
1898	May	135	18	28.0	Sept	241	29	31.5
1899	May	135	18	29.0	Aug	210	28	31.0
1899	June	162	11	25.5	Aug	230	7	33.5
1900	June	158	7	33.5	Sept	240	7	33.5
1901	June	169	18	32.0	Sept	217	4	32.0
1902	May	141	21	27.0	Sept	217	4	33.0
1903	May	147	27	32.0	Sept	234	11	30.0
1904	June	172	21	32.0	Sept	235	12	27.5
1905	May	147	27	32.5	Sept	241	31	33.2
1906	June	156	5	30.0	Aug	232	9	30.0
1907	June	160	9	32.0	Aug	211	19	32.0
1908	June	165	14	31.8	Aug	241	29	29.5
1909	June	157	6	32.8	Aug	210	28	32.5
1910	June	154	3	32.8	Aug	210	28	32.0
1911	June	157	6	33.5	Sept	266	23	31.5
1912	June	164	13	32.0	Sept	250	16	32.0
1913	June	168	17	32.0	Sept	238	26	32.0
1914	June	168	17	32.0	Aug	216	21	30.5
1915	June	155	4	32.0	Sept	245	2	32.0
1916	June	164	13	33.5	July	181	3	32.0
1917	June	164	13	33.5				

Frost every month

MORDEN, MAN.

Year	Late Frost				Early Frost			
	Month	Day of Year	Date	Temp	Month	Day of Year	Date	Temp
1905	May	146	26	29.0	Sept	255	12	29.0
1906	May	118	28	31.0	Oct	278	5	33.0
1907	May	147	27	27.0	Sept	261	21	33.0
1908	June	165	14	31.5	Sept	270	27	27.5
1909	May	129	9	24.0	Sept	268	25	31.0
1910	May	119	29	31.0	Sept	255	12	30.0
1911	May	148	28	32.0	Sept	267	21	23.0
1912	May	160	18	33.0	Sept	267	25	29.5
1913	June	158	7	33.0	Sept	268	13	31.0
1914	June	170	19	33.0	Sept	256	13	31.0
1915	June	160	9	32.0	Sept	251	8	31.0
1916	June	153	2	31.0	Aug	238	26	27.0
1917	June	155	4	30.0	Sept	262	9	27.0

POPULAR HEIGHTS, MAN.

1878	May	141	21	30.5	Sept	254	11	28.8
1879	June	132	1	30.9	Sept	251	8	29.8
1880	June	153	2	33.4	Sept	250	7	25.1
1881	May	140	20	26.5	Sept	248	5	33.5
1882	June	170	19	31.8	July	199	18	33.0

Frost every month

PORTAGE LA PRAIRIE, MAN. (Summer Station.)

1905	May	129	9	30.5	Sept	255	12	32.5
1906	May	147	27	32.0	Oct	282	9	28.5
1907	May	147	27	31.5	Sept	264	21	30.0
1908	May	140	20	32.0	Sept	270	27	32.5
1909	May	136	6	31.0	Oct	282	9	31.0
1910	June	153	2	32.0	Sept	269	26	30.0
1911	May	133	13	27.0	Sept	268	25	30.5
1912	May	133	13	28.0	Sept	269	26	30.0
1913	May	144	24	30.0	Sept	265	22	21.5
1914	May	134	14	25.0	Sept	260	7	33.0
1915	June	158	7	33.0	Sept	254	11	33.5
1916	May	145	25	32.5	Sept	258	15	31.0
1917	June	154	3	33.0	Aug	229	17	31.0

PORTAGE LA PRAIRIE, MAN.

1894	June	156	5	29.0	Sept.	260	17	25.0
1895	May	141	21	33.0	Sept.	251	8	31.0
1896	May	144	24	32.0	Aug	243	31	33.0
1897	June	158	7	32.0	Sept	259	16	32.0
1898	May	149	29	31.0	Sept.	251	8	32.0
1899	May	139	19	32.0	Sept.	256	13	33.0
1900	June	158	7	31.0	Sept	260	17	32.0
1901	June	158	7	31.0				
1902					Sept.	254	11	30.0
1903	May	129	9	25.0	Sept.	256	13	30.0
1904	May	144	24	32.0	Sept.	254	11	31.0
1905	June	172	21	32.0	Sept.	255	12	31.0
1906	May	147	27	31.0	Sept.	279	6	32.0
1907	May	147	27	29.0	Oct.	264	21	31.5
1908	May	164	13	31.0	Sept.	260	26	32.0
1909	June	135	15	30.0	Sept.	281	8	29.0
1910	May	152	1	32.0	Oct.	239	27	33.0
1911	June	132	12	28.5	Aug.	266	23	29.0
1912	May	157	6	33.0	Sept.	268	25	26.0
1913	June	156	5	33.0	Sept.	264	21	30.0
1914	June	134	14	23.0	Sept.	250	7	31.0
1915	May	159	8	33.0	Aug	238	26	31.0

ROSEBANK, MAN.

1896	May	124	4	31.0	Aug	239	27	33.0
1897	June	159	8	30.0	Sept.	253	10	33.0
1898	June	153	2	31.0	Sept.	251	8	27.0
1899	May	142	22	29.0	Aug	243	31	28.0

## RUSSELL, MAN.

Year	Late Frost					Early Frost			
	Month	Day of Year	Date	Temp		Month	Day of Year	Date	Temp.
1895						Aug	232	29	31.0
1896	May	139	19	29.0		July	203	22	29.0
1897	June	159	8	30.0		Aug	242	30	32.0
1898	June	165	14	29.0	Frost every month	July	201	20	32.0
1899	June	158	7	32.0		Aug	216	4	32.0
1900	June	162	11	29.0	Frost every month	July	200	19	33.0
1901	June	159	8	31.0					
1902	May	130	10	30.0		Sept	254	11	27.0
1903	June	161	10	32.0		Sept	248	5	27.0
1904	July	187	6	32.0		Sept	254	11	29.0
1905	July	197	16	30.0		Sept.	247	4	33.0
1906	May	147	27	31.0					
1912	June	167	16	32.0		Sept	258	15	30.0
1913	June	157	6	32.0		Sept.	261	30	28.0
1914	May	134	14	22.0		Sept.	232	10	33.0
1915	June	167	16	29.0		Aug	238	26	33.0
1916	June	180	29	32.0		Aug	223	11	33.0
1917	June	172	21	30.0	Frost every month	July	183	2	30.0

## ST. ALBANS, MAN.

1914	June	170	19	32.2		Aug	238	26	32.0
1915	June	170	19	32.5		Aug	236	24	30.0
1916	June	170	19	30.5		Sept	245	2	31.5
1917	June	172	21	30.0		Aug	240	28	31.0

## SOURIS, MAN.

1913	May	138	18	28.6					
1914	April	120	30	28.6		Aug	238	26	32.0
1915	June	170	19	33.0		Aug	236	24	33.5
1916	May	139	19	31.0		Sept.	258	15	22.2
1917	June	172	21	30.0		Aug.	240	28	33.0

## SWAN LAKE, MAN.

1914	May	135	15	31.0		Oct.	284	11	32.5
1915	June	167	16	32.0		Sept.	254	11	29.0
1916	May	140	20	33.0		Sept.	258	15	23.0
1917	June	172	21	32.0	No observations until Nov., Aug., Sept. and Oct. missing				

## TREHERNE, MAN.

1895						Aug	232	20	32.0
1896	May	122	2	33.0		Aug	230	18	32.0
1897	June	158	7	23.0		Sept.	253	10	32.0
1898	June	165	14	31.0		Sept.	251	8	28.0
1899	May	140	20	31.0		Sept.	262	19	28.0
1900	June	159	8	31.0		Sept.	259	16	30.0
1901	June	158	7	26.0		Sept.	250	7	24.0
1902	June	175	24	33.0		Sept.	246	3	31.0
1903	June	166	15	33.0		Sept.	248	5	30.0
1904	May	145	25	33.0		Aug.	212	30	33.0
1905	June	172	21	27.0		Sept.	246	3	30.0
1906	May	148	28	32.0		Aug	242	30	33.0
1907	June	156	5	29.0		Aug.	215	3	33.0
1908	July	196	6	33.0	Frost every month..	Aug.	234	22	32.0
1909	June	165	14	29.0		Sept.	273	30	32.0
1910	June	153	2	29.0		Aug	240	28	33.0
1911	May	148	28	33.0		Sept.	267	24	26.0
1912	June	157	6	32.0		Sept.	266	23	32.0
1913	May	144	24	29.0		Sept.	264	21	27.0
1914	June	170	19	31.0		Aug	238	26	33.0
1915	June	167	16	32.0		Aug	238	26	32.0
1916	June	155	4	33.0		Sept.	258	15	24.0
1917	June	172	21	32.0		Sept.	246	3	32.0

VIRDEN, MAN.

Year	Late Frost				Early Frost			
	Month	Day of Year	Date	Temp.	Month	Day of Year	Date	Temp.
1904					Sept.	253	10	30.0
1905	June	172	21	30.0	Aug.	235	27	31.0
1906	June	173	22	29.0	Aug.	239	27	33.0
1907	May	149	29	29.0	Aug.	233	21	29.0
1908	June	164	13	31.0	Aug.	233	21	31.0
1909	May	135	15	28.0	Aug.	240	28	29.0
1910	June	156	5	31.0	Aug.	229	17	33.0
1911	May	148	28	29.0	Sept.	262	19	30.0
1912	June	156	5	32.0	Sept.	266	23	29.0
1913	May	114	24	32.0	Sept.	262	19	30.0
1914	May	142	22	32.0	Aug.	238	26	31.0
1915	June	170	19	33.0	Aug.	238	26	27.0
1916	June	160	15	29.0	Aug.	222	10	30.0
1917	June	171	20	33.0	Aug.	239	27	33.0

MONTHLY PRECIPITATION, QU'APPELLE RIVER BASIN.

ABERNUTHY.

Year	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1903	0.02	0.12	0.38		1.92	2.60	5.32	0.98	1.53			
1901												

ARLINGTON BE/ '11.

1901	1.00	1.72	2.00	2.29	0.70							
1905				0.30	3.55	1.72						

BALCARRES (File Hills).

1910											1.10	
1911	1.40	1.20	0.20		2.75							

BALGONIE.

1886	0.40	0.35	0.40	0.53	1.50	0.50	0.76	0.47	R.	0.12	0.60	0.25
1887	0.80	0.10		0.15	0.81	2.70	1.14	0.21	0.63	0.70	0.50	0.30
1888	0.20	0.20		0.56	0.29	1.69	2.95	0.30	0.50	1.40	0.35	
1889		0.30		0.40	0.22	1.00	0.80	R.	0.01	0.30	1.15	0.23
1890	1.20	1.50	0.90							3.30	0.10	
Sums	2.60	2.75	1.30	1.58	2.82	5.89	5.74	0.95	1.17	5.82	2.70	0.78
Means	0.65	0.55	0.65	0.34	0.70	1.47	1.44	0.24	0.29	1.16	0.54	0.19

BROADVIEW.

1901								0.87	1.27			
1905					4.47	2.16	2.16	3.63	3.55	1.51		
1908					0.90	2.10	1.43	1.09	1.73	0.20		
1909					1.50	0.80	1.03					
1910					0.65	0.20	0.50	0.22	0.50			
1911					0.37	0.37	2.00		2.10			
1913				0.40	0.27							
Sums				0.40	7.56	5.63	7.12	4.94	8.75	2.98		
Means					1.26	1.13	1.42	1.65	1.75	0.99		

BROWNLEE.

1910							0.26	2.15	1.01	0.24	0.44	0.70
1911	0.70	0.15	0.49	0.50	3.56	2.70	2.43	1.79				



## GRENFELL (Brownhill).

Year	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1881										1.95	0.85	0.55
1884		0.39	0.35	0.49	0.23	2.96	2.83	0.29	1.89	0.61	0.25	0.23
1885	0.10	0.30	0.35	2.34	0.98	0.48	2.75	2.13	0.01	0.38	0.30	
1886				1.36	1.35	0.70	3.10	0.79	0.32	0.54		0.14
1887				0.03	1.40	3.63	3.94	3.46	0.83	0.18		
1888				0.42	0.60	3.37	3.18	2.74	0.33	1.45	0.43	0.05
1889	0.50	1.35	0.33	0.71	1.85	1.00	1.70	1.41	0.84	0.10	0.25	S.
1890				1.06	1.91	4.13	5.77	2.12	1.95	3.16	0.05	0.15
1891	0.13	1.00		0.34	1.30	8.16	2.69	1.72	0.31	1.13	0.40	
1892			1.00	1.07	4.40	3.35	0.88	2.02	1.76	0.43	1.68	
1893				0.10								
1894			0.10	2.27	1.30	0.75	0.96	1.92	0.29	2.40	0.80	0.20
1895			S.	S.	1.66	2.97	3.84	0.73	1.42	0.27	0.50	
1896		0.40	0.20	3.20	3.47	3.08	1.70	0.81	1.13	S.	0.50	
1897				0.11	R.	1.39	2.26	0.54	0.13	0.20	0.70	
1898				0.80	0.38	2.73	1.29	2.01	2.96	1.37	0.26	
1899				0.12	2.22	3.60	0.48	1.50	0.97	2.44	0.38	0.10
1900	0.20								0.90	0.04	1.45	S.
1901	1.70	0.30	0.20		R.	4.22	4.13	4.85				0.88
1902	S.	1.60	2.62	0.15	2.67	3.97	0.85	1.88	0.32	0.07	0.73	1.90
1903	0.60	S.	1.60	0.60	2.94	0.96	2.35	4.44	1.00	0.26	0.60	0.15
1904	0.85	1.90	2.80	0.73	1.05	4.63	2.62	1.29	1.33	0.19	0.50	0.90
1905	0.65	0.10	0.90	0.59	2.18	2.82	1.86	2.71	5.15	0.39	0.59	0.70
1906	1.30	S.	0.40	1.53	3.10	6.67	0.91	1.32	1.31	0.46	3.02	1.60
1907	0.50	0.20	1.20	1.94	0.79	5.72	1.41	2.68	1.49	0.07	0.40	0.60
1908	0.30	2.00	2.05	2.20	1.62	2.10	1.55	1.46	0.98	1.29	0.70	0.60
1909	0.70	0.80	1.18	2.85	2.81	1.00	7.09	2.45	1.29	0.53	1.95	0.80
1910	0.40	0.85	2.65	2.26	3.07	4.65	1.59	1.81	0.43	0.22	1.30	0.80
1911	2.10	0.30	0.28	0.43	3.01	3.18	2.49	2.42	3.31	1.89	1.93	0.40
1912	0.50	0.30	0.70	1.01	4.83	0.56	3.31	1.85	4.61	0.14	0.55	0.90
1913	1.15	1.10	1.40	0.38	2.24	5.51	2.26	3.64	1.50	1.62	1.00	0.05
1914	1.70	0.12	1.20	3.07	2.76	2.63	3.14	1.28	0.45	1.58	1.71	0.45
1915	0.50	0.40	0.20	0.70	1.39	3.51	3.32	0.21	2.55	0.78	1.90	0.94
1916	2.50	0.30	1.70	1.65	1.92	3.32	1.72	1.56	3.61	2.41	1.10	0.55
1917	1.20	1.10	0.40	3.51	0.33	2.60	1.72	1.12	1.47	1.56	0.10	1.20
Sums	16.98	14.81	23.81	37.94	59.76	100.35	79.69	61.16	46.84	30.11	25.88	14.84
Means	0.81	0.65	0.99	1.19	1.81	3.14	2.49	1.91	1.46	0.91	0.83	0.57

## HEWARD.

1904				0.12	1.17	2.74	1.75	1.71	1.86			
1905				0.21	1.12	1.40	0.97	0.82		1.76		

## HUBBARD.

1908	0.30	1.20	1.15	0.82	0.56	4.75	0.25	1.02	0.22	1.50	0.30	0.80
1909	0.60	0.50	0.20	0.80	1.24	3.61	8.69	1.27	0.23	0.30		0.90
1910	0.30	0.40	0.10	0.68	3.29	3.08	1.32	2.15	0.63	R.	0.60	
1911		0.40	0.10				0.90					
1912		0.40	0.60	0.10	2.88	2.49	4.32	2.62	2.32	0.30		1.30
1913	1.10	1.00	1.00	0.20	1.13	1.60	3.63	3.57	0.70	1.30	0.40	0.20
1914	1.40	0.50	0.80	R.	0.87	1.60	0.91	0.47	1.08	1.08	1.00	0.30
1915	0.40	0.40	R.	0.20	1.21	2.69	3.75	0.82	0.56	S.	0.70	1.00
1916	0.80	0.30	1.20	0.70	3.26	3.39	4.99	0.58	3.70	2.20	0.20	0.60
1917	0.20	0.60		0.60	0.20	3.80		2.59	0.71	1.20	0.20	0.80
Sums	5.10	5.70	5.15	4.10	14.64	27.01	28.76	14.62	9.54	7.88	3.40	5.90
Means	0.64	0.57	0.57	0.46	1.63	3.00	3.19	1.83	1.06	0.89	0.49	0.74

## IMPERIAL.

1911											0.30	0.60
1912				0.10	5.89	3.41	2.14	1.73	1.89	0.52	0.18	0.90
1913	0.40	1.10	0.60	0.06	0.97	2.45	3.85	2.97	0.44	0.56	0.41	
1914	0.60		0.35		1.07	2.22	1.80	0.97	0.26	1.67	S.	
1915	0.10	S.		0.35	3.03	3.33	1.71	1.43	1.16	0.37	0.45	
1916	0.30		0.70	1.30	1.63	4.37	5.08	1.37	0.70	1.10		0.20
1917	0.45	0.30		0.30	0.90	3.17	0.82	1.38	0.66	0.20	S.	
Sums	1.85	1.40	1.65	2.41	13.49	18.95	15.44	9.85	5.11	4.42	1.34	1.70
Means	0.37	0.47	0.55	0.48	2.26	3.16	2.41	1.66	0.85	0.74	0.22	0.57

## INDIAN HEAD.

Year.	Jan.	Feb.	March	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1890					0 80	4 48	3 01	2 06				
1891	0 28	0 60	0 25	0 60	0 97	6 77	3 86	2 04	0 86	0 21	0 10	0 55
1892	0 10	S.	0 75	0 60	0 82	2 59	1 09	0 80	0 93	1 40		S.
1893					2 00	2 59	2 00			0 90		
1894			0 20	0 52								
1895	0 30	0 25	0 19	0 59	2 10	3 95	3 82	0 60	1 60	0 10	0 90	0 90
1896	0 30	0 05	0 20	1 75	2 83	4 32	1 90	1 39	0 60	R.	1 40	0 15
1897	0 25	0 50	0 30	R.	R.	11 20	1 52	0 11	0 20	0 80	1 30	0 20
1898	0 40	0 30	0 60	1 25	0 50	4 14	1 36	4 00	4 03	1 85	0 40	S.
1899	0 60	0 50	1 00	0 50	2 15	5 21	0 40	0 20	1 15	1 20	0 30	0 40
1900	0 10	0 40	0 15	0 25	0 80	0 65	1 73	4 85	3 81	0 50	1 00	0 80
1901	1 50	0 35	0 20	1 71	0 87	5 63	5 82	R.	5 10	1 58	S.	0 50
1902	S.	1 40	1 35	0 87	3 87	4 96	0 67	0 57	0 42	R.	0 60	1 30
1903	0 40	0 19	0 42	0 11	4 08	1 29	4 23	4 16	1 26	0 40	1 10	1 40
1904	0 85	2 25	1 30	0 54	1 94	2 74	1 81	1 17	1 79	0 32	0 38	1 00
1905	0 25	0 45	0 91	0 57	3 54	5 16	2 47	2 28	5 00	0 54	0 85	0 80
1906	0 31	0 10	0 14	1 61	2 33	4 50	2 35	0 44	2 22	0 35	1 02	0 90
1907	0 40	0 20	0 18	1 00	0 95	8 07	1 58	3 91	2 14	0 23	0 10	0 65
1908	0 25	1 00	1 50	1 95	2 21	5 44	0 71	1 87	0 69	1 65	0 40	0 90
1909	0 70	0 60	0 20	1 53	2 95	2 30	4 89	1 58	0 14	0 19	1 30	1 20
1910	0 15	0 60	0 84	1 09	2 58	0 86	4 03	0 59	0 15	0 15	1 70	1 70
1911	2 98	0 95	0 28	0 29	3 77	4 28	3 01	3 53	1 15	2 00	1 08	0 35
1912	0 35	0 15	0 40	0 70	3 86	1 42	3 42	1 98	0 35	0 35	0 45	1 23
1913	0 80	1 30	1 18	0 13	1 90	1 37	4 13	2 35	0 55	2 20	0 75	0 05
1914	1 25	0 40	1 00	1 29	1 58	2 28	1 50	1 33	0 47	1 27	1 03	0 45
1915	0 45	0 53	0 75	0 37	1 37	2 32	1 92	1 75	4 17	0 24	1 85	1 10
1916	1 90	0 30	3 20	0 82	2 75	2 63	1 52	1 18	3 72	2 35	0 22	0 75
1917	1 45	1	0 43	1 10	0 41	2 67	1 36	1 83	0 71	1 39	0 50	1 10
Sums	16 94	11 58	18 99	21 42	54 44	106 37	66 96	50 81	45 28	22 19	18 92	18 38
Means	0 68	0 58	0 76	0 82	2 76	1 94	3 29	2 03	1 81	0 82	0 79	0 78

## LANIGAN.

1909											0 70	1 67
1910		0 13	0 14	0 15	1 30	2 94	1 20	4 55	0 99	0 10		

## LAST MOUNTAIN.

1901						2 85	2 60	0 66	2 41	0 41	0 04	1 20
1905		1 00		0 29	2 93	2 64	1 13	1 78	3 28		0 56	0 05
1906						3 59	0 40	0 65	2 84	0 67	0 22	0 65
1907		0 20	0 15	0 20	0 68	4 36	2 76	5 48	1 59	R.		0 60
1908							0 41			1 22		
1909					0 34	1 98	6 58					
1910	0 80		0 37	0 32	1 85	1 64	0 94					0 36
1911							5 97	2 51	0 88	0 71		
1912	0 88	0 08			3 30	2 04	3 06	3 17				
Sums	1 68	1 28	0 52	0 81	9 10	19 10	23 75	13 65	11 00	3 60	9 82	2 86
Means	0 84	0 41	0 26	0 27	1 82	2 73	2 65	2 28	2 20	0 74	0 27	0 57

## LIMBERG.

1906	0 70	0 05	0 05	0 40	1 94	4 43	0 76	0 30	1 80	S.	0 35	1 70
1907					0 15	4 80	1 59	3 71				

## MUNSTLER.

1904						0 75	4 37	0 81	1 30	0 41	0 15	0 12
1905		1 30	0 30	0 56	0 91	4 52	2 05	3 21	2 90		0 50	0 40
1906		S.	0 27	0 97	0 02	3 24	3 11	2 50	1 50	0 50	0 70	0 70
1907	1 00	S.	0 60	0 20	0 50	2 00	1 50	2 60	1 00	0 05	0 25	0 20
1908		0 35		0 50	0 22	5 31	1 01	4 32	R.	1 00	0 80	0 20
1909	0 40		0 20	0 20	1 70	1 90	7 99	R.	S.	0 30		95
1910	0 60	0 20	0 65	R.	0 05	1 69	2 20	0 58	0 75	0 37	0 10	0 50
1911	2 00	0 30	0 20	1 39	0 92	2 90	6 21	1 08	1 10	0 35		0 20
1912	0 20	0 30	0 40	0 46	1 72	4 21	4 54	4 02	2 05	0 10	0 40	0 20
1913	0 46	0 60	0 80	0 08	2 14	5 55	3 86	3 84	1 19	0 57	0 47	0 10
1914	0 13	0 12	0 50	0 36	2 44	0 99	1 80	0 49	0 71	1 14	1 25	0 50
1915	0 30	0 15	0 65	0 65	0 85	3 65	3 27	3 61	0 95	0 19	0 60	0 18
1916	1 20	0 00	0 20	0 36	2 52	2 94	4 99	1 13	0 85	0 64	0 15	0 65
1917	0 30	0 10	0 25	1 00	0 29	3 65	1 62	1 67	0 55	0 23	0 02	0 62
Sums	6 59	4 32	4 37	6 04	14 28	43 30	48 50	30 46	15 75	5 85	9 59	5 22
Means	0 60	0 36	0 43	0 46	1 10	1 09	3 33	1 46	1 12	0 45	0 47	0 47

## MUSCOWPETUNG.

Year	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1898	2.65	1.35		0.10		1.27	1.51		0.64	1.64	1.13	S.
1899	3.60	3.48	0.96	0.69	0.14	3.39	0.94	0.98	1.17	0.35	0.30	0.90
1900	1.70	1.20	0.70	0.06	1.94	0.76	1.32	3.01	2.74	1.18	0.91	0.50
1901	1.00	0.30	0.91	1.83	0.83	4.80	4.04	1.35				
Sums	8.95	6.33	2.57	2.68	2.91	10.22	7.81	5.34	4.55	3.17	2.34	1.40
Means	2.54	1.58	0.86	0.67	0.97	2.56	1.95	1.78	1.52	1.06	0.78	0.47

## PENNE (Gatesgarth).

1897					0.47	1.20	1.12	0.63	0.42	0.89	1.30	0.70
1898	0.20		0.75	0.95	0.85	2.66	2.84	2.27	1.87	0.90	1.00	S.
1899			0.70	1.35	3.96	4.96	1.30	1.66	0.38	0.33	S.	
1900				0.12	1.43	0.93	1.23	3.86	3.24	0.46		
1901					1.27	6.47	6.13	0.34	2.99	0.57	0.03	0.75
1902	0.10	0.90	1.00	0.62	3.80	5.23	2.96	0.88	0.57	R.		
1903				0.94	3.35	0.82	5.00	3.74	0.69	0.86	0.67	0.40
1904	1.40	2.20	1.20		1.43	2.49	1.46	0.77	1.89	0.21	0.20	S.
1905		0.68	0.71	0.04	4.83	3.45	5.36	1.36	2.24	0.31	1.40	0.20
1906	1.00	S.		1.57	2.92	7.84	0.65	0.47	2.76	0.34	1.20	S.
1907	1.40	1.40	S.		1.07	4.32	1.28	4.00	0.80	0.05		0.30
1908	0.35	1.65		0.91	1.17	4.01	1.71	1.52	0.20	S.		
1909	S.			0.67	4.05	2.30	6.99	1.71	0.14	0.51	1.00	1.70
1910	S.	0.40	1.23	0.34	3.12	3.25	0.56	2.50	0.45	0.25		
1911				0.90	3.41	2.34	4.85	2.67	1.03	0.31		0.80
1912	0.50	0.27	0.23	0.62	5.13	3.59	3.55	2.22	1.55	0.49	0.33	0.80
1913	S.	0.20		1.17	0.07	1.09	4.40	2.55	5.05	0.61	1.04	0.17
1914	0.60		0.78	0.21	0.84	3.74	1.92	1.46	0.45	2.41	0.10	0.60
1915			0.15	0.19	2.11	2.45	3.15	1.62	1.94	0.26	0.06	
1916				0.63	3.41	3.37	2.81	0.89	2.64	2.44		
1917				0.43	0.36	2.88	0.52	2.55	1.18	1.23	0.21	
Sums	5.55	7.70	7.92	10.56	50.07	72.70	58.00	42.17	28.34	13.89	8.12	6.25
Means	0.56	0.77	0.72	0.62	2.38	3.46	2.76	2.01	1.35	0.66	0.54	0.52

## QU'APPELLE.

1883						2.09	2.29	1.28	0.14	1.35	6.80	1.10
1884	0.05	0.50	0.25	0.96	0.30	3.18	2.41	1.46	3.15	0.49	0.32	0.90
1885	0.65	0.34	0.81	1.64	1.08	2.16	1.30	1.60	0.31	0.72	0.59	0.72
1886	0.40	0.80	0.56	1.58	1.99	0.32	2.34	0.72	0.14	0.12	0.65	0.58
1887	0.50	0.71	0.25	0.61	2.21	4.26	1.16	2.40	0.86	0.72	0.55	0.55
1888	0.40	0.35	1.40	0.44	1.48	6.25	2.22	1.48	1.13	1.46	0.34	0.05
1889	0.10	0.28	0.05	1.42	1.74	0.0	2.15	0.54	1.11	0.30	1.16	1.29
1890	0.30	1.87	1.18	1.49	2.09	4.28	4.84	1.87	2.55	3.35	0.12	0.03
1891	0.61	0.82	0.64	0.32	1.26	7.19	3.38	1.83	0.89	0.63	0.90	0.50
1892	0.50	0.48	0.74	1.94	1.43	2.54	3.15	2.45	0.72	0.76	1.41	0.33
1893	0.51	1.54	0.29	1.07	1.49	3.50	4.27	0.30	0.54	1.35	0.87	0.62
1894	0.34	0.66	1.29	1.49	1.25	1.40	0.98	1.31	1.25	1.74	0.82	0.33
1895	0.88	0.87	0.11	0.17	2.28	2.87	4.24	0.58	1.57	0.25	0.82	0.65
1896	0.66	0.27	0.88	2.59	4.73	4.52	2.50	2.05	1.21	S.	1.77	0.45
1897	0.48	0.75	0.40	0.39	0.25	4.81	1.77	1.24	0.31	0.69	1.14	0.43
1898	0.56	0.40	1.46	0.92	0.45	4.60	2.25	3.57	3.37	2.40	1.44	0.23
1899	1.33	0.21	1.57	0.46	3.33	4.68	1.57	1.36	0.81	2.83	0.30	0.82
1899	0.24	1.90	1.23	0.29	0.71	1.19	2.11	3.05	2.63	0.86	1.97	0.34
1900	2.28	1.59	0.91	3.59	0.81	4.83	5.47	0.77	1.17	0.37	0.17	1.51
1901	0.26	2.85	3.52	1.31	6.95	4.54	0.95	1.34	0.66	0.10	1.05	0.84
1902	1.10	0.12	0.42	0.39	3.86	1.46	4.26	5.03	0.92	0.47	1.10	0.96
1903	1.14	2.25	4.11	0.85	2.22	2.58	3.78	1.23	2.11	0.36	0.74	0.85
1904	0.52	0.52	0.26	0.68	4.79	5.16	2.93	2.24	4.61	1.51	1.00	0.33
1905	1.13	0.49	0.22	1.30	3.27	4.58	1.80	0.64	2.75	0.59	2.51	0.85
1906	0.28	0.39	0.95	1.03	1.06	6.11	2.22	4.34	1.03	0.08	0.27	0.77
1907	0.26	1.00	1.76	1.26	1.19	5.73	0.59	1.91	0.69	1.61	1.99	0.68
1908	0.76	0.54	0.52	1.78	3.97	2.26	7.25	3.96	0.08	0.28	1.24	3.11
1910	0.15	0.59	1.77	0.81	3.38	4.71	0.50	2.85	0.46	0.12	1.95	1.73
1911	1.35	0.50	0.32	0.51	3.35	3.29	2.76	3.53	1.25	2.40	0.80	0.55
1912	0.35	0.16	0.68	1.29	3.96	1.73	4.42	1.95	1.64	0.46	0.48	0.94
1913	1.12	1.12	1.21	0.32	2.26	5.16	3.60	3.30	1.14	1.58	0.33	0.94
1914	1.54	0.32	1.05	0.89	2.59	3.34	4.76	1.81	0.58	1.43	1.05	0.41
1915	0.50	0.41	0.06	0.53	3.10	2.66	2.81	1.12	4.43	0.36	1.70	0.96
1916	1.10	0.34	2.24	1.25	3.15	4.10	2.13	2.99	5.39	2.78	0.15	0.92
1917	2.15	0.97	0.60	1.73	0.23	3.39	0.73	2.61	0.78	1.88	0.20	1.42
Sums	24.54	26.63	33.65	37.40	78.21	125.87	95.49	70.76	55.38	36.43	32.70	26.79
Means	0.72	0.78	0.99	1.10	2.30	3.40	2.73	2.02	1.58	1.04	0.93	0.76

## REGINA.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1900						0.70	2.04	3.35	2.41	0.81	0.60	0.10
1901	1.45	S	0.30	1.98	0.49	4.75	7.56	0.92	4.53	0.84	S	0.40
1902	0.43	0.63	0.61	0.57	3.61	3.69	1.42				1.63	0.27
1903	0.22	S	0.19	1.07	3.14	1.37	4.71	3.27	0.80	0.87	0.63	0.00
1904	0.55	2.16	2.4	0.27	1.69	1.76	1.74	1.75	2.11	0.31	0.14	0.26
1905	0.32	0.15	0.53	0.52	3.78	3.58	2.97	2.36	3.01	0.70	0.90	0.10
1906	1.22	0.18	0.10	1.95	3.33	7.78	1.15	0.70	3.25	0.72	1.60	1.15
1907	1.23	0.20	0.42	0.85	0.87	5.22			0.70	0.05	0.12	0.45
1908	0.15	0.89	2.53	1.24	0.81	5.87	0.55					
Sums	5.57	4.45	6.92	8.15	16.72	31.82	22.17	12.00	16.81	1.36	5.1	3.28
Means	0.70	0.59	0.87	1.09	2.09	3.87	2.77	2.06	2.40	0.62	0.79	0.41

## STRASBOURG.

1910					3.54	2.25	1.13	2.31		0.32	0.30	1.00
1911					2.21	3.60	1.59	2.54	1.1	1.48	0.20	
1912				0.19	3.15	1.48	1.11	1.24	1.16			
Sums				0.19	8.90	7.33	4.16	6.09	2.27	1.80	0.50	1.00
Means					2.97	2.44	1.39	2.03	1.13	0.90	0.25	

## WHITWOOD.

1914		0.20	1.00	2.45	1.90	1.70	3.02	1.70	0.90	1.90	1.47	0.25
1915	0.65	0.35	0.23	0.33	1.05	1.78	3.11	0.86	2.03	0.16	1.70	0.90
1916	1.40	0.20	1.80	1.70	1.81	3.82	0.99	0.83	4.31	0.25	0.37	
1917	1.25	1.05	1.40	2.25	0.45	1.77	2.86	1.10	0.91	1.43	0.15	1.10
Sums	3.30	1.80	4.43	6.73	5.21	9.12	10.00	4.49	8.15	4.45	3.57	2.62
Means	1.10	0.45	1.11	1.98	1.30	2.28	2.58	1.12	2.01	1.11	0.89	0.60

## MONTHLY PRECIPITATION, ASSINIBOINE RIVER BASIN.

## BUCHANAN.

Year.	Jan.	Feb.	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
1912							1.15	3.30			0.13	0.58
1913				1.33	1.07	3.89	R	3.91	1.46	0.62	0.71	0.44
1915					4.81							
1916								0.41	0.49	0.02	0.97	
1917												

## CRISCENT LAKE.

1899											0.38	0.25
1900	0.92	0.35	1.05	0.04	1.15	1.40	1.22	4.84	2.60	0.61	1.15	0.80
1901	1.33	0.27	0.55	2.51	0.40	6.11	4.13	1.02	4.69	0.68	0.39	1.01
1902	0.15	1.04	2.15	0.56	4.92	5.19	2.43	1.52	0.25	0.12	1.19	1.72
1903	0.81	0.30	0.17				5.03	2.41	1.65	0.63	1.68	1.00
1904	0.65		2.71	1.22	1.23	2.51	2.71	0.75	1.31	0.28	0.39	0.97
1905		0.34	0.66	0.12	2.00	3.30	1.99		3.74	2.85	0.51	0.38
1906	0.27	0.10	0.39									
1908		1.20		0.53		1.01						
1909	0.44	0.70	0.15	1.40	2.03	2.01	5.82	1.51	0.18	0.48	1.79	1.70
1910	0.05	0.68	1.56	1.21	3.40	3.29	1.33	2.53	0.71	0.19	0.90	0.95
1911	1.58	0.83	0.47	0.44	3.56	1.91	2.35	3.60	1.97	0.97	1.34	0.26
1912	0.14	0.30	0.59	1.03	2.30	1.23	4.77	2.69	2.05	0.35	0.68	1.79
1913	1.04	1.79	0.58	0.43	0.95	2.05	3.47	2.27	1.23	1.31	0.70	0.02
1914	1.45	0.30	0.64	0.57	1.36	0.82	1.16	1.18	0.61	1.25	1.34	0.31
1915	0.28	0.36	0.07	0.21	0.87	3.38	2.61	0.38	2.86	0.76	1.80	0.50
1916	0.99	0.25	1.49	0.93	3.52	3.44	4.75	1.14	5.39	2.44	0.11	0.40
1917	1.51											
Sums	11.61	8.81	13.33	11.25	27.69	37.68	41.37	25.86	29.27	12.91	13.78	12.15
Means	0.77	0.59	0.89	0.80	2.13	2.69	3.17	1.99	2.09	0.92	0.92	0.81

## GLADWIN

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1915	0.50	0.55	0.80	0.35	1.42	3.05	4.43	3.24	1.81	0.93	1.05	0.50
1916	0.95	0.23	2.00	1.19	4.14	4.36	2.85	0.95	3.89	3.09	0.20	0.49
1917	1.93	0.68	0.70	0.73	0.96	3.98	0.99	2.04	1.89	0.10	0.90	0.70
Sums	3.38	1.46	2.70	2.24	6.52	11.39	8.27	6.23	7.59	4.12	2.15	1.69
Means	1.13	0.49	0.90	0.75	2.17	3.80	2.76	2.08	2.53	1.37	0.72	0.56

## INSINGER.

1905						3.21	1.03	1.25	6.63	0.10	0.45	0.35
1906	0.85	0.25	0.50	0.95	1.58	4.27	2.18	0.13	3.00	0.62	1.95	0.70
1907	0.45	0.50	1.45	1.00	1.28	5.23	1.70	2.29	1.75	1.20	0.45	1.06
1908	0.10	0.90	1.30	2.60	1.58	4.14	1.62					
Sums	1.40	1.65	3.25	3.95	4.44	16.85	6.53	3.97	10.78	1.92	2.85	2.11
Means	0.47	0.55	1.08	1.32	1.45	4.21	1.63	1.32	3.59	0.64	0.95	0.70

## KAMSACK.

1907						0.35	3.03	1.38				0.50
1908						2.50	6.52	2.45				1.50
1909	0.20	0.25	0.80	1.75	0.82	2.50	6.52	1.43	0.31	0.60	0.80	1.50
1910	0.40	0.35	0.85	0.20	2.66	4.18						
1912	1.45	1.60	0.55	0.10	0.52	2.91	5.10	2.47	2.06	0.47	0.20	0.40
1913	2.15	0.40	0.10	0.29	1.72	0.98	0.58	0.73	0.60	6.44		
1914				0.20	0.71	2.91	6.91	0.66	1.91	0.79	0.75	
1915				0.15	2.21	2.29	1.13	0.58	3.21	1.01		
1916	0.20	0.10		0.03	0.45	5.92	1.44	1.07	0.21	0.15		
1917												
Sums	4.40	2.70	2.30	2.72	9.09	22.04	24.73	10.77	9.98	5.59	1.75	2.40
Means	0.88	0.54	0.58	0.32	1.30	2.76	3.53	1.34	1.25	0.70	0.58	0.80

## USHERVILLE (Poreupine Forest Reserve).

1917	0.90	0.25	0.70	1.04	0.85	4.48	2.04					
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## WALLACE.

1890	1.70	1.20				1.89	2.80	3.06	3.90	2.54	1.28	0.60
1891	0.91	1.60	1.35	1.12	0.16	10.12						
1892	0.70	0.22	1.43	1.77	4.83	2.40	2.36	2.20	1.24	1.22	1.60	0.20
1893	0.39	1.10	0.75	2.31	2.19	2.60	2.20	0.83				
1894	1.18	1.13	0.76	2.00	1.59	4.66	0.87	1.07	0.94	2.48	1.08	1.15
1895	1.45	0.90	0.23	0.16	2.66	4.46	3.36	2.19	3.34	0.20	0.67	0.60
1896				0.46	3.31	6.76	3.55	2.94				
Sums	6.33	5.15	4.52	7.82	14.74	32.89	15.14	12.29	9.42	6.44	4.63	2.55
Means	1.06	0.86	0.90	1.30	2.46	4.70	2.52	2.04	2.36	1.61	1.16	0.64

## YORKTON (Kilnap).

1884		0.55	2.30				1.50	2.71	3.13	0.71	0.11	0.90
1885	0.09	0.23	0.96	0.40	2.09	2.56	1.58	1.73	0.27	0.41	0.50	0.51
1886	0.33	0.42	0.33	1.53	1.85	1.81	0.95	0.73	1.19	0.65	0.46	0.35
1887	1.32	0.46	0.46	1.13	2.41	4.43	1.92	0.76	1.49	1.07	0.58	0.95
1888	0.42	0.85	0.44	0.19	2.63	3.22	1.56	1.89	0.97	0.53	0.26	0.14
1889	0.17	0.81	0.30	0.36	1.35	0.77	0.62	0.54	0.38	0.31	0.27	0.43
1890	0.30	1.60	0.75									
1909					2.60	2.76		0.66	0.25			
1910					4.32	4.35	0.75	2.53		0.50		
1911					2.97		1.67	5.69	1.03	2.04		
1912				0.42	4.15	1.41	3.33	3.96	2.20	0.28		
1913					0.59	2.13	9.01	3.84	1.48	0.51		
1914				0.68	2.38	0.41	1.23	1.52	0.56	1.72		
1915				0.24		4.04	5.19	0.39	2.38	0.60		0.20
1916			0.68	0.12		2.38	3.11	1.14	4.64	0.76		
1917						3.37	0.61	2.48	0.43	0.08		
Sums	2.63	4.92	5.62	5.16	27.34	33.64	33.03	30.57	20.40	10.17	1.86	3.48
Means	0.44	0.70	0.70	0.57	2.49	2.59	2.36	2.04	1.53	0.73	0.31	0.50

MINNEBOSA

Year	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1883	1.00	0.57	0.85	1.26	0.88	2.03	1.38	1.63	0.30	2.26	1.85	1.24
1884	0.72	0.49	1.00	1.25	0.27	3.30	3.17	3.76	2.91	1.77	0.79	0.61
1885	0.56	0.54	0.95	1.93	2.59	3.01	2.26	1.90	0.46	0.61	0.23	1.08
1886	0.51	0.50	0.40	2.10	1.63	1.25	1.88	0.76	0.89	1.15	0.44	0.14
1887	0.43	0.50	0.21	0.93	2.34	7.00	1.80	1.53	1.15	0.23	0.87	0.82
1888	0.48	0.25	1.00	1.02	0.71	3.68	4.50	1.27	0.27	1.55	0.44	1.06
1889	1.04	0.51	0.23	0.69	1.74	0.94	1.50	1.80	1.23	0.28	0.44	0.60
1890	0.33	2.30	0.23	0.61	1.89	4.72	2.72	3.81	1.90	1.00	0.53	0.56
1891	0.69	1.50	0.42	0.89	0.52	5.43	2.23	1.36	1.09	0.90	2.42	0.15
1892	0.37	0.29	0.36	0.71	1.38	1.69	2.79	1.33	0.62	2.20	1.17	0.82
1893	1.01	0.95	0.15	0.48	0.74	1.55	2.85	1.89	3.03	0.71	1.44	0.22
1894	1.83	0.77	0.88	1.21	1.58	3.10	0.77	1.40	0.89	0.15	1.01	0.76
1895	0.77	0.19	0.10	0.44	2.70	2.94	3.06	1.21	1.98	0.44	1.88	0.94
1896	1.37	0.14	1.28	2.77	3.07	2.93	3.56	3.69	1.84	1.01	0.92	0.94
1897	1.70	0.43	1.67	0.87	1.02	1.88	1.77	1.76	0.32	2.42	1.05	0.14
1898	0.39	0.25	0.74	0.18	0.38	2.96	4.78	2.56	0.85	2.03	1.41	0.18
1899	0.57	0.35	0.47	0.57	2.57	4.50	1.44	1.48	0.85	4.16	0.85	1.31
1900	1.00	0.37	0.67	1.06	0.16	0.70	4.21	4.56	3.02	0.87	0.53	0.45
1901	0.90	0.38	0.51	1.25	2.29	6.64	2.25	0.83	0.96	0.62	0.70	0.81
1902	0.06	1.16	2.58	0.71	3.33	6.30	1.35	0.96	2.16	1.43	1.57	0.77
1903	1.13	0.29	0.62	1.05	4.65	1.03	5.40	3.94	0.70	0.73	0.68	0.76
1904	1.35	0.77	1.77	1.58	0.93	4.42	2.74	2.92	2.42	0.32	0.35	0.81
1905	0.61	0.10	1.07	0.13	2.89	3.51	1.77	1.99	1.60	1.14	2.37	1.23
1906	0.88	0.12	0.42	0.40	3.98	5.33	2.58	0.75	1.39	0.36	0.36	0.26
1907	1.23	0.30	0.86	1.07	0.57	3.98	2.76	3.27	1.53	0.48	0.71	0.28
1908	0.31	0.59	0.72	1.31	2.09	2.68	3.20	3.11	1.23	1.13	0.45	1.72
1909	0.45	1.85	0.71	1.60	1.53	1.84	1.60	1.23	1.48	0.48	1.52	0.76
1910	0.63	0.30	0.82	1.46	4.27	2.63	1.60	2.05	5.12	2.77	1.86	0.83
1911	1.19	0.94	0.23	0.62	2.87	3.05	3.93	2.42	3.13	0.27	0.29	0.84
1912	0.49	0.46	0.59	1.26	3.09	0.91	3.37	2.51	0.95	0.66	1.07	0.15
1913	0.83	0.88	0.38	0.31	0.41	2.93	3.86	2.23	2.30	1.44	1.87	0.33
1914	1.76	0.30	0.39	1.64	3.15	1.30	3.80	2.56	1.15	2.63	0.35	1.61
1915	0.30	0.20	0.23	0.77	4.71	3.86	2.56	4.18	1.48	3.00	0.10	0.69
1916	1.48	0.33	0.11	0.81	1.58	3.55	1.55	1.45	0.97	0.57	0.26	1.31
1917	2.22	1.57	0.20	0.86	0.01	1.59	0.80	1.22				
Sum	29.55	21.44	23.82	35.80	62.55	108.65	91.30	72.51	54.91	26.35	33.00	22.71
Means	0.85	0.61	0.68	1.02	1.79	3.10	2.61	2.07	1.56	1.04	0.94	0.65

WINNIPEG.

1872	0.50	0.48	1.90	5.42	3.80	3.80	1.62	1.85	8.09	1.55	0.99	0.27
1873	0.28	1.19	0.20	0.92	2.38	3.37	3.55	1.17	2.28	0.54	0.86	0.35
1874	0.53	0.45	0.80	0.66	2.01	4.38	3.21	3.77	2.04	0.29	1.07	0.30
1875	0.57	0.64	0.23	0.66	3.34	3.45	1.76	4.88	0.86	1.32	0.98	0.96
1876	0.97	1.27	1.07	0.46	3.09	4.50	3.31	9.42	1.36	0.59	1.84	0.52
1877	0.29	0.09	0.86	1.13	5.39	5.69	4.24	0.83	3.02	0.72	0.70	2.21
1878	0.12	1.20	2.45	3.98	3.62	3.99	5.47	1.53	1.80	3.50	0.22	1.36
1879	1.56	0.58	0.62	2.23	2.78	6.98	5.22	1.82	0.72	1.38	0.30	2.29
1880	1.00	1.80	0.47	0.44	5.88	3.52	2.47	1.06	4.13	1.70	0.29	1.40
1881	0.12	3.74	0.61	0.75	2.07	2.66	0.87	1.82	2.60	1.51	0.34	0.33
1882	1.18	1.73	2.48	0.47	4.54	1.45	7.19	1.51	1.01	3.97	1.06	2.09
1883	0.65	0.68	0.29	4.02	1.35	3.48	4.77	2.96	1.96	3.68	1.25	0.92
1884	0.61	0.37	1.29	2.69	0.87	2.97	1.32	6.94	3.75	1.51	0.87	1.41
1885	0.23	0.44	1.12	1.82	1.94	3.05	2.65	1.99	0.74	0.59	0.84	1.22
1886	0.61	0.50	0.58	1.73	1.19	1.20	0.67	1.17	4.75	1.22	0.57	0.39
1887	0.71	1.07	0.93	1.14	3.01	2.94	2.02	1.49	1.77	0.45	1.63	1.37
1888	0.79	0.31	1.09	1.29	0.18	3.10	3.88	1.13	1.49	2.79	0.59	0.48
1889	1.57	1.03	0.29	0.85	1.79	0.45	2.38	0.95	2.67	0.86	0.45	0.46
1890	0.51	0.82	1.54	1.20	2.10	2.46	5.61	3.05	3.06	3.67	1.18	1.01
1891	0.78	0.88	0.38	1.13	0.92	4.72	1.94	3.60	2.20	1.05	2.26	0.10
1892	0.53	0.60	1.60	2.55	1.85	1.40	3.57	3.73	0.86	4.35	2.31	0.62
1893	1.88	1.52	0.22	2.30	2.23	3.87	5.42	1.52	0.66	1.79	1.87	0.57
1894	1.16	1.00	1.63	3.56	0.58	2.40	0.63	0.77	2.18	0.33	0.95	1.75
1895	1.54	1.18	0.55	0.62	3.74	2.31	3.30	1.01	1.14	1.96	1.01	0.27
1896	1.03	0.42	1.85	5.64	5.32	3.96	2.01	1.51	0.34	1.33	0.72	0.55
1897	0.89	0.89	1.58	1.01	1.59	2.31	5.38	1.00	2.50	5.67	2.00	0.61
1898	0.89	1.07	2.56	0.98	0.89	6.10	1.77	2.15	0.94	1.85	0.55	0.11
1899	1.77	0.84	0.36	2.17	2.20	3.68	1.96	3.42	0.66	4.22	0.94	0.67
1900	1.05	0.20	0.68	0.30	0.11	1.85	4.06	3.66	3.80	0.46	0.06	0.44
1901	0.81	0.90	0.26	1.93	0.36	10.67	3.12	1.70	2.01	1.23	1.62	1.50
1902	0.12	0.54	2.88	1.33	3.87	3.46	1.33	0.93	2.77	0.69	1.50	1.02
1903	0.28	0.10	1.08	0.54	3.40	0.49	3.05	2.09	1.88	1.51	0.32	1.65
1904	0.17	0.85	3.00	0.46	1.77	4.22	5.55	1.62	1.56	1.03	1.13	0.41
1905	0.20	0.27	1.78	0.25	3.35	4.15	4.35	1.41	1.51	0.21	1.87	1.29
1906	1.33	0.21	0.54	1.64	2.97	6.30	3.37	1.33	0.69	0.40	0.72	0.18
1907	2.12	0.27	1.12	0.99	0.97	1.54	3.98	3.90	1.89	0.21	0.55	0.65
1908	0.44	1.80	1.83	1.75	3.01	3.11	1.76	2.44	0.60	0.52	0.89	3.99
1909	0.73	0.76	2.67	1.58	1.25	1.54	3.84	4.75	2.75	1.08	1.27	1.87
1910	0.25	1.56	1.65	1.49	1.65	2.38	0.80	2.14	2.33	1.84	0.59	0.59
1911	0.43	0.71	0.28	2.57	6.38	2.27	0.91	6.11	1.64	5.49	1.15	0.78
1912	0.30	0.18	0.30	2.25	3.59	0.91	2.09	4.71	1.27	0.77	0.75	0.26
1913	0.75	0.61	0.36	0.41	0.53	3.27	1.46	7.14	2.05	2.22	0.72	1.40
1914	0.79	0.88	0.59	0.75	1.65	1.46	1.83	0.13	4.89	1.03	1.16	1.69
1915	0.38	1.06	0.11	1.31	0.82	2.56	4.12	2.84	2.35	2.32	0.32	1.70
1916	3.36	0.25	2.13	0.30	2.47	1.12	2.84	1.70	1.93	1.36	0.22	0.79
1917	1.10	0.88	0.33	0.22	0.03	2.13	3.27					
Sum	37.88	28.82	50.85	68.74	105.83	150.02	145.55	112.11	104.85	65.94	44.26	45.25
Means	0.82	0.84	1.11	1.49	2.30	3.26	3.16	2.44	2.28	1.44	0.66	0.98

## ROBLIN.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1916						3.30	2.53	1.71	1.93	3.08	1.05	1.55
1917	2.40	0.85	0.40	0.75						0.83		0.50

## FAIRFORD.

1886				1.76	1.79	1.73	1.65	3.19				
1887					2.54	4.51						

## ASSESSPI.

1885								0.30	0.49	0.51	0.10	
1886	0.89	1.21	0.92	1.46	1.27	0.92	1.59	0.92	1.15	3.15	0.33	0.61

## SHELLMOUTH.

1885					1.16	4.35	1.50	0.21	0.11			
1886				0.55	1.92	1.51	1.33	0.31	0.74	2.19	0.40	
1887				0.21	1.81	4.16	1.36	1.42				

## ROSSBURN.

1885				0.17	1.16	0.77						
1886		0.69	0.17	0.68	0.64	1.61			0.15			
1887				0.09	2.83	5.27	2.32	2.23	2.56	0.09		

## HAMMOTA.

1914	0.80		0.02	0.38	1.50	4.83	2.50	1.04	5.62	1.20	0.56	0.35
1915	2.20	0.20	2.20	0.20	1.85	5.15	1.80	1.24	3.31	2.40	0.10	1.40
1916	0.80	2.75	0.15	1.22	0.01	3.76	0.90	1.13	1.03	0.21	0.45	0.32
1917	0.80											0.40
Sums	3.80	2.95	2.37	1.80	3.36	13.71	5.29	3.41	9.96	3.90	1.13	2.47
Means	1.27	1.48	0.79	0.60	1.12	4.58	1.76	1.14	3.32	1.30	0.19	0.68

## ELKHORN.

1885				0.73	2.77	2.75	3.56	1.49	0.65			
1886	0.70	S.	0.75	1.26	1.75	0.96		0.67	0.17	1.30	0.37	0.20
1887						5.97	4.07	1.77				
1892	R.	0.75	2.14	1.69	1.37	1.78	3.12	2.30	1.29	2.04	1.99	0.95
1893	3.10	1.55	0.45	1.60	2.11	2.82	2.80	2.21	1.01			
1895	0.65	2.65	0.18	0.12	3.20	3.22	3.19	1.04	1.97	0.21	6.40	0.13
1896	1.05	0.20	S.	2.87	4.53	3.36	1.80	1.40	0.70	0.40	1.59	S.
1897	0.02		1.05	0.87	0.83	0.84	0.21					
1898		0.30		0.27	0.87	2.48	3.33	1.16	0.39	1.15		
1899												
1900	0.52	0.40	0.20	0.06	0.23	0.51	3.17	6.71	5.47	1.12	0.63	0.48
1901	1.60	0.40	0.40	2.06	S.	4.56	0.33	1.85	3.88	0.63	S.	0.30
Sums	7.64	6.25	5.17	12.23	17.66	29.25	25.58	20.60	15.03	6.85	4.89	2.07
Means	0.95	0.78	0.64	1.22	1.77	2.66	2.56	2.06	1.67	0.98	0.81	0.34

## GRISWOLD.

1883	0.21	0.28	0.30	0.50	0.68	3.23	2.14	2.01	1.12	2.32	0.83	0.82
1884	0.30	0.30	0.60	1.01	R.	4.81	3.55	3.23	2.36	1.59	0.40	0.76
1885	0.36	0.52	0.28	3.13	1.71	3.46	2.74	0.91	R.	0.47	0.20	0.24
1886	0.75	0.13	0.77	2.38	1.54	0.68	1.75	0.88	0.29	1.67	0.46	0.39
1887			0.80	4.30	2.00	5.97	3.32	3.69	R.	1.20	0.05	0.52
1888			0.80	1.22	0.30	3.63	0.26		R.	1.37	0.35	0.48
Sums	1.62	1.23	3.55	12.34	6.23	21.78	13.76	10.72	4.88	7.47	3.06	2.71
Means	0.41	0.31	0.59	2.06	1.64	3.63	2.29	1.73	0.81	1.24	0.51	0.54

## FORT LITTLE

Year	Jan.	Feb.	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec.
1883				0 03	2 20	1 28	1 21				0-13	0 95
1884		0 60	0 80	1 18	0 30	2 03	2 72	1 60	2 59	1 55	1 02	0 85
1885	0 20	0 30	0 55	1 67	2 38	0 80	4 25	1 51	0 22	0 15	0 20	0 50
1886	1 20	0 65	1 15	0 92	1 93	0 62	0 80	0 71	0 11	1 10	0 45	0 50
1887	0 10	0 05	1 45	1 40	0 75	5 05	1 72	0 11	1 60	1 20	0 47	1 07
1888	0 51	0 23	1 22	0 61	0 54	3 29	1 05	3 19	0 10	1 38	0 55	0 30
1889	0 70	0 70	0 23	0 40	0 83	2 45	1 05	0 57	0 93	0 06	0 30	1 15
1890	0 21	2 12	0 35	1 11	2 31	3 86	2 60	3 48	3 67	2 06	2 51	0 26
1891	0 75	1 27	0 25	1 05	1 85	5 12	2 63	1 13	1 02	0 55	0 67	0 70
1892	0 05	0 70	1 40	0 60	2 04	3 68	2 82	2 47	0 81	0 26	1 61	0 40
1893	3 00	1 55	0 45	1 40	2 10	3 22	3 01	2 31	1 26	1 39	1 23	0 85
1894	1 50	1 20	1 11	1 23	2 97	0 58	1 07	0 81	0 67	2 00	1 30	0 20
Sums	8 77	9 97	9 96	12 02	20 22	39 78	39 86	7 64	43 08	11 71	10 47	7 73
Means	0 88	0 91	0 91	1 00	1 69	3 32	2 10	1 60	1 19	1 07	0 87	0 64

## PORTAGE LA PRAIRIE

1883			0 40	0 42	1 80	1 92	3 81	6 24	1 15	1 96	0 89	0 60
1884	0 55	0 90	1 21	2 62	0 32	2 86	0 76	4 75	3 56	1 25	0 82	0 61
1885	0 23	0 20	0 61	2 20	2 84	3 05	3 42	2 08	0 34	1 47	0 60	0 85
1886	0 41	0 76	0 09	1 88	0 93	1 79	1 56	1 37	1 47	1 33	0 47	0 07
1887	0 21	0 59	0 83	0 99	4 50	3 36	2 27	1 61	1 43	0 28	0 47	1 38
1888	0 85	0 70	1 40	0 36	0 58	4 95	5 11	1 54	1 35	1 67	0 19	0 56
1889	0 85	0 90	0 03	1 23	2 22	0 16	1 18	1 18	1 82	0 63	1 12	1 35
1890	1 00	0 80	0 60	1 53	1 61	2 29	4 43	2 70	2 91	1 10	0 40	0 14
1891	0 39	0 87	0 30	1 29	0 31	8 16	3 97	3 59	2 16	2 39	0 99	1 50
1892	1 20	0 75	0 63	3 19	2 73	2 95	4 26	2 69	0 57	1 06	2 11	0 35
1893	1 10	1 22	1 31	2 33	2 41	5 35	2 12	1 88	0 98	2 66	1 70	0 20
1894	1 10	0 80	0 10	1 58	1 33	4 75	0 32	0 29	1 55	0 95	0 46	0 09
1895	1 05	0 60	0 35	0 41	3 11	4 53	3 54	0 51	1 56	0 48	S	0 80
1896	0 89	S	1 50	3 66	1 84	4 22	2 39	2 61	2 82	0 10	2 40	0 40
1897	1 03	1 03	0 87	0 62	0 80	1 22	4 41	1 91	0 13	1 21	0 65	0 20
1898	0 12	0 69	1 74	0 49	0 73	3 75	1 96	2 58	2 26	2 33	1 10	0 80
1899	0 85	0 40	0 52	0 91	1 73	2 65	1 48	2 12	0 82	1 83	0 73	0 44
1900	0 90	0 20	0 30	0 25	0 20	0 42	3 75	4 32	4 57	0 29	1 05	0 35
1901	0 79	1 69	0 40	0 60	0 12	4 65	3 17	1 67	2 94	0 45	0 12	0 40
1902	0 20	0 60	2 68	1 83	3 67	2 14	0 15	0 05	3 56	1 82	1 68	0 60
1903	0 65	0 30	0 13	0 00	2 37	0 59	2 81	2 26	0 76	1 03	1 30	1 60
1904	0 35	0 58	2 82	0 71	0 90	6 06	3 51	1 48	1 89	1 36	0 65	1 35
1905	0 15	0 25	1 55	0 12	3 85	5 08	1 38	1 22	2 11	0 55	0 86	1 05
1906	0 10	0 38	0 22	0 82	2 31	4 28	3 09	2 08	0 81	0 59	1 80	1 65
1907	0 86	0 80	0 95	1 35	0 21	2 26	2 00	1 87	1 12	0 49	0 86	0 20
1908	0 68	1 58	1 55	1 04	1 63	1 83	1 69	1 75	1 13	0 38	1 17	0 50
1909	0 00	0 58	1 03	0 57	1 69	2 74	3 91	1 68	0 63	0 24	0 20	2 18
1910	2 25	0 00	0 22	2 86	1 32	2 43	1 16	3 03	2 02	0 15	1 55	1 20
1911	0 38	0 15	0 03	1 55	4 29	5 70	2 14	2 78	1 77	2 28	0 98	0 13
1912	3 05	1 10	0 10	2 47	4 61	4 43	3 12	1 59	6 59	0 82	0 09	1 05
1913	1 10	0 65	0 55	1 16	0 34	3 13	2 19	2 87	1 56	1 20	0 47	0 10
1914	0 15	0 65	0 10	2 13	0 21	4 20	1 35	0 59	5 21	0 66	1 40	
1915												
1916												
1917	0 79	0 68	0 82	1 45	2 09	3 30	5 74	7 85	0 98	1 06	0 25	0 63
Sums	26 34	21 45	27 38	46 30	66 21	10 97	90 88	74 88	68 96	10 57	30 17	21 43
Means	0 80	0 65	0 81	1 36	1 98	3 23	2 67	2 20	2 03	1 19	0 89	0 73

## CYPRESS RIVER

1904					1 91	2 38	2 53	1 79	1 09			
1905					2 65	7 52	4 25	1 39	1 27			
1906					0 34	1 88	4 21	3 03	0 95	0 73		
1907					2 57	2 99	1 55	5 29	0 87			
1908					3 08	2 41	1 62	2 41	0 67	0 81		
1909						2 85	1 92	2 83	1 46	0 32		
1910						1 58	1 57	2 17	1 69	0 35		
1911					1 70	5 86	0 54	4 11	3 95	0 10		
1912					0 21	0 84	4 00	1 63	3 65	0 99		
1913					2 00	1 95	1 00	1 42	0 88			
1914					2 03	0 77	4 13	2 70	1 02	4 11	0 57	
1915					0 25	1 77	3 05	2 81	3 10	1 37	1 27	
1916												
1917					2 16	0 08	1 98	2 09				
Sums					8 95	25 65	34 31	34 36	33 00	19 74	6 80	
Means					1 49	2 14	2 45	2 45	2 54	1 50	0 76	

ST. ALBANS.

Year.	Jan.	Feb.	March.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1885	0.21	0.29	0.73	2.27	1.16	4.28	5.00	0.61	0.09	0.53	0.29	0.55
1886	0.51	0.67	0.32	1.63	0.88	1.52	2.25	1.14	1.62	1.21	0.29	0.25
1887	0.38	0.56	0.57	1.19	2.11	0.18	2.77	2.05	0.80	0.46	0.69	0.85
1888	0.69	0.48	1.49	1.72	0.85	3.80	4.43	1.66	0.51	1.17	0.62	0.44
1889	0.54	0.83	0.36	1.01	1.82	3.83	1.95	2.00	3.25	0.43	0.58	0.83
1890	0.31	0.49	0.29	0.32	2.31	2.11	5.17	4.29	2.69	2.23	0.31	0.27
1891	0.41	0.52	0.22	1.81	1.51	6.28	1.49	2.78	1.22	1.49	1.05	0.81
1892	0.48	0.89	0.38	2.10	1.52	1.50	4.97	1.01	0.54	1.04	1.72	0.21
1893	1.01	0.54	0.15	0.71	1.22	2.50	1.88	1.31	0.56	1.11	1.23	0.55
1894	1.30	0.66	1.33	2.36	1.13	4.00	1.14	0.71	1.80	1.37	0.76	0.21
1895	0.56	1.17	0.55	0.10	3.35	2.13	4.01	1.26	1.28	0.41	0.82	0.48
1896	0.98	0.19	1.30	3.09	3.50	3.48	2.15	1.23	1.52	0.49	1.40	0.80
1897	0.77	0.87	1.37	0.08	0.52	2.04	2.13	2.26	0.29	1.11	0.72	0.35
1898	0.57	0.61	1.32	0.26	0.23	2.54	3.00	3.15	1.18	2.61	1.51	0.42
1899	0.72	0.46	0.60	1.91	2.41	4.79	3.66	1.67	1.15	1.51	0.82	1.03
1900	0.80	0.57	0.46	0.11	0.29	1.26	3.08	5.27	6.81	0.41	0.95	0.73
1901	0.82	0.57	0.50	0.86	0.42	7.91	4.42	1.27	2.58	0.45	0.29	0.63
1902	0.10	1.06	3.70	0.19	2.57	3.75	1.85	0.74	0.51	0.60	1.22	1.05
1903	1.05	0.31	0.78	0.57	4.26	1.22	2.41	4.02	3.45	2.16	0.63	0.74
1904	0.33	1.23	2.39	0.96	1.26	3.96	1.68	2.00	1.24	0.35	0.30	0.32
1905	0.65	0.13	1.17	0.15	2.25	4.34	5.12	1.67	2.56	0.70	0.50	0.52
1906	1.13	0.12	0.67	0.92	1.67	2.53	1.21	3.02	0.87	1.17	1.62	0.71
1907	1.05	0.26	1.08	1.38	0.45	1.72	1.98	6.59	0.88	0.19	0.55	0.21
1908	0.20	1.21	1.30	1.91	1.99	2.85	1.25	2.28	0.91	0.47	0.76	1.11
1909	1.06	0.72	1.75	2.71	2.78	2.31	0.91	1.43	0.78	0.62	0.97	1.53
1910	0.13	0.55	1.65	1.25	1.62	2.48	2.86	1.52	2.68	0.36	1.70	1.24
1911	1.53	0.72	0.29	1.40	3.92	1.79	3.39	4.13	2.55	2.82	1.06	0.31
1912	0.33	0.29	0.13	1.31	4.50	0.55	5.15	1.10	4.26	0.67	0.26	1.09
1913	1.98	0.90	0.97	0.30	1.09	2.61	2.29	3.45	0.95	1.03	0.34	0.11
1914	2.31	0.81	0.78	2.69	2.52	1.66	1.69	1.17	1.17	1.21	0.81	0.15
1915	0.39	0.19	0.38	1.99	0.91	3.42	2.10	1.31	5.13	0.77	1.32	1.38
1916	1.42	0.68	1.56	0.49	1.98	1.17	2.20	1.57	1.72	2.55	0.36	1.28
1917	1.79	0.98	0.37	1.39	1.19	1.91	1.27	1.38	1.16	1.39	0.25	0.71
Sums	25.66	19.19	31.21	41.12	59.86	101.69	89.39	71.76	58.17	35.68	26.70	21.93
Means	0.78	0.58	0.95	1.05	1.81	3.09	2.71	2.17	1.76	1.08	0.81	0.66

BRANDON, MAN.

1884							0.40					
1885	0.36	0.52	0.28	1.57	2.75	3.01	3.48	0.92	0.05	0.17	0.15	0.21
1886	0.70	0.12	0.49	2.76	1.59	1.05	2.32	0.92	0.70	1.67	0.46	0.28
1887	0.60	0.55	0.80	2.65	2.90	6.62	3.32	3.69	1.20	0.05	0.52	0.60
1888	1.20	0.50	0.80	1.22	0.30	3.63	0.26	R	R	1.37	0.65	0.48
1889	0.54	0.81	0.36	1.01	1.37	0.77	0.17	1.67	1.89	0.32	0.71	1.21
1890	0.35	1.70	0.10	0.82	2.46	4.12	0.61	5.10	2.00	2.00	0.40	1.04
1891	0.75	1.40	0.22	1.66	0.36	6.13	2.37	1.87	1.11	1.05	0.63	0.32
1892	0.95	0.90	0.30	0.50	0.80	1.23	4.50	2.63	0.07	1.78	1.54	0.05
1893	0.52	0.43	0.10	0.10	0.90	2.30	1.50	0.70	0.14	0.21	0.79	0.25
1894	1.07	0.38	1.60	0.70	0.70	1.70	0.79	0.66	0.47	0.25	0.99	0.23
1895	0.12	0.57	0.25	0.10	3.10	1.51	4.15	1.27	1.51	0.29	1.11	0.60
1896	1.85	0.35	1.57	2.64	3.00	3.76	2.99	2.39	0.61	0.50	2.37	1.00
1897	1.93	1.35	1.90	0.40	0.35	0.66	1.56	2.29	0.37	1.14	2.15	0.65
1898	1.13	1.25	0.28	R	0.61	3.49	5.53	2.26	2.30	3.14	1.43	0.40
1899	1.38	0.30	0.40	0.56	2.47	3.93	1.21	1.94	0.10	1.79	1.23	0.30
1900	0.47	S.	S.	0.32	0.14	0.29	3.32	5.87	5.60	0.32	0.65	1.20
1901	1.50	0.60	0.50	1.90	1.12	8.32	1.93	1.13	3.31	0.63	0.41	0.70
1902	0.10	2.05	0.20	0.63	2.03	10.17	1.83	0.67	R	0.38	0.99	1.30
1903	1.90	0.60	0.40	0.61	4.11	0.67	2.13	3.92	3.17	0.89	0.61	1.10
1904	0.80	2.70	4.73	1.49	0.94	3.21	1.76	2.21	0.82	0.42	0.30	0.60
1905	0.90	0.05	1.17	0.06	2.88	4.54	3.76	2.37	3.12	0.22	0.16	0.60
1906	1.13	0.12	0.67	1.67	3.44	4.13	1.76	2.10	0.86	1.03	2.09	0.48
1907	2.45	0.25	1.55	1.05	2.75	2.51	2.45	6.21	0.82	0.29	0.31	0.29
1908	0.36	0.75	1.40	1.24	2.14	2.97	2.22	2.69	1.73	0.77	0.64	1.20
1909	1.10	0.90	1.30	1.11	2.53	2.62	3.20	0.38	1.03	0.47	1.57	2.70
1910	0.20	0.30	1.61	0.54	1.04	2.09	2.09	1.01	1.91	0.93	2.10	1.10
1911	1.90	0.70	0.10	0.30	2.68	1.97	2.91	5.84	1.43	1.60	0.69	0.30
1912	0.39	0.30	0.27	1.56	2.91	0.24	6.46	1.17	3.46	0.21	0.10	1.00
1913	1.10	0.60	0.50	0.35	1.01	2.31	1.70	3.56	0.68	0.73	0.29	0.00
1914	1.65	0.30	0.10	2.52	2.28	2.21	1.87	1.02	2.47	1.54	0.70	0.10
1915	0.16	0.15	0.40	1.07	1.28	3.81	2.34	0.18	3.29	0.64	1.10	0.85
1916												
1917	1.80	0.90	0.10	1.09	0.14	1.76	1.26	0.78	1.52	0.91	0.05	0.50
Sums	30.61	23.72	24.45	34.17	57.0	95.22	78.06	60.69	45.95	26.78	25.75	21.30
Means	0.95	0.77	0.76	1.07	1.78	2.98	2.37	2.08	1.44	0.84	0.80	0.66

## RAPID CITY

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1885	0.28	0.51	0.95	0.62	1.11	2.03	5.27	1.60	0.16	0.72	0.31	0.30
1886	0.90	1.05	0.10	2.51	3.23	2.73	1.80	0.95	1.12	1.11	0.28	0.02
1887	0.60	0.56	0.20	2.12	2.71	6.01	3.25	1.97	0.87	0.23	0.91	0.02
1888	1.21	0.57	2.16	1.10	0.52	5.17	3.16	1.10	0.60	1.60	0.18	0.35
1889	1.02	0.87	0.31	0.87	1.19	0.80	0.91	2.21	1.11	0.05	0.12	1.57
1890	0.22	2.00	0.81	1.09	3.05	3.81	4.12	4.27	2.65	1.67	0.16	0.22
1891	1.14	1.10	0.20	0.85	0.27	6.21	1.10	2.35	0.58	2.10	2.21	0.30
1892	0.10	0.82	0.80	1.35	0.81	1.43	1.68	2.28	0.78	1.17	1.10	0.80
1893	0.90	2.61	0.10	0.33	0.66	1.50	1.77	1.82	0.55	1.80	0.65	0.55
1894	1.40	0.60	1.11	0.40	1.10	3.92	0.17	0.55	1.25	0.22	1.00	0.75
1895	0.95	0.80	0.10	0.50	3.92	1.67	2.71	1.45	1.10	0.30	1.85	0.65
1896	1.40	1.05	1.00	1.41	3.55	3.08	2.27	1.51	0.10	0.99	1.21	0.62
1897	1.72	1.47	2.12	0.81	0.60	0.71	2.36	1.73	2.45	3.46	0.90	8
1898	0.10	0.25	2.10	R	0.37	2.29	5.60	1.35	1.18	2.07	1.00	0.02
1899	0.50	0.35	0.50	0.70	1.61	6.57	1.76	1.80	1.81	0.93	1.00	0.95
1900	1.01	0.35	0.50	0.41	0.02	0.62	2.13	1.82	3.02	1.05	0.17	0.42
1901	1.01	0.64	0.76	1.36	2.51	6.83	2.51	1.15	0.60	0.89	0.60	0.66
1902	1.07	1.42	2.83	0.83	1.41	0.49	1.01	5.01	3.10	1.50	0.52	0.27
1903	1.54	0.65	0.10	0.20	1.37	1.10	1.61	2.36	0.73	0.50	0.45	1.63
1904	0.50	1.20	1.10	1.00	0.82	1.91	3.16	3.41	1.51	0.56	0.63	1.19
1905	1.16	0.16	1.27	0.55	2.11	2.83	1.67	0.93	1.52	1.95	1.05	1.35
1906	2.55	0.10	0.27	0.90	3.01	1.22	2.16	5.56	0.87	0.28	0.32	0.27
1907	0.65	0.28	1.39	0.48	0.50	3.89	2.60	2.01	1.75	0.51	0.52	0.39
1908	0.35	1.07	0.99	0.67	1.92	2.18	3.33	0.42	0.88	0.91	0.39	1.02
1909	0.48	6.60	0.59	1.11	1.26	1.87	1.87	0.83	1.71	0.90	1.11	0.81
1910	0.12	0.48	0.19	0.89	1.10	3.39	1.41	4.83	1.69	3.07	0.89	0.26
1911	1.37	0.61	0.21	0.85	3.35	2.28	4.50	2.11	3.52	0.17	0.22	0.85
1912	0.27	0.21	0.36	2.15	4.41	0.31	2.46	1.87	0.58	0.53	0.97	0.07
1913	0.83	3.79	0.72	0.49	1.31	1.31	2.46	0.51	1.92	1.58	0.45	0.25
1914	1.49	0.62	0.69	2.00	2.25	1.32	3.06	1.42	2.90	0.63	0.90	0.98
1915	0.58	0.16	0.22	0.67	1.24	3.99	2.25	3.69	0.98	2.07	2.62	0.99
1916	2.10	0.48	1.75	0.37	1.92	3.00	3.69	0.23	0.91	0.81	0.03	0.67
1917	1.68	1.27	0.46	1.05	0.02	1.41	0.23	0.91	0.91	0.81	0.03	0.67
Sums	31.88	25.71	31.21	32.91	58.53	98.28	87.64	72.70	51.02	10.87	24.25	20.93
Means	0.97	0.78	0.95	1.00	1.77	2.98	2.66	2.20	1.55	1.21	0.73	0.63

## THE SOURIS RIVER BASIN.

**January.**—In the portion of this basin which lies in Canadian territory observations have not been numerous enough to show all the local variations of temperature which may occur, but the data in hand make it appear that the coolest portion is the region between the Souris river and Moose Mountain creek where the mean maximum is about  $10^{\circ}$  and the mean minimum about  $-11^{\circ}$ . Towards the International Boundary the temperature rises slightly, the minimum by about  $3^{\circ}$  and the maximum about one degree. In Manitoba territory the basin is a little warmer.

**February.** In the Moose Mountain region the normal daily range of temperature is from  $-12^{\circ}$  to  $10^{\circ}$  but at Estevan from  $-6^{\circ}$  to  $14^{\circ}$ . Between Estevan and Alameda the temperature gradient is rather steep. The slopes between Manor and Pipestone are a little colder than the Moose Mountain region but at the confluence with the Assiniboine the maximum temperature is a little higher.

**March.**—The Moose Mountain region has a maximum of  $24^{\circ}$  and a mean minimum of  $4^{\circ}$ . Weyburn and Estevan are  $3^{\circ}$  warmer.

The maxima are  $23^{\circ}$  to  $26^{\circ}$  in the Pipestone region and a little higher between Turtle Mountain and the Branden Hills.

**April.** The Moose Mountain district has a maximum of  $48^{\circ}$  and a minimum of  $21^{\circ}$  while at Estevan the corresponding temperatures are  $52^{\circ}$  and  $26^{\circ}$ . The Pipestone district has intermediate temperatures while the maximum rises to  $52^{\circ}$  again at the confluence. South of the confluence at Pelican lake the maximum decreases to  $48^{\circ}$ .

**May.**—Alameda and Estevan have minima of  $35^{\circ}$  and  $37^{\circ}$  respectively and a maximum of  $62^{\circ}$ . From Pierson to Souris the maximum is  $2^{\circ}$  or  $3^{\circ}$  higher and at the confluence  $1^{\circ}$  higher.

**June.** Observations at Manor, Glen Adelaide, Wallace, Alameda and the Moose Mountain Forest Reserve all show that the relative coolness of the Moose Mountain district compared with the Estevan district is still evident in June.

At Estevan the maximum is  $72^{\circ}$  and the minimum  $48^{\circ}$ . From Sourisford to Souris these temperatures increase a little, while Aweme has a mean maximum of  $76^{\circ}$ .

**July.**—From Weyburn to Estevan the mean maximum is 77° and the minimum 52°. At Manor the minimum is less than 50° while the Moose Mountain Forest Reserve has a maximum of 71°. The north-flowing Souris is in territory with a maximum of 79° or 80°, and minimum of 53°.

**August.**—The region between Moosomin and the Moose Mountain Forest Reserve seems to be distinctly cooler than surrounding territory. Near Moosomin the maximum is 72° and the minimum 44°. At Alameda, Estevan and Weyburn the maximum is 76° and the minimum 48° or 49°. South of the Souris towards Turtle Mountain the minimum rises to 52°.

**September.** The Weyburn line to Willowbunch runs through a territory with a mean maximum of 68° while eastwards the maximum is less and near the Moose Mountain Reserve is only 61°.

The lowest minimum temperatures occur near Manor where the average is 35°. At Estevan and Portal the average minimum is 39° and near Souris 40° to 41°.

**October.** The mean maximum is 52° to 51° while the mean minimum is generally 27° to 29° but there is an area from Yellow Grass and Weyburn to Alameda which has a minimum less than 26°.

**November.** From 36° at Willowbunch the mean maximum decreases to the east and north and at Moosomin is 28°. Souris and Brandon have mean maxima less than 32°.

At Estevan the mean minimum is 15° but this decreases northeasterly to 9° in the Moose Mountain region. From Souris to Brandon it is 9° to 11°.

**December.** At Estevan the mean maximum is 20° and the mean minimum 1°. Immediately westward the temperatures are higher while eastward they decrease but little.

## RECORDS OF FIRST AND LAST FROSTS.

## BASIN OF THE SOURIS RIVER.

## ESTEVAN, SASK.

Year	Late Frost.				Early Frost.			
	Month.	Day of Year.	Date.	Temp.	Month.	Day of Year.	Date.	Temp.
1900		111	21	32.0	Sept.	259	16	27.0
1903	May	176	25	31.0	Sept.	256	13	29.0
1904	June	164	9	32.0	Sept.	251	10	28.5
1905	June	171	20	31.0	Sept.	254	11	32.0
1906	May	116	26	27.0	Sept.	270	27	32.0
1907	June	159	8	32.0	Sept.	251	8	30.0
1908	May	134	14	30.0	Sept.	271	28	32.0
1909	June	151	3	32.0	Sept.	246	3	31.0
1910	May	147	27	31.0	Aug.	228	16	32.0
1911	May	137	17	31.0	Aug.	238	26	33.0
1912	May	140	20	32.0	Sept.	265	22	30.0
1913	May	133	13	29.0	Sept.	262	19	30.0
1914	May	169	18	31.0	Aug.	237	25	32.0
1915	June	137	17	31.0	Sept.	254	10	27.0
1916	May	137	17	31.0	Sept.	257	11	25.0

## MOOSE MOUNTAIN, SASK. (Highview P.O.)

1916	May	151	31	32.0	Aug.	243	31	31.0	
1917	June	172	21	30.0	Frost every month	July.	183	2	32.0

## MOOSOMIN, SASK.

1900	June	163	12	33.0	Aug.	239	27	33.0
1901	June	157	6	30.0	Sept.	259	16	27.0
1902					Sept.	252	9	32.0
1903	May	141	21	32.5	Sept.	247	4	32.0
1904	May	147	27	32.0				
1905	May	147	27	30.0	Sept.	255	12	28.0
1906	May	148	28	32.0	Sept.	269	26	33.0
1907	May	150	30	29.0	Sept.	255	12	32.0
1908					Aug.	225	13	31.0
1909	May	135	15	32.0	Aug.	241	29	33.0
1910	June	155	4	34.0	Aug.	237	25	33.0
1911	May	149	29	33.0	Aug.	234	22	33.0
1912	June	157	6	31.0	Sept.	257	14	31.0
1913	June	157	6	32.0	Sept.	253	10	30.0



YELLOW GRASS, SASK.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1911.....									
1912.....	June	166	15	32.0		Aug	233	21	31.0
1913.....	May	141	21	32.0		Sept	257	11	29.0
1914.....	May	134	13	29.0		Aug	242	30	32.0
1915.....	June	169	18	33.0		Aug	221	9	33.0
1916.....	May	147	27	32.0		Sept	253	10	25.0
1917.....	July	182	1	33.0		Sept	256	13	27.0
						Aug	217	5	31.0

WEYBURN, SASK.

1916.....					Sept. 1s. return				
1917.....	June	172	21	28.0	Frost every month	July	183	2	28.0

ALAMEDA, SASK.

1894.....	June	157	6	28.9		Sept	253	16	27.1
1895.....	June	180	29	27.4		Aug	243	31	27.9
1896.....	May	136	16	31.8		July	202	21	33.0
1897.....						Aug	240	28	32.0
1898.....	May	150	30	30.0		July	200	19	32.0
1899.....	July	209	25	33.0		Sept	251	8	33.0
1901.....	June	158	7	31.0		Aug	218	6	32.5
1902.....	May	146	26	33.0		Sept	252	9	30.6
1903.....	July	211	30	28.0		Sept	247	4	27.0
1905.....	June	180	29	32.0					
1906.....	May	147	27	28.0		Aug	238	26	32.5
1907.....	June	155	4	32.0		Sept	250	7	33.0

ASSINIBOIA, SASK.

1915.....					From 18th June	Sept	254	11	25.0
1916.....	May	146	26	33.0		Aug	223	11	32.0
1917.....	June	172	21	32.0		Sept	245	2	33.0

CANNINGTON MANOR, SASK.

1895.....	June	179	28	33.0		Aug	232	20	27.0
1896.....	May	139	19	33.0		Sept	216	3	29.0
1897.....	June	159	8	29.8		Aug	242	30	33.2
1898.....	May	149	29	32.0		Sept	251	8	30.0
1899.....	May	139	19	33.5		Sept	254	11	31.5
1900.....	June	159	8	30.0		Sept	256	13	32.0
1901.....	June	158	7	29.0		Sept	251	8	33.0
1902.....	May	116	26	33.0		Sept	252	9	32.0
1903.....	May	141	21	28.0		Sept	247	4	31.5
1904.....	June	174	23	33.0					
1905.....					Frost every month				
1906.....	June	173	22	33.0		Aug	238	26	29.0
1908.....	June	160	9	29.0		Aug	225	13	33.4
1909.....	May	155	15	31.0		Aug	242	30	33.0
1910.....	June	155	4	30.0		Aug	229	17	33.0
1911.....	May	147	27	29.0		Aug	234	22	30.0
1914.....	May	151	31	33.0		Aug	222	10	28.0
1915.....	June	170	19	30.0		Aug	236	24	30.0
1916.....	May	148	28	33.0		Aug	223	11	32.0
1917.....	June	172	21	25.0	Frost every month	July	183	2	30.0

BOISSELVAIN, MAN.

1912.....	June	155	4	33.0		Sept	266	23	30.0
1913.....	May	139	19	28.0		Sept	263	20	32.0
1914.....	May	132	12	28.0		Sept	250	7	32.0

GOODLANDS, MAN.

Year.	Late Frost.				—	Early Frost.			
	Month.	Day of Year.	Date	Temp.		Month.	Day of Year.	Date	Temp.
1916	May	145	25	20.0					
1917	June	172	21	31.0	Sept	257	14	29.0	
					Sept	251	8	33.0	

NINETTE, MAN.

1912	April	120	30	32.0					
1913	May	145	25	32.0	Sept	267	24	30.0	
1914	May	134	14	33.0					
1915	June	170	19	32.0	Oct	286	13	28.0	
1916	June	155	4	32.0	Aug	236	24	31.0	
1917	June	171	21	30.0	Aug	241	29	32.0	
					Frost every month	July	184	3	32.0

NINGA, MAN.

1911	May	147	27	32.0					
1912	May	133	13	28.1	Sept	257	14	29.6	
1913	May	137	17	30.0	Sept	266	23	30.0	
1914	May	133	13	24.0	Sept	263	20	23.0	
1915	June	166	15	30.0	Sept	249	6	30.0	
1916	May	147	27	25.0	July	186	5	33.0	
1917	June	171	20	31.0	Sept	257	14	20.0	
					Frost every month	Sept	244	1	32.0

OAKDALE PARK.

1905	June	172	21	30.0					
1906	June	169	9	29.0	Sept	255	12	31.0	
1907	May	147	27	28.0	Sept	272	29	23.0	
					Sept	252	9	28.0	

PIERSON, MAN.

1904									
1905	June	175	24	32.0	Sept	254	11	28.0	
1908	June	165	14	15.0					
1909	May	129	9	22.0	Aug	225	13	33.0	
1910	June	157	6	33.0	Aug	243	31	28.0	
1911	June	178	27	31.0	Aug	229	17	33.0	
1912	July	196	15	33.0	Aug	234	22	33.0	
1913	June	158	7	33.0	Sept	250	7	31.0	
1914	May	150	30	30.0	Sept	254	11	32.0	
1915	June	170	19	33.0	Aug	230	18	32.0	
1916	June	173	22	33.0	Aug	236	21	27.0	
1917	June	172	21	26.0	Aug	240	28	33.0	
					Aug	240	28	30.0	

(Summer Station).

PIPESTONE, MAN.

1894	June	156	5	29.0					
1895	June	177	26	32.0					
1896	May	140	20	33.0					
1899	May	136	16	31.0	Aug	236	24	32.0	
1900	June	159	8	30.0	Sept	261	18	29.0	
1901	June	158	7	29.0	Sept	259	16	27.0	
1902	June	171	20	33.0	Sept	249	6	32.0	
1904					Sept	246	3	32.0	
1905	May	146	26	33.0	Sept	253	10	30.0	
1906	May	148	28	28.0	Sept	254	11	32.0	
1907	May	149	29	30.0	Sept	255	12	33.0	
1908	June	160	9	30.0	Sept	251	8	33.0	
1909	May	139	19	32.0	Aug	234	22	32.0	
1910	June	155	4	32.0	Aug	241	29	32.5	
1911	June	178	27	26.0	Aug	239	27	33.0	
					Sept	262	19	30.0	

## RECORD OF MONTHLY PRECIPITATION, SOURIS RIVER BASIN.

## DELOIRAINI, MAN.

Year	Jan.	Feb.	March	April	May.	June.	July	Aug.	Sept.	Oct.	Nov.	Dec.
1887					0.77	1.88	3.48	1.51	0.42	1.45		
1898.				0.14		3.03		1.04		2.58		
1899.				0.89	5.81	2.67	3.28	2.80		2.32	1.26	0.58
1900.	0.42	0.65	0.53	0.10	0.69	1.09	4.28	1.08	7.05	0.07	1.25	1.85
1901.	2.02	0.93	1.13	1.44	0.42	1.65	4.79	1.37	3.93	0.39	0.19	1.25
1902.	0.15	1.60	2.81	0.20	4.74	2.44	0.21	0.25	1.57	0.75	0.80	
1903.	0.58	0.53	0.65	0.16	1.81	1.20	2.61	6.75	3.01	1.20	0.93	1.30
1904.	1.05	1.07	2.06	0.41	0.50	1.11	1.23	1.19	0.70	0.36	0.23	0.12
1905.	0.27	0.00	1.26	0.10	2.23	1.33	1.70	1.41	2.60	0.65	0.27	0.27
1908.	0.26	0.72	1.23									0.23
1909.	0.10	0.15	1.25	0.91	1.18	2.59	2.15	0.00	0.51	0.51	0.65	1.33
1910.	0.23	0.35	0.91	0.91	0.52	1.46	0.50	0.32	1.48	0.12	1.18	1.15
1911.	1.25	0.60	0.33	0.49	5.97	5.41	1.33	2.31	4.05	2.63	1.03	0.45
1912.	0.20	0.28	0.25	0.70	4.16	0.59	2.98	1.12	3.82	0.92	0.33	0.58
1911.	1.50	0.05	0.88	3.18	2.36	2.79	1.30	4.09	0.16	1.16	0.58	0.35
1915.	0.55	0.35	0.28	0.98	2.01	2.91	2.04	1.71	1.26	0.53	2.50	2.35
1916.	2.60	3.90	2.25	1.13	2.39	1.70	2.55	1.87	0.98	1.70	0.20	1.10
1917.	1.32	1.25	0.10	1.25	0.88	3.67						
Sums.	12.80	12.73	15.92	12.72	39.74	43.28	33.96	32.18	31.14	16.74	11.40	13.27
Means.	0.85	0.85	1.06	0.85	2.48	2.55	2.26	2.01	2.08	1.05	0.81	0.95

## HARTNEY, MAN.

1885.	0.30	8	0.00	2.56	1.87	2.14	3.49	1.75	0.15	0.50	0.05	0.60
1886.	1.50	1.40	0.30	2.55	1.16	1.81	2.74	1.44	1.52	1.89	1.00	0.45
1887.	1.60	1.40	0.90	1.50	2.36	7.76	4.67	4.42	1.21	0.41	0.90	1.25
1888.	0.80	0.10	1.05	1.87	0.88	4.00	7.03	0.50	0.11	1.23	0.81	0.35
1889.	0.80	0.50	0.30	0.85	1.34	0.99	1.43	1.99	2.45	2.28	0.80	1.65
1890.	1.50	1.60	0.56	1.77	2.45	2.70	3.39	3.89	3.45	3.59	0.30	0.55
1891.	0.50	0.65	0.55	1.84	1.03	7.91	4.59	1.50	0.13	1.21	1.50	2.10
1892.	0.80	1.00	0.80	2.05	1.55	1.65	2.02	2.28	0.81	1.59	1.45	0.60
1893.	1.90	2.00	0.70	1.05	1.36	3.19	1.61	1.31	1.72	1.45	0.90	0.15
1894.	0.90	0.50	2.05	2.51	2.03	3.04	0.72	1.85	1.27	1.99	1.35	0.35
1895.	0.67	0.75	0.40	0.55		6.51	5.24	1.58	1.44	0.51	0.95	0.70
1896.	0.95	0.60	1.19	1.17	5.37	3.83	2.45	0.86	1.02	0.65	2.65	0.85
1897.	1.10	1.50	0.71	1.09	0.87	3.78	1.67	2.01	0.38	1.12	0.75	0.60
1898.		0.50	1.30	0.78	0.20	4.26	5.22	3.92	2.37	2.86	1.05	0.10
1899.	0.70		0.95	0.75	4.35	4.32	1.61	2.42	0.80	2.10	1.05	0.50
Sums.	13.82	13.10	13.67	22.92	26.88	58.01	47.91	31.75	19.16	23.95	15.51	11.10
Means.	0.99	0.94	0.91	1.53	1.92	3.87	3.19	2.12	1.28	1.60	1.04	0.71

## OAK LAKE, MAN.

1884.				.50	5.00	6.00	5.49	8.05	3.65	1.20		
1885.				1.89	1.78	4.69	3.32	2.15	0.00	0.00		
1886.				1.12	0.86	1.33	0.33	1.11	0.00	1.58		
Sums.				3.51	7.64	12.02	9.14	11.31	3.65	2.78		
Means.				1.17	2.55	4.01	3.05	3.77	1.01	0.93		

## PIPESTONE, MAN.

1899.			1.20		0.91	2.28	1.86	0.77	0.16	1.45	0.66	
1900.					0.62	0.79	1.28	3.67	5.16			
1901.						5.74	3.16	0.35	1.85	0.21		
1902.			1.32	0.13		2.36	3.77	0.59	0.79			
1903.						2.47	3.34	1.08	1.71	0.29		
1905.					2.04	3.21	1.73	4.12	2.10			
1906.					3.48	5.61	1.21	1.18	0.65			
1907.					0.16	4.02	1.84	6.66	0.82	0.58		
1908.					2.41	3.04	1.48	1.55	1.87	0.51		
1909.					2.82	1.18	3.45	0.40	0.37	0.58		
1910.					1.03	2.57	1.15	1.45	1.45	0.50		
1911.					2.32	1.17	0.29	5.25	0.25	2.23		
Sums.					11.49	32.80	25.98	27.07	17.21	6.18		
Means.					1.81	2.73	2.95	2.26	1.43	0.77		

## SOURIS, MAN.

Year.	Jan.	Feb.	March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1883.				0.10	0.65	2.80	1.23	2.83	1.05	2.45		
1884.				2.73	0.84	3.39	3.75	2.92	0.55			
1885.				1.05	2.39	3.24	2.78	2.00	0.05	0.05		
1886.	0.50	0.25	0.33	2.60	0.72	1.56	0.93	1.23	0.45	1.17	0.50	
1887.					0.67	5.35	3.35	2.72	1.12			
1888.					0.35	5.18	2.27	0.66				
1912.												0.71
1913.	1.40	1.01	0.70	0.10	0.67	1.03			0.47	0.49	1.10	0.10
1914.	2.60		0.80	2.20	1.30	1.49			0.35	0.71	0.14	
1915.	0.35	0.09	0.12	0.94	1.57	2.78	1.60	1.48	2.64	2.01	2.05	2.04
1916.	3.10	1.15	1.55	0.83	2.80	4.26	2.64	1.42	1.11	2.70	0.30	0.92
1917.	2.80	2.65	0.35	1.51	0.18	2.46	1.19	0.69	0.90	0.91	0.17	1.30
Sums.	10.75	5.15	3.85	12.06	11.30	31.80	19.38	1.19	11.06	11.10	4.26	5.07
Means.	1.79	1.03	0.64	1.34	1.13	2.90	1.61	2.18	1.11	1.23	0.71	1.01

## PIERSON, MAN.

1904.						0.35	1.70	2.50	1.72	0.32		
1905.					1.54	2.07						
1907.						1.42	1.92					
1908.					1.50	3.93	1.60	1.84	1.30	0.80		
1909.					3.69	1.70	3.03	0.00	0.05	0.40		
1910.					1.10	1.03	0.80	R.	1.72	0.67		
1911.					2.71	1.93	1.59	5.58	1.42	1.98		
1912.				1.73	3.74	0.26	2.88	2.40	3.75			
1913.				0.50	1.04	3.40	1.49	5.18	1.54	0.95		
1914.				1.70	3.30	6.01	2.08	2.64	0.70	0.10		
1915.				0.46	1.86	2.97	1.45	0.01	2.59			
1916.				1.15	1.18	1.94	5.86	2.90	0.92			
1917.				2.35	0.00	0.99	1.16	1.20	0.37	0.55		
Sums.				7.80	21.66	28.60	25.56	24.34	16.18	5.77		
Means.				1.32	1.93	2.20	2.13	2.23	1.47	0.72		

1884.	0.30	0.50	0.60	1.69	R.	5.08	2.16	3.06	2.02	1.10		
1885.	0.30			1.13	3.33	4.25	1.59	0.07	0.39	0.30	0.70	
1886.	0.75	0.60	0.10	1.75	2.00	2.03	4.88	0.73		0.50	0.60	
1887.	0.80	1.05	0.70	0.39	0.65	6.03	2.75	3.67	0.86	0.02	0.30	
1888.	0.55	0.10	3.29	0.39	0.36	2.56	1.26	1.37	0.20		0.10	
1889.	1.50	1.00		0.60								
Sums.	4.20	3.25	4.60	4.34	4.14	19.01	15.30	10.42	3.45	1.40	0.82	1.70
Means.	0.70	0.65	1.15	1.09	0.83	3.81	3.06	2.08	0.79	0.75	0.27	0.42

## ALAMEDA, SASK.

1894	1.12	0.51	0.76	1.89	0.58	4.57	0.11	1.10	2.38	1.78	0.75	1.03
1895	0.80	0.25	0.02	0.67	1.09	1.80	3.83	0.80	0.85	0.20	1.30	0.60
1896	1.70	0.25	1.32	0.23	3.61	2.48	1.36	0.94				
1897						3.15	1.21	0.29	0.22	0.62		
1898	0.10	0.60	0.79	0.45	0.54	2.82	1.80	2.72	1.82	1.15	0.30	
1899	0.80			0.02	1.40	3.95	0.41	2.07	0.10			
1900					0.17	6.44	2.44	4.20	3.98			
1901				0.64	0.17	6.44	2.44	1.03	3.19	0.36	0.00	
1902					3.52	5.02	0.72	2.21	0.28	0.72		
1903					4.57	2.51	2.91	8.98	0.60			
1905		0.25	0.39	1.17	1.87	2.29	1.20		1.83	0.04	0.89	0.28
1906	1.27	S.	0.33	0.89	1.10	3.09	0.66	1.27	1.55	0.52	0.88	1.85
1907	0.60	0.23	2.45		0.10	0.85	2.49	1.59	0.39	0.22		1.45
1908	0.13		1.40									
Sums	6.52	2.09	7.37	5.96	18.55	38.97	19.14	27.20	17.19	5.61	4.12	5.21
Means	0.82	0.30	0.92	0.74	1.09	3.25	1.60	2.27	1.43	0.62	0.69	1.04

\* Snow not measured.

## ASSINIBOIA, SASK.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1915						1.54	3.81	0.21	1.74	0.35	0.03	
1916	0.65	0.40	1.10	1.01	2.84	2.65	3.47	1.05	1.87	0.97	0.25	0.50
1917	0.50	0.72	0.30	1.04	0.03	2.09	1.08	1.84	0.89	0.82	S.	0.20
Sums	1.15	1.12	1.40	2.65	2.87	6.28	8.36	3.10	4.50	2.14	0.28	0.70
Means	0.58	0.56	0.70	1.32	1.44	2.09	2.79	1.03	1.50	0.71	0.09	0.35

## ARCOLA, SASK.

1907							0.30	2.14				
1908						3.47	2.32					

## CANNINGTON MANOR.

1896	1.65	0.35	0.68	2.25	3.62	3.49	2.26	1.85	0.85	0.83	2.50	0.40
1897	0.32	0.85	1.41	0.89	0.60	1.78	1.59	0.51	0.16	0.48	1.60	1.40
1898	0.20	1.35	3.95	1.29	0.86	4.28	4.72	2.91	2.78	2.62	0.80	0.20
1899	0.70	0.11	3.35	0.86	3.70	3.38	1.01	0.49	0.85	3.14	0.44	S.
1900	0.15	0.77	0.60		1.18	0.96		7.07	4.03			0.60
1901	1.10	0.80	1.20	0.78	0.27	5.51	4.45		3.47	0.38	0.11	
1902				0.20	0.03	3.10	4.45	2.50	3.80	0.20	0.52	0.90
1903				0.40	0.45	1.80	3.38	5.50	1.60	0.45	0.50	0.40
1904	0.60	1.00	0.90	0.30	0.30	0.70				0.85		
1905	0.05	S.		1.40	3.35	1.51	2.88	3.55	3.75	0.80	0.80	0.90
1906					2.46	5.21	0.49	0.45				
1910										0.30	1.55	1.10
1911	1.20	0.40	0.45	0.50	2.79	1.15		2.69				S.
1914					1.70	3.07	2.53	2.32	1.29	0.48	0.75	
1915	0.10	0.40	0.10	0.44	1.58	2.67	1.98	0.36	1.03	0.13	1.10	
1916		0.40			1.49	3.25	1.52	2.65	1.34	1.20	0.90	1.00
1917				2.74	0.37	1.99	1.96	0.50	1.30	0.90	0.15	
Sums	6.07	12.50	12.84	11.88	27.52	45.20	31.27	34.65	21.65	13.08	11.80	6.90
Means	0.61	1.14	1.28	0.99	1.57	2.45	2.40	1.48	1.67	0.93	0.89	0.63

## DIRT HILLS.

1898								0.73	2.91	1.35		
1899					5.40	3.30	2.28	2.05	0.31	1.90		
1900				0.80	2.88	0.82	2.81	2.95	3.09	2.93	1.55	
1901				3.05	1.19	6.33	4.75	0.77	4.75	0.72	0.30	
1902	0.20	1.65	0.35	1.64	4.41	7.24	3.10	0.90	0.80	S.	0.28	0.20
1903	0.40	0.25	0.45				1.40	5.87	1.51	0.63	0.70	0.80
1904	1.00	1.40	3.80	0.28	2.59	3.23	3.22	1.70	3.52	1.87	0.28	0.50
1905	0.45	1.90		0.20	2.90	4.08	7.33	1.48	1.69	0.68	0.55	0.50
1906	0.70	0.20	S.	3.36	2.73	10.46	1.11	1.04	2.72	0.50	2.60	2.80
1907	1.20	0.40	0.65	0.80	0.94	3.60	2.34	3.21	1.13	0.25		1.10
1908	0.20	0.80		2.15	2.48	5.71	0.46	1.75	0.45	2.13	0.70	0.85
1909	0.65	0.30	0.40	0.80	2.33	1.10	8.73	1.12	3.70	0.70	0.80	1.30
1910	0.11	0.55	2.53	0.11	2.91	2.73				0.91	0.80	0.55
1911	0.35		0.10									
Sums	5.26	6.55	8.48	13.19	30.76	48.60	37.56	23.57	26.58	14.57	8.86	8.60
Means	0.53	0.73	0.94	1.32	2.80	4.42	3.41	1.96	2.22	1.12	0.89	0.96

## ESTEVAN.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1899						1.00	2.76	2.15				
1900						0.58	1.77	2.39				
1901									3.41	1.08	1.00	
1902	0.10	1.65	2.78					1.02	0.20	0.68	0.68	1.06
1903	0.67	0.49	1.00	1.20	3.70	3.88	1.51	6.74	1.85	0.25	0.51	0.98
1904	0.90	1.90	8.10	0.30	0.57	1.47	1.15	1.23	1.58	0.36	0.03	0.50
1905	0.90	0.40	0.34	0.45	2.96	3.71	4.67	1.66	2.43	0.08	1.20	0.55
1906	0.50	0.20	S.	1.26	2.41	3.15	0.37	0.72	0.68	R.	1.40	2.40
1907	2.45	0.40	1.75	0.40	0.61	0.89	2.31	4.92	0.37	0.10	S.	1.25
1908	0.30	1.00	1.00	1.03	3.17	3.94	2.01	2.48	1.41	1.45	0.30	0.30
1909	0.35	0.15	0.10	1.60	5.64	1.29	1.05	0.78	0.51	0.12	0.40	0.50
1910	0.45	0.20	2.23	1.53	2.02	3.54	0.90	2.03	0.45	0.14	1.45	0.40
1911	0.80	0.40	S.	0.20	0.50	2.04	2.60	3.35	1.29	1.49	0.27	0.20
1912	0.20	S.	0.40	0.99	4.85	0.74	2.15	2.63	1.98	0.46	0.20	0.60
1913	0.20	S.		0.35	1.10	5.60	0.90	1.68	1.62	0.74	0.20	0.20
1914	1.10		0.90	0.30	1.62	1.57	1.57	2.17	0.39	0.30	0.40	0.23
1915	0.15	S.	0.27	0.70	1.30	4.23	4.23	0.10	1.58	0.57	0.90	0.40
1917	0.20											
Sums	9.27	6.79	19.07	10.61	32.44	37.63	29.96	36.05	21.18	8.48	9.04	10.02
Means	0.62	0.52	1.47	0.82	2.50	2.51	2.00	2.25	1.32	0.53	0.56	0.71

## FLEMING.

1885			0.20	0.08	1.02	2.60	4.24	1.49	0.11	0.06		
1886	0.37	0.48	0.22	1.18	1.07	1.06	1.07	1.02	0.50		0.30	
1887		0.15	0.30		3.01	5.90						
1888					0.15	4.00	4.50	1.50	0.27	0.25		
1889					1.02	1.14	1.20	1.00	1.20			
1891	0.50	0.60	1.10	0.75								
Sums	0.87	1.23	2.82	2.01	6.27	14.70	11.01	5.10	2.08	1.81	0.30	
Means	0.44	0.41	0.70	0.67	1.25	2.94	2.75	1.27	0.52	0.60	0.30	0.34

## GLEN ADELAIDE.

1890					2.48	5.46	4.49	2.67	4.49	2.88	0.05	0.10
1891	0.38	0.75	0.45	1.01	1.38	7.03	6.61	1.33	0.66	2.37	1.25	0.55
1892	0.40	0.26	1.00	1.20	1.25	4.18	0.85	1.80	0.93	1.41	1.41	0.30
1893	0.75	0.98	0.10	1.10	2.54	2.90	3.39	0.97	0.58	1.76	0.30	0.90
1894				2.30	2.66	4.43	0.37	1.92	2.02			
Sums	1.53	1.99	1.55	5.61	10.31	24.00	15.71	8.69	8.68	8.42	3.01	1.85
Means	0.51	0.66	0.52	1.40	2.06	4.80	3.24	1.74	1.74	2.10	0.75	0.46

## MOOSE MTN. FOREST RESERVE (Highview).

1906	2.85	2.10	2.90	1.84	1.74	3.48	2.93	1.34	1.98	2.25	0.65	0.95
1907	1.50	0.70	0.80	2.81	0.06	3.40	2.13	3.01	0.81	1.93	0.12	1.20
Sums	4.35	2.80	3.70	4.65	1.80	6.88	5.06	4.35	2.79	4.18	0.77	2.15
Means	2.18	1.40	1.85	2.33	0.90	3.44	2.53	2.18	1.40	2.09	0.33	1.08

## MOOSOMIN.

1900		0.40	0.80	0.04	0.69	0.51	2.33	5.98	4.83	0.85	1.00	0.15
1901	1.22	0.10	0.40	2.18	0.42	6.16	1.44	1.95	3.48	1.66	0.05	0.45
1902						1.31	1.44	3.02	0.28	0.61	1.13	0.54
1903	0.53	0.42	0.46	0.10	4.61	2.42	2.46	6.43	2.16	0.79	0.55	0.30
1904	0.45	1.30	1.80	0.28	0.93	2.07	0.95	1.22			0.21	0.60
1905	0.90	S.	S.	0.08	2.11	0.90	0.78	3.33	3.21	0.71	0.26	S.
1906	S.	S.	S.	1.21	2.83	9.22	1.45	1.84	0.81	0.29	1.80	1.00
1907	S.	S.	0.30	0.60	0.02	4.18	2.27	4.05	1.20	0.55	S.	S.
1908							2.71	0.98	0.31	1.05		
1909				0.85	2.92	1.54	4.67	0.51	0.75	0.38	0.10	S.
1910		S.		1.06	1.32	2.83	1.31	2.32	0.91	0.10	1.55	
1911			0.20		2.72	2.53	0.57	2.16	4.38	2.57		
1912				0.20	2.88	0.21	3.00	1.53	2.39	0.18		
1913				0.10	0.15	2.63		1.67	1.32	1.31	1.05	
1914	S.		0.65	1.24	1.69							
Sums	3.76	2.22	4.72	7.34	23.23	56.51	25.33	36.39	26.65	10.45	7.79	3.67
Means	0.44	0.28	0.47	0.66	1.79	2.81	1.95	2.60	2.00	0.80	0.70	0.34

## YELLOW GRASS.

Year	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911								1.26	0.93	0.32	0.46	
1912			0.20		3.76	0.61	2.05	1.05	0.93	0.24	0.20	1.30
1913	0.10		0.61	0.10	1.22	2.93	2.42	2.64		0.48	1.63	
1914	0.80		0.50	0.77	0.95	3.49	1.70	1.26		0.57	0.30	S.
1915	S.	S.	0.40	0.12	1.70	2.19	3.68	0.81	1.92	0.25	0.80	0.82
1916	1.50	0.65	2.00	0.98	1.98	3.98	1.77	1.01	2.62	2.16	0.25	
1917			0.90	1.67	0.18	1.30	1.35	2.39	0.16	0.70	0.10	
Sums	2.70	0.65	4.61	3.61	9.79	11.50	12.97	10.45	6.56	5.02	3.14	2.12
Means	0.68	0.32	0.77	0.75	1.66	2.42	2.16	1.49	1.31	0.72	0.45	0.71

## THE RED RIVER OF MANITOBA.

**January.**—The mean maximum is 9° and the mean minimum -10° near the border while the minimum falls about 5° and the maximum about 3° to the river's mouth.

**February.**—The temperatures near the International Boundary and on the western side of the basin are a little higher than at Winnipeg or on the eastern side. At Emerson the daily range of temperature is from a maximum of 15° to a minimum of -9°. Towards Carman these temperatures change very little but diminish to 11° and -11° at Winnipeg.

**March.**—The daily maximum temperature is 26° throughout the basin but the minimum temperatures decrease from 7° at Emerson to 4° at Winnipeg.

**April.**—The daily maximum is 50° and the minimum is 27°.

**May.**—The daily range of temperature is from a minimum of 37° or 39° to a maximum of 64° or 65°.

**June.**—The maximum temperature is generally 74° or 75° and the minimum 50°. Oakbank and Beausejour are a little cooler than Winnipeg.

**July.**—The maximum is generally 79° and the minimum 53° to 55°.

**August.**—From 77° and 51° at Morden the temperatures decrease to 74° and 50° at Selkirk. Between Carman and Winnipeg the minimum is 49°.

**September.**—In the southern portion of the basin and on the western side of the River the mean maximum is 67° to 68°. Winnipeg, Selkirk, and the eastern side generally, have maxima between 63° and 66°. The mean minimum is 41° over the whole basin.

**October.**—The lower portion has a mean maximum of 55° and a mean minimum of 29°. The northern portion has a higher minimum but a lower maximum. At Selkirk the averages are 51° and 31°.

**November.**—From 33° at Morden the mean maximum decreases to 31° at Winnipeg and to 29° at Oakbank. The mean minimum temperature is between 13° and 14° over most of the basin.

**December.**—From 20° and nearly zero west of Morden near the Boundary, the normal temperatures decrease to 16° and -3° at Selkirk.

## RECORDS OF FIRST AND LAST FROSTS, BASIN OF THE RED RIVER OF MANITOBA.

## EMERSON, MAN.

Year	Late Frost.				Early Frost.			
	Month.	Day of Year	Date.	Temp.	Month.	Day of Year	Date.	Temp.
1894	May	147	27	29.3				
1904	May	134	14	32.0				

## MORRIS, MAN.

1916	June	170	19	33.5	Sept.	260	17	31.0
1917.	June	155	4	33.0	Sept.	246	3	33.0

WINNIPEG, MAN.

Year	Late Frost.				Early Frost			
	Month.	Day of Year	Date.	Temp.	Month	Day of Year	Date.	Temp.
1871	June	160	9	30.5	Sept.	258	15	28.5
1875	June	163	15	30.0	Aug.	233	21	31.0
1876	June	156	4	31.0	Aug.	239	26	31.5
1877	June	159	8	33.0	Sept.	260	17	33.0
1878	May	111	21	31.5	Sept.	254	11	29.4
1879	June	181	30	33.0	Sept.	256	13	31.3
1880	May	152	31	31.0	Sept.	251	7	31.0
1881	May	140	10	31.0	Sept.	249	6	28.7
1882					Sept.	263	20	24.0
1883	June	153	2	8	Sept.	250	7	29
1884	May	112	21	33.0	Oct.	281	7	29.0
1885	June	159	8	31.4	Aug.	236	24	30.5
1886	June	168	17	33.0	Aug.	243	31	31.7
1887	June	174	23	33.3	Aug.	237	25	33.3
1888	June	158	6	28.8	Aug.	244	31	30.3
1889	June	154	3	33.3	Sept.	255	11	27.3
1890	May	117	17	27.3	Aug.	234	22	33.0
1891	May	116	26	28.1	Aug.	239	27	30.3
1892	May	152	31	31.0	Sept.	259	15	31.5
1893	May	115	25	27.1	Sept.	265	22	31.8
1894	June	156	5	32.0	Sept.	260	16	33.4
1895	May	116	26	29.5	Aug.	232	20	32.8
1896	May	122	2	32.0	Aug.	243	31	32.0
1897	June	176	25	32.5	Sept.	259	16	31.5
1898	June	151	2	32.2	Sept.	251	8	32.0
1899	June	159	8	30.0	Aug.	243	31	31.5
1900	June	159	8	33.0	Sept.	260	17	31.0
1901	June	159	8	32.0	Sept.	251	8	28.0
1902	May	130	10	31.0	Sept.	255	12	28.0
1903	May	132	12	31.6	Sept.	218	5	33.2
1904	May	115	25	30.8	Sept.	245	2	32.0
1905	May	145	25	31.5	Sept.	255	12	29.0
1906	May	118	28	30.8	Aug.	243	31	31.8
1907	June	156	5	32.1	Sept.	264	21	33.2
1908	June	165	11	32.1	Sept.	270	27	32.0
1909	May	137	17	32.0	Sept.	267	24	29.8
1910	June	153	2	31.4	Aug.	240	28	30.4
1911	May	152	12	28.4	Sept.	255	12	33.1
1912	June	157	6	33.3	Sept.	269	25	33.3
1913	May	139	19	26.6	Sept.	261	21	31.9
1914	May	143	23	32.1	Sept.	250	7	31.8
1915	June	158	7	30.0	Aug.	238	26	32.0
1916	May	140	20	32.3	Sept.	258	15	28.3
1917	June	155	1	32.0	Sept.	253	10	30.9

OAKBANK

1894	June	157	6	30.0	Aug.	227	15	31.0
1895	July	209	28	33.0	Sept.	248	5	28.0
1902	May	130	10	28.5	Sept.	255	12	28.0
1903	May	132	12	29.0	Sept.	247	4	33.0
1904	May	145	25	30.0	Aug.	211	29	32.5
1905	May	147	27	33.0	Sept.	255	12	29.7
1906	June	148	28	33.0	Aug.	243	31	30.0
1907	June	156	5	32.0	Aug.	233	21	33.0
1908	May	140	20	32.5	Sept.	270	27	32.5
1909	May	131	11	31.5	Sept.	267	24	25.5
1910	June	153	2	30.5	Sept.	255	12	29.0
1911	May	132	12	26.5	Sept.	251	8	32.0
1912	May	133	13	29.0	Sept.	268	25	33.0
1913	June	159	8	31.5	Sept.	256	13	30.0
1914	May	143	23	27.7	Sept.	247	4	31.0
1915	June	166	15	32.5	Aug.	238	26	28.5
1916	June	153	2	33.5	Sept.	245	2	32.0
1917	June	172	21	32.0	Aug.	211	29	33.0

PEMBINA CROSSING, MAN.

1902	June	170	19	32.3	Sept.	247	4	29.6
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## TURTLE MOUNTAIN.

Year.	Jan	Feb	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
1883						1.50	2.21	2.41	3.70	2.42	0.71	1.12
1884	0.40	0.80	0.55	1.59	R	5.01	2.16	3.06	2.02	0.85	0.18	0.88
1885	0.30	0.40	0.29	2.06	1.35	4.98	7.19	1.85	2.55	0.99	0.70	0.65
1886	0.80	0.30	0.30	2.18	1.45	1.41	1.23	1.63	1.15	1.34	0.30	0.30
1887	0.70	0.40	0.20	0.90	2.00	7.24	4.15	4.16	0.96	0.27	0.80	1.85
1888	0.78	0.08	1.15	1.90	R	4.15	2.20	1.90	1.50	0.52	0.65	0.20
1889	0.80	0.50	0.60	1.00	1.27	0.90	1.50	2.76	2.20	1.40	1.90	1.10
1890	0.58	0.90	0.00	4.88	1.71	4.52	2.51	4.45	2.37	5.70	0.27	0.05
1891	0.52	0.55	0.37	1.10	0.14	4.32	4.41	1.59	1.28	0.93	1.20	0.80
1892	0.50	0.15	0.80	2.17	1.07	4.44	0.37	1.93	0.91	1.65	0.60	0.05
1893	0.80	1.15	0.04	0.88	1.03	7.10	2.18	0.96	1.15	0.51	0.91	0.05
1894	0.90	0.20	3.00	0.71	1.20	2.87	2.65	0.73	2.00	1.25	0.62	0.10
1895	0.30	0.50	0.47	0.85	3.76	3.61	4.99	2.49	1.28	4.52	1.33	0.25
1896	0.90	0.63	0.50	2.70	3.51	4.69	1.31	3.55	1.24	1.20	3.00	0.37
1897	0.90	1.60	1.00	0.51	1.03	1.47	1.80	1.59	6.51	1.08	0.35	0.12
1898	0.17	0.35	0.83	0.26	0.45	2.85	4.60	2.46	1.80	4.40	0.95	0.10
1899	0.55	0.13	1.10	1.65	4.11	1.73	2.21	2.88	0.19	2.93	0.85	0.45
1900	0.27	0.55	0.77	0.90	0.62	0.61	1.22	4.20	7.16	0.57	1.05	0.35
1901	0.85	0.20	0.80	1.35	1.65	0.91	0.02	2.32	4.06	3.90	S & R	0.55
1902	S	2.83	4.10	4	2.92	4.21	2.07	1.51	1.18	1.13	1.70	0.30
1903	0.58	0.52	0.65	0.16	4.12	1.05	1.49	5.21	3.13	1.45	0.60	0.30
1904	0.35	1.20	3.30	1.09	0.80	2.47	2.30	5.48	1.53	0.37	0.15	0.40
1905	0.35	0.00	0.98	0.44	1.35	3.94	1.83	1.57	3.73	0.19	1.00	0.10
1906	1.80	S	0.10	1.36	3.19	7.01	3.04	2.43	0.57	1.09	1.20	1.75
1907	0.40	S	0.95	0.70	0.30		3.53	1.48	0.56			
Means	0.62	0.50	0.69	1.52	2.11	3.96	3.09	2.71	1.98	1.70	0.88	0.44

## TRIHERNE.

1885	0.05	0.15	0.45	1.03	3.70	2.05	3.40	0.74	0.13	1.98	0.82	0.60
1886	0.78	1.13	0.11	2.28	0.84	1.09	1.52	0.74	0.71	0.61	0.80	0.92
1887	0.53	0.51	0.80	0.65	3.78	6.41	3.10	1.67	1.13	0.05	0.35	1.38
1888	0.55	0.40	4.54	1.24	0.93	3.71	3.00	0.95	0.80	1.70	0.15	0.47
1889	0.29	0.60	0.35	1.33	2.25	0.31	1.09	1.20	1.58	0.09	0.47	4.76
1890	0.50	0.40	0.30	2.80	1.92	2.99	3.56	4.24	2.65	4.71	0.29	0.33
1891	0.42	0.75	0.55	2.02	0.26	6.49	4.12	1.84	1.85	1.65	0.50	1.60
1892	0.18	0.34	0.50	1.90	2.51	3.38	6.59	2.17	0.60	1.21	1.45	0.05
1893	0.65	0.70	0.28	2.13	1.24	5.95	2.39	1.51	0.95	1.28	1.61	0.30
1894	0.62	0.38	1.43	3.52	1.15	4.38	0.72	0.58	2.29	2.18	0.91	0.20
1895	0.53	0.84	0.35	0.52	4.56	3.98	4.75	1.65	1.70	0.58	0.83	0.70
1896	1.37	0.35	2.02	6.74	6.63	3.07	2.50	1.08	2.71	0.52	1.65	0.30
1897	0.40	0.90	1.08	0.00	1.00	1.87	2.02	1.07	0.00	1.00	0.20	0.40
1898	0.50	0.60	1.50	0.78	0.19	1.01	2.75	1.70	0.09	1.73	0.50	0.80
1899	0.70	0.35	0.14	1.05	2.70	3.55	2.35	0.22	1.00	1.41	1.20	0.55
1900	0.90	0.20	0.20	0.09	0.10	0.21	4.50	0.86	1.54	0.09	1.00	0.35
1901	0.68	0.40	0.50	0.50	0.75	3.28	3.12	0.00	2.05	R	0.00	0.37
1902	0.10	1.12	2.50	0.25	0.64	6.25	1.00	2.09	0.80	0.70	1.55	0.30
1903	0.50	0.10	0.20	R & S	3.80	1.43	1.88	0.34	0.32	0.12	1.30	1.00
1904	1.05	0.90	2.23	0.20	1.45	8.69	3.39	1.13	1.95	0.74	1.05	0.50
1905	0.80	0.30	1.10	0.60	1.91	2.90	3.05	1.39	1.27	0.15	1.40	0.30
1906	1.10	0.05	0.50	0.10	2.05	0.80	0.40	3.03	0.95	0.83	2.50	1.50
1907	1.40	0.30	1.00	1.50	0.64	1.88	0.17	5.29	0.87	0.30	0.40	0.20
1908	0.15	0.80	6.80	1.30	2.87	2.99	1.55	1.27	1.29	1.06	0.80	0.70
1909	0.60	0.40	2.00	2.00	3.38	2.14	1.62	2.41	0.67	0.64	0.70	2.50
1910	0.25	0.51	0.70	1.45	2.69	4.54	1.84	2.02	2.09	0.63	1.06	1.56
1911	1.06	0.68	0.52	2.36	6.58	1.97	2.06	3.74	2.11	2.30	1.05	0.47
1912	0.48	0.32	0.20	3.06	4.05	0.87	4.32	2.03	4.09	1.23	0.09	1.01
1913	1.02	0.85	0.87	0.38	0.55	3.60	1.59	3.41	2.60	0.90	0.35	0.13
1914	1.80	0.95	0.77	2.62	2.18	1.88	1.42	1.41	1.37	1.31	0.81	0.89
1915	0.65	0.26	0.20	2.14	6.94	3.95	2.30	0.64	3.97	0.93	1.54	1.25
1916	2.57	0.55	2.35	0.87	1.99	5.01	3.34	3.37	1.30	2.02	0.10	2.20
1917	1.06	1.10	0.52	1.81	0.28	1.95	1.22	0.92	0.79	1.26	0.11	0.53
Means	0.73	0.56	0.88	1.52	2.16	3.30	2.59	1.71	1.46	1.06	0.84	0.96

SWAN LAKE.

Year.	Jan	Feb.	March	April.	May	June	July	Aug.	Sept.	Oct	Nov	Dec
1885	0.20	0.25	0.25	3.36	3.72	2.83	4.12	0.80	0.27	0.14	0.45	0.45
1886	1.34	1.20	0.65	3.34	1.10	1.88	1.85	0.47	0.86	0.81	0.35	0.30
1887	0.47	0.71	0.79	0.99	5.00	6.34	3.52	2.51	0.89	0.30	0.57	1.66
1888	0.41	0.28	1.50	0.12	0.67	5.08	3.12	0.94	0.78	1.63	0.00	S.
1889	0.25	1.30	0.30	0.55	2.53	0.52	2.11	1.95	2.01	S.	0.70	1.15
1890	0.25	0.60	0.49	1.22	2.39	1.27	5.39	3.60	2.38	4.43	0.13	0.60
1891	0.58	0.91	0.50	1.83	0.60	5.07	2.92	1.87	2.18	1.14	0.90	2.25
1892	0.43	0.48	0.15	1.92	2.47	4.92	4.68	3.22	1.28	1.14	2.09	0.10
1893	1.43	1.30	0.63	1.53	1.84	2.81	3.98	1.41	0.91	1.33	1.81	0.40
1894	0.22	0.33	0.75	3.87	1.03	1.49	0.61	0.61	2.67	1.80	0.62	0.38
1895	0.80	0.85	0.34	0.52	4.08	6.14	4.71	1.66	1.06	0.50	0.83	0.68
1896	1.33	0.27	1.78	5.88	6.94	3.60	1.52	2.54	2.38	0.75	0.00	1.90
1897	0.20	1.03	1.42	0.22	1.04	1.08	4.43	1.50	2.45	1.28	0.62	0.38
1898	0.55	0.65	1.02	0.81	0.94	5.20	3.06	1.68	0.9	3.45	1.13	0.50
1899	0.77	0.40	0.53	2.21	2.10	3.57	3.16	2.47	0.47	2.05	0.60	0.33
1900	1.07	0.65	1.10	0.70	0.62	1.49	5.01	4.21	1.85	0.29	1.15	0.63
1901	0.62	1.13	0.77	0.90	0.95	5.34	3.18	2.81	3.00	0.85	0.23	0.40
1902	0.12	1.00	2.60	0.15	4.27	3.99	1.36	0.71	1.35	0.51	1.18	0.20
1903	0.55	0.42	0.81	0.38	3.30	1.23	1.19	6.23	3.36	0.22	0.80	1.15
1904	0.65	0.95	2.00	0.92	1.63	4.91	3.10	2.71	1.19	0.75	0.45	0.20
1905	0.83	0.30	1.55	0.20	2.14	4.62	3.49	1.10	1.57	0.83	1.40	0.33
1906	1.12	0.05	0.57	0.08	2.62	3.24	2.90	2.63	0.93	0.76	2.89	1.80
1907	1.45	0.30	1.00	1.55	0.84	0.64	2.50	2.83	0.96	0.34	0.41	0.18
1908	0.13	0.85	0.82	1.35	2.17	3.44	0.96	2.20	0.91	0.62	0.75	0.75
1909	0.30	0.63	2.02	2.33	2.20	1.87	2.19	1.20	0.34	0.82	0.75	2.47
1910	0.30	0.33	1.46	0.63	1.85	2.69	1.91	1.93	1.17	0.39	0.60	0.65
1911	0.45	0.38	0.20	1.03	3.74	2.25	2.85	1.69	2.20	2.24	0.80	0.35
1912	0.25	0.20	0.20	5.29	4.68	0.61	4.57	1.81	5.21	1.52	0.10	0.85
1913	0.28	0.58	0.68	0.68	0.61	2.17	1.21	4.97	2.46	0.70	S.	0.01
1914	2.00	0.55	1.10	2.50	2.00	2.18	1.04	1.96	1.07	1.52	0.70	0.15
1915	0.58	0.08	0.15	1.74	0.96	4.06	2.25	1.08	3.49	0.49	1.35	1.35
1916	2.70	0.90	2.80	0.69	1.04	5.17	1.85	3.19	1.08	1.64	0.25	1.18
1917	1.40	0.55	0.65	1.35	0.00	1.57	1.74				0.10	0.20
Sums	24.73	20.81	31.48	40.82	72.78	108.74	92.49	67.55	50.74	35.22	25.03	22.67
Means	0.75	0.63	0.95	1.50	2.21	3.30	2.80	2.11	1.77	1.10	0.76	0.70

MORDEN.

1885	0.65	0.15	0.45	1.50	1.01	4.01	3.47	0.46	0.23	0.05	0.72	0.51
1886	0.58	0.49	0.45	1.20	0.75	1.30	0.90	1.00	0.80	1.20	0.55	0.35
1887	0.70	0.90	0.30	1.30	2.50	3.70	1.90	1.85	1.50	0.25	0.70	1.50
1888	1.20	0.25	1.05	0.91	0.25	2.81	1.94	0.25	1.03	0.96	0.27	0.21
1889	0.18	0.62	0.30	1.37	3.77	0.54	0.87	1.12	1.08	0.00	0.50	1.45
1890	0.30	0.60	0.50	1.67	0.76	1.39	3.04	1.71	2.30	2.81	0.20	0.02
1891	0.50	0.79	0.40	1.65	1.10	5.00	3.20	3.35	1.75	1.09	1.00	3.10
1892	0.30	1.05	1.37	1.11	3.91	1.26	2.95	4.69	0.79	0.42	1.35	0.00
1893	0.59	0.98	0.47	0.69	1.11	7.51	0.99	1.42	R.	1.17	1.09	0.40
1894	0.50	0.15	0.48	2.79	1.00	2.89	0.28	0.25	1.75	2.74	0.58	0.35
1895	1.00	0.56	S. & R.	0.38	2.58	2.27	2.69	2.29	0.65	4.30	0.35	0.12
1896	0.75	0.20	1.25	5.35	5.18	6.07	1.54	2.12	2.09	4.31	1.85	0.38
1897	0.45	0.95	1.22	0.27	1.18	2.25	7.30	2.16	0.40	1.76	0.40	0.25
1898	0.30	0.20	0.80	0.67	0.70	2.40	1.65	0.68	2.40	3.60	0.80	0.40
1899	0.78	0.15	0.12	2.08	3.30	3.30	2.10	1.25	0.00	1.70	0.70	0.30
1900	1.45	0.20	S.	R.	0.40	0.53	2.38	4.43	0.47	1.30	0.55	0.35
1901	1.10	0.40	0.60	1.78	0.15	6.91	2.57	2.67	2.91	0.10	0.30	0.45
1902	S.	1.10	0.90	R. & S.	2.96	3.96	1.88	2.44	0.81	0.63	1.25	0.30
1903	0.55	0.40	0.10	0.17	2.37	1.44	1.19	3.25	3.30	1.52	0.90	0.95
1904	0.37	0.47	3.78	4.97	2.58	8.24	3.41	2.12	2.56	1.16	0.88	0.97
1905	0.82	0.16	1.80	0.59	3.36	5.66	2.04	1.98	2.02	0.21	2.76	0.72
1906	1.00	0.04	0.45	0.51	3.25	5.38	8.60	1.02	0.90	0.65	2.53	1.61
1907	2.36	0.93	1.38	1.51	0.76	1.23	1.47	1.63	1.08	0.69	0.53	0.27
1908	0.39	2.50	1.80	1.71	2.57	3.60	0.71	2.27	0.61	2.12	1.07	0.98
1909	0.70	2.59	0.90	1.98	4.06	1.62	3.62	0.96	0.38	0.59	0.90	1.97
1910	0.22	0.70	1.73	1.71	1.12	1.18	1.14	1.44	2.21	1.12	1.05	1.41
1911	1.26	0.97	0.21	1.86	3.35	1.31	0.98	2.04	1.45	1.62	1.20	1.00
1912	0.85	0.85	0.05	1.60	2.02	0.45	4.58	2.46	3.93	1.21	0.10	0.75
1913	1.20	1.40	1.50	0.57	0.54	0.83	1.01	3.59	1.19	1.10	0.25	0.20
1914	2.60	2.60	1.00	1.22	1.51	1.71	1.31	1.17	2.20	0.51	2.10	1.30
1915	0.10	0.40	S.	1.06	0.66	2.87	1.85	0.30	4.14	0.19	2.03	1.60
1916	2.00	0.60	6.20	0.87	0.88	0.22	1.67	2.32	0.64	1.36	1.36	3.60
1917	1.00	0.85	0.60	2.20	R.	2.18	2.84	0.91	0.65	1.95	0.40	1.00
Sums	25.46	23.11	32.46	44.77	61.31	100.95	77.77	60.93	53.98	38.57	30.11	28.97
Means	0.77	0.70	0.98	1.34	1.86	3.06	2.30	1.85	1.61	1.17	0.94	0.88

## NINGA.

Year	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1910												
1911	1 87	1 09	R. S.	2 90	2 89	2 41				0 11	1 86	0 57
1912	0 60	0 50	0 86	2 06	2 39	0 21						
1913					1 18	1 59	1 93	4				
1914				1 75	1 41	1 98	1 37	3 14	0 96	0 71	1 11	
1915			0 20	1 35	1 26	1 91	2 68	0 00	2 66	0 26	R	
1916					1 27	2 50	2 19	2 07	0 72	0 49		
1917					1 24	2 15	1 31	0 42				
Sums					11 67	12 83	15 06	13 97	10 51	3 41		
Means					1 67	1 83	2 15	1 97	1 76	0 58		

## PEMBINA CROSSING.

1881				1 87	2 40	3 20	1 50	1 68	2 14	0 85	0 10	
1885				1 87	2 40	3 20	1 50	1 68	2 14	0 85	0 10	
1886	0 10	0 55		1 95	1 10	1 22	1 27	0 42	3 28	0 92		
1887						3 12	1 67	1 11	1 22			
1890					1 68	2 86	3 27	2 70	2 19	2 92	0 13	
1891	0 38	0 60		1 38	1 43	5 18	3 53	4 80	1 90	0 73		
1892		0 15		1 64	1 37	3 18	3 14	2 28	1 14	0 66		
1893					0 96	7 11	1 97	0 89				
1894				2 74	0 37	8 58	0 18	0 16	2 57	1 25	0 48	
1895				1 95	3 84	3 29	4 50	2 19	0 38	0 77		
1896				3 65	4 00	1 31	1 28	2 32	2 71	0 73		
1897					1 48	2 47	6 06	1 40	0 15	1 53		
1898			0 95	0 71	0 10	2 85	1 95	1 38	0 67	3 63		
1899				0 30	2 61	4 48	4 34	5 07	1 24	2 05	0 79	
1900				0 25	R.	0 61	2 23	5 55	3 85	0 35		
1901				0 48		3 70	1 88	2 16	2 71	0 31		
1902						6 89						
Sums				16 02	21 82	63 18	43 43	34 65	26 94	17 25		
Means				1 54	1 68	3 95	2 71	2 18	1 80	1 23		

## GRETNA.

1885				0 30	1 44	3 71	2 68	0 19	0 51	0 19		
1886	0 90	0 95	0 20	1 10	0 78	1 28	1 82	0 55	1 18	1 28		0 40
1887	0 80	0 80	0 00	0 12	3 65	3 50	2 64	1 37	1 00	0 60	0 80	0 90
1888	1 30	0 55	1 10	0 90	0 35	5 35	4 10	0 20				
1897	1 00	1 70	1 55	0 35	1 24	1 56	0 10	1 88	R.	1 40	0 40	
1898					0 70	6 78	1 55	2 21	1 00	3 40	0 77	0 20
1899	2 80			1 23	1 15	3 05	3 96	1 40				
1902												
1903			1 83	1 75	1 86	1 92	0 99	3 62	3 20	0 88	0 79	
1904	0 73	1 23	2 17	1 27	2 06	7 09	5 44	2 34	1 59	0 58	0 28	
1905	0 55	0 25	1 80	0 23	2 77	4 46	0 69	2 64	1 40	0 21	1 76	0 85
1906	0 95	R. S.	0 25	0 61	3 60	5 38	2 96	1 53	2 00	0 22	3 00	1 65
1907	1 35	S.	1 18	1 25	0 48	1 88	2 64	2 23	1 42	0 35	0 45	0 35
1908	0 75	3 00	2 25	2 45	2 76	3 47	0 86	2 52	1 08	0 97	1 68	1 00
1909	1 40	1 33	1 20	0 83	3 32	3 04	2 53	2 35				2 23
1910	0 05	0 70	1 59	1 59	0 75	0 68	0 81	2 06	2 86	1 20	1 03	1 48
1911	1 04	0 95	0 05	2 15	5 86	2 16	1 20	2 16	1 18			
1912	0 43											
Sums	14 05	11 46	15 17	16 36	32 77	55 31	40 37	29 55	18 42	12 01	11 61	9 06
Means	1 00	0 99	1 17	1 09	2 05	3 46	2 52	1 85	1 42	0 92	1 06	1 01

## NINETTE.

1885				1 22	2 59	3 23	3 56	1 70	0 11	0 60		
1886	1 33	0 79	0 35	2 47	1 18	1 72	1 43	1 45	0 75			
1911											0 40	0 18
1912	0 20	0 15	0 13	0 13					0 30	0 60		
1914	1 02	0 45	0 40	1 10	1 45	1 30						
1915	S.	R. S.	0 00									0 80
1916	3 20	0 25	3 50	0 87	1 76	4 16		1 61	0 68	2 03		
1917	1 10	0 70	0 05	2 31	0 02	1 61	1 92	2 05	0 70	1 15	0 14	9 45

## ARNAUD.

1885				2 67	1 57	2 84	2 86	0 89	0 73	0 65		
1886	0 20			1 51	0 53	1 21	1 02	1 22	2 25	0 94		

## MISSISSIPPI.

Year	Jan.	Feb.	Mar.	April.	May.	June.	July	Aug.	Sept.	Oct.	Nov.	Dec.
1902					4.51	3.05	4.07	1.37				
1903				0.58	3.69	1.74	3.06	3.18	3.18	1.32	1.20	
1904	0.33	S.	0.40	0.16	3.17	7.31	2.75	2.35	1.32	1.21	0.25	0.30
1905			0.81	0.20	1.20	3.31	2.19	2.01	2.82	0.21	0.47	0.30
1906				0.33	2.85	5.51	1.81	1.37	0.99	0.57	2.01	2.45
1907		0.25		S.	0.25	1.17	2.63	2.41	1.01	0.50	0.29	0.10
1908	0.60	2.05	1.60	1.33	1.79	2.85	1.04	2.39	0.86	1.18	0.91	1.15
1909	1.30	1.85	2.85	2.17	3.22	2.54	2.48	1.57	0.31	1.23	0.95	3.20
1910	0.10	0.60	1.03	2.12	1.60	3.13	1.21	2.32	2.11	1.13	1.00	1.80
1911	0.40	0.40		1.94	6.19	2.68	1.15	2.58	1.78	2.45	0.80	0.35
1912	0.35	0.29	0.05	3.00	4.91	0.47	5.05	1.92	4.73	0.57	0.05	1.15
1913	0.45	1.10	0.80	0.30	0.53	2.15	2.50	4.15	1.91	1.27	0.55	0.10
1914	2.25	1.80	0.70	1.71	1.15	1.50	2.81	1.20	2.82	0.80	0.51	0.90
1915	0.15	0.02	0.00	1.89	0.65	3.45	2.52	0.61	5.57	1.38	1.24	1.09
1916	3.60	0.53	2.90	0.86	1.52	4.13	2.23	2.64	1.09	2.01	0.17	1.95
1917	1.05	0.60	0.15	1.76	0.20	1.64	1.33	0.69	1.18	1.16	0.10	0.13
Sums	10.88	9.40	11.29	18.35	40.13	46.96	39.16	32.76	32.01	17.02	10.53	15.27
Means	0.99	0.78	1.03	1.22	2.53	2.94	2.45	2.65	2.13	1.10	0.70	1.09

## SELKIRK, E.

1885				1.82	2.18	3.61	3.62	0.59	0.71	1.12		
1886				2.01	1.22	0.81	0.86	0.43	3.52	1.62	0.43	0.18
1887	0.72	1.63	1.91	1.57	3.59	2.63	1.78	1.63	1.71	0.44	1.13	1.92
1888	1.43	0.51	1.38	1.16	0.36	3.38	3.11	2.26				

## DOMINION CITY.

1885				2.28	1.81	2.70	2.91	0.70	0.75	0.47		
1886	0.45	0.50	0.10	1.36	1.58	1.37	1.80	0.72	1.66	1.21		

## SPRAGUE.

1916	2.05	3.00	2.60	1.70	2.25	3.03	1.35	2.24	1.88	4.10	2.00	0.90
1917	0.70	1.80	0.30	0.51	0.25	2.25	1.97	1.93	1.44	1.72	0.80	0.45

## CARTWRIGHT.

1883				0.38	0.65	3.01	3.19	4.31	0.83	2.18		
1884				2.20	0.65	3.82	3.51	1.81	2.56			
1885	0.23	0.30	0.48	2.92	3.25	4.08	1.31	1.37	0.13	0.56	0.85	0.33
1886	0.85	0.83	0.32	3.06	1.75	1.83	1.07	1.56	0.76	1.51	0.35	0.23
1887	0.65	0.45	0.63	1.73	1.81	6.11	5.60	2.82	1.66	0.78	0.61	1.35
1888	0.78	0.25	2.46	1.08	0.74	3.98	3.81	2.65	0.59	0.81	0.14	0.20
1889	0.30	1.30	0.50	2.00	1.27	0.51	2.36	1.49	3.02	1.20	0.40	0.80
1890	0.15	0.15	1.10	1.13	1.56	2.81	2.56	1.19	2.00	1.39	S.	S.
1891	0.63	0.65	0.93	2.29	0.58	4.94	3.79	2.91	1.91	1.46	1.20	2.79
1892	S.	0.90	0.40	1.43	0.63	1.98	3.92	1.29	0.85	1.09	2.02	0.30
1893	0.60	0.30	0.27	0.52	0.70	5.32	1.64	0.81	1.19	1.32	2.00	0.30
1894	0.20	0.20	0.20	2.05	0.88	2.55	0.33	0.54	1.84	2.33	1.25	S.
1895	0.50	0.70	0.15	0.91	3.56	4.25	3.84	2.58	0.91	1.20	0.20	0.35
1896	6.80	0.30	0.50	4.01	4.60	2.56	1.17	2.40	0.68	0.30	0.60	0.90
1897	0.90	1.50	1.90	3.45	0.77	1.63	3.21	1.96	0.53	1.08	0.30	0.12
1898	0.55	0.50	1.20	0.51	0.02	4.12	3.04	1.11	0.78	3.57	1.00	0.40
1899	0.50	0.20	1.00	3.50	2.42	5.42	2.87	4.15	0.71	4.16	0.83	0.35
1900	0.30	0.60	0.65	0.39	0.82	0.81	4.26	3.97	5.61	2.90	1.00	0.80
1901	0.90	0.20	0.83	0.81	0.26	4.69	2.52	3.00	2.36	0.87	0.03	0.55
1902	S.	1.45	2.80	0.20	4.62	2.92	2.55	1.32	0.81	0.72	0.64	0.70
1903	0.55	0.30	0.60	0.35	4.26	0.84	1.33	6.29	1.35	1.37	0.48	0.38
1904	0.15	1.32	3.08	0.53	1.43	6.76	3.09	1.93	0.99	0.48	0.23	0.65
1905	0.15	0.12	1.45	0.08	2.42	3.96	2.54	1.64	2.33	0.18	0.73	0.70
1906	1.50	S.	0.25	1.21	3.48	1.71	2.26	3.89	0.89	0.89	1.99	1.50
1907	0.80	0.15	1.35	1.28	2.35	2.23	2.57	3.83	2.17	0.71	0.35	0.23
1908	0.25	2.05	1.60	2.19	2.98	3.14	1.72	2.78	0.91	0.94	1.01	1.18
1909	0.80	1.03	1.90	1.12	4.66	1.90	1.78	2.62	1.13	1.23	3.30	2.55
1910	0.70	0.55	1.35	1.66	2.36	2.30	1.14	1.13	1.41	0.54	1.54	0.90
1911	1.65	0.30	0.85	1.87	3.12	2.39	1.43	2.92	2.35	2.06	1.00	0.33
1912	0.60	0.28	0.40	3.77	3.97	0.40	3.04	2.13	5.67	1.29	0.25	1.05
1913	0.85	0.63	0.75	1.50	1.19	1.23	1.87	2.95	2.58	0.92	0.37	0.16
1914	2.33	0.43	1.25	1.75	1.15	1.95	1.35	0.95	0.70	1.10	0.60	0.15
Sums	1.77	18.24		51.97	65.21	102.15	81.03	75.26	55.18	41.01	25.30	19.65
Means	0.66	0.61	1.07	1.62	2.01	3.19	2.63	2.35	1.72	1.32	0.84	0.65

## THE WINNIPEG RIVER BASIN.

**January.**—No observations have been made in this territory until very recently and the stations at present are too few in number to determine the course of the isotherms without considerable guess-work. It seems probable that northeast of the English River there lies a very cold territory with a daily range of temperature between  $3^{\circ}$  and  $-18^{\circ}$ , and that the tempering influence of the Lake of the Woods on one hand and of Lake Winnipeg on the other hand prevent such low temperatures south of the Winnipeg River. The region drained by the Whitemouth River is probably a little colder in respect to maximum temperatures than the Red River Basin, the mean maximum may in fact be lower than  $5^{\circ}$ . The mean minimum is about  $-10^{\circ}$  near the border.

**February.**—At the head of the Whitemouth the daily range of temperature is  $-10^{\circ}$  to  $12^{\circ}$  and at Lac du Bonnet from  $-12^{\circ}$  to  $8^{\circ}$ . Northeast of Lac du Bonnet there is probably a further but gradual fall of temperature.

**March.**—The Whitemouth basin has a daily range of temperature from  $5^{\circ}$  to  $26^{\circ}$  in the south and from  $2^{\circ}$  to  $24^{\circ}$  at Lac du Bonnet. Northeast of Lac du Bonnet the minimum is zero.

**April.**—The southern portion of the Basin has a maximum of  $48^{\circ}$  and a minimum of  $26^{\circ}$  while Lac du Bonnet is  $2^{\circ}$  colder and the mouth of the Winnipeg  $3^{\circ}$  or  $4^{\circ}$  colder. The isotherm of  $24^{\circ}$  shown on the map between Indian Bay and the Whitemouth is doubtful.

**May.**—The maximum temperature is  $62^{\circ}$  at Sprague and Giroux which are nearly on the divide between the Red and Whitemouth basins. Eastwards to the Lake of the Woods the maximum decreases  $2^{\circ}$  or  $3^{\circ}$  but the minimum is  $38^{\circ}$  in the whole southern region. Towards Lac du Bonnet it is a little lower and is probably  $35^{\circ}$  at the mouth of the Winnipeg.

**June.**—The southern portion of this basin is  $2^{\circ}$  to  $3^{\circ}$  cooler than the Red River Basin.

**July.**—Near the Lake of the Woods the minimum is  $54^{\circ}$  but in the interior of the southern portion of the basin may be  $52^{\circ}$  or  $53^{\circ}$ . At Lac du Bonnet it is  $52^{\circ}$ .

Maximum temperatures range from  $78^{\circ}$  at Sprague and the Mouth to  $75^{\circ}$  northeast of Lac du Bonnet.

**August.**—The temperatures range from  $74^{\circ}$  and  $51^{\circ}$  in the south to  $71^{\circ}$  and  $49^{\circ}$  north east of the river.

**September.**—The greater part of the basin has a mean minimum of  $40^{\circ}$  or  $41^{\circ}$  and a mean maximum of  $62^{\circ}$ .

**October.**—From  $47^{\circ}$  near the Lake of the Woods the maximum increases to  $52^{\circ}$  on the southern portion of the Red River divide. The minimum is approximately  $32^{\circ}$  throughout.

**November.**—The mean maximum is  $30^{\circ}$  or  $31^{\circ}$  in the southern portion of the basin and near Lac du Bonnet is probably nearly  $27^{\circ}$  with a slight increase towards the mouth. The minimum temperature increases from the Red River towards the Lake of the Woods and is probably  $17^{\circ}$  at Sprague and  $13^{\circ}$  or  $14^{\circ}$  at Lac du Bonnet.

**December.**—The normal mean maximum is  $12^{\circ}$  and the mean minimum  $-3^{\circ}$  to the north of the main river. At Sprague the temperatures are  $16^{\circ}$  and  $-1^{\circ}$ .

## RECORDS OF FIRST AND LAST FROSTS, BASIN OF THE WINNIPEG RIVER.

## SPRAGUE, MAN.

Year	Late Frost.				Early Frost.			
	Month.	Day Year.	Date.	Temp.	Month.	Day Year.	Date.	Temp.
1915	Sept.—1st return.							
1916	June	169	18	30.0	Aug.	223	11	31.0
1917	June	179	28	30.0	July	182	1	30.0

(Shoal Lake.)

## INDIAN BAY, MAN.

1915	June	168	17	32.0	Aug.	238	26	33.0
1916	May	140	20	31.0	Aug.	240	28	32.0
1917	June	166	15	31.0	Aug.	241	29	31.0

## PINAWA, MAN.

1916	July—1st return.				Sept.	257	14	32.0
1917	June	172	21	33.0	Sept.	251	8	30.0

## RECORDS OF MONTHLY PRECIPITATION AND FIRST AND LAST FROSTS GREAT LAKES OF MANITOBA.

## ATKINSVILLE (BAYTON)

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date	ap.		Month.	Day of Year	Date.	Temp
1910	June	153	2	30.5		Aug.	237	25	32.8
1911	May	148	28	33.4		Sept.	249	6	26.1
1912	May	141	21	30.1		July	202	21	33.3
1913	June	168	17	33.2		Sept.	255	13	29.0
1914	June	177	26	30.1		Oct.	277	4	27.7
1915	June	173	22	32.2	Frost every month	July	186	5	28.0
1916	June	155	4	31.1		Sept.	245	2	25.1
1917	June	156	5	30.2		Sept.	216	3	30.0

## BERENS RIVER, MAN.

1905	June	166	15	33.0					
1908	June	165	14	33.0		Sept.	269	26	32.0
1909	June	156	5	31.0		Sept.	267	24	27.0
1910	June	153	2	32.0		Aug.	230	18	30.0
1911	May	149	29	32.0		Sept.	218	5	31.0
1912	May	145	22	31.0					
1913	June	158	7	30.0					
1914				....	No observations June to Aug.				
1915	June	173	22	32.0		Aug.	236	24	33.0
1916	May	140	20	33.5		Sept.	259	16	32.0
1917	June	172	21	28.0		Aug.	240	28	28.0

## BOWSMAN, MAN.

1901	June	158	7	27.0		Aug.	220	8	32.0
1902	June	176	33	32.0		Aug.	215	3	33.0
1903	June	173	22	33.0		Aug.	234	22	33.0
1904	July	186	5	32.0	Frost every month.	Aug.	233	21	31.0

## CHANNEL ISLAND, MAN.

1894	May	147	27	32.0		Sept.	259	16	33.0
1895	May	140	20	30.0		Oct.	280	7	24.0
1896	May	142	22	32.0		Sept.	261	18	32.5
1897	June	156	5	32.0		Oct.	269	26	33.0
1898	June	154	3	30.5		Oct.	275	2	29.0
1899	May	143	23	31.0		Sept.	271	28	31.5
1900	May	135	15	33.0		Sept.	269	26	31.0
1901	June	157	6	33.0		Sept.	250	17	33.0
1902	May	134	14	30.0		Oct.	281	8	28.0
1903	May	138	18	33.0		Sept.	255	13	33.0
1904	May	149	29	32.0		Oct.	275	2	27.0

## DURBAN, MAN.

1916	June	171	20	33.5		Aug.	241	29	30.0
*1917	June	173	21	32.0	Frost every month.	July	183	2	32.0

## GRAND RAPIDS, MAN.

1916	June	170	19	33.0		Sept.	245	2	31.0
1917	June	172	21	32.0		Sept.	244	1	28.0

## DARPHIN, MAN.

1894									
1903	May	141	21	31.0		Sept.	248	5	32.5
1904	May	147	27	32.5		Sept.	254	11	31.5
1905	June	161	10	33.0		Sept.	255	12	27.0
1906	May	148	28	31.0		Sept.	256	13	32.0
1907	May	150	30	32.0		Sept.	259	16	33.0
1911	May	149	29	32.0		Sept.	249	6	29.5
1912	May	141	21	30.0		Sept.	259	16	31.0
1913	June	157	6	33.0		Sept.	256	13	29.0
1914					Incomplete.	Sept.	250	7	30.0
1915	June	167	16	33.0		Aug.	238	26	31.0
1916	June	155	4	33.0		Sept.	258	15	30.0
1917	May	152	31	33.0		Sept.	253	10	31.0

## LE PAS, MAN.

Year.	Late Frost.					Early Frost.			
	Month.	Day of Year	Date.	Temp.		Month.	Day of Year.	Date.	Temp.
1913	May	144	24	28 0		Sept	255	12	32 0
1914	June	169	18	32-0		Aug	235	23	32 0
1915	June	166	15	32 0		Aug	237	25	33-0
1916	June	152	1	32 0		Sept	257	14	30 0
1917	June	154	3	32-0		Sept.	2	26	32 0

## NORWAY HOUSE, MAN.

1897	June	158	6	32 2		Sept.	251	10	33-0
1898	July	185	3	32-5		Sept.	253	9	33-2
1899	June	166	11	33-5		Aug.	226	13	29-7
1900	June	161	9	29-0		Sept.	253	9	31-5
1901	June	160	8	32-5		Sept.	251	7	31 0
1902	June	162	10	31 0		Sept.	259	15	27-5
1903	June	168	16	33 0		Sept.	255	11	33 0
1904	June	153	1	26 0		Sept.	255	11	33 0
1905	May	146	25	32 0		Sept.	257	13	29-0
1906						Aug.	244	31	31-0
1907	June	157	5	32 0		Sept.	263	19	32 0
1908	June	161	9	27 0		Sept.	267	23	33-0
1909	June	165	13	30 0		Sept.	250	6	30-0
1910	June	156	4	31-0		Aug.	241	28	33 0
1911	May	150	29	26 0		Sept.	255	11	31-0
1912	June	167	15	33 0		Aug.	215	2	31-0
1913	May	133	13	30 0		Sept.	245	2	28-0
1914	June	173	22	30 0		Sept.	249	0	31-0
1915	June	144	23	32 0		Aug.	239	26	30-0
1916	June	154	2	33 0		Sept.	259	14	33-0
1917	June	143	22	32 0		Sept.	271	27	33-0

## PINE RIVER, MAN.

1916	May	129	9	33-0					
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## PORT NELSON, MAN.

1915	June	177	26	31-0	Frost every month..	July	184	3	32-0
1916	June	179	28	29 0		Aug.	220	8	33-0
1917	June	180	29	33 0	Frost every month..	July	184	3	30-0

## ROCKWOOD, MAN.

1878	June	155	4	33 0		Sept.	254	11	27 0
1879	May	151	31	33-0		Sept.	251	8	30 0
1880	May	147	27	32-0		Sept.	256	13	27-1
1881	May	139	19	33 0					
1883	June	154	3	28 0		Sept.	251	8	29 0

## ROBLIN, MAN.

1916					June 1st, return unre- liable.				
1917	June	172	21	32 0		July	212	31	33-0

## SWAN RIVER, MAN.

1908	June	159	8	30-5		Aug.	233	21	32-0
1909	June	164	13	33-0		Sept.	246	3	33 0
1910	June	154	3	33 0		Aug.	238	26	31-0
1911	May	147	27	33 0		Aug.	237	25	33-0
1915	June	173	22	33 0		Aug.	213	1	30-0
1916	June	171	20	30-0		Aug.	241	29	32 0
1917	May	151	31	31 0		Aug.	220	8	32-0

## YORK FACTORY, MAN.

Year	Late Frost					Early Frost.			
	Month.	Day of Year.	Date	Temp.		Month.	Day of Year.	Date	Temp.
1878	June	156	4	28.5		Sept.	248	4	30.9
1889	June	177	25	32.0		Aug.	235	22	33.5
1900	June	160	8	29.0		Aug.	242	29	30.0
1903	May	149	28	30.0					
1904	June	154	2	32.0		Sept.	245	1	29.0
1905	July	190	8	33.0		Sept.	252	8	32.0
1906	June	175	24	33.0		Aug.	241	28	28.0
1907	June	174	22	33.0		Sept.	261	17	32.0
1908	June	182	30	33.0		Sept.	270	26	33.0
1909	June	173	21	33.0		Aug.	244	31	29.0
1910						Sept.	255	11	27.0
1911	July	186	4	31.0		Sept.	247	3	33.0
1912	July	192	10	32.0	Frost every month.	Aug.	231	18	32.0
1913	July	191	9	31.5		Sept.	247	3	32.5
1914	July	199	17	33.0	Frost every month.	Aug.	234	21	32.5

## NORWAY HOUSE.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1896	0.88	0.65	0.06	1.66	1.37	3.42	4.19	2.57	3.43	0.78	0.18	0.72
1897	1.10	0.59	0.95	0.83	2.68	3.22	4.12	3.48	1.26	1.07	0.75	2.04
1898	0.77	0.59	0.69	0.46	0.22	1.21	1.88	5.38	2.58	0.99	1.48	0.83
1899	0.33	0.71	0.28	0.63	1.59	3.73	2.53	2.46	2.54	1.06	0.70	0.40
1900	1.00	0.83	2.29	0.02	1.50	1.52	2.88	2.68	3.81	2.18	0.70	0.40
1901	0.75	0.67	0.25	1.20	1.56	4.16	4.41	1.25	3.87	0.49	1.33	0.90
1902	1.28	0.46	0.50	0.38	0.35	2.60	3.11	3.30	2.96	0.25	0.70	0.20
1903	1.10	0.12	1.29	2.50	1.35	9.49	4.27	1.34	2.02	0.00	1.40	2.10
1904	0.80	0.00	1.60	0.05	0.50	3.11	4.76	1.82	0.18	0.86	0.03	0.70
1905	0.90	0.30	R.	1.00	0.00	1.69	3.37	1.88	0.30	0.80	0.90	0.30
1906	0.00	2.60	0.10	0.50	2.50	1.26	1.11	0.41	2.10	0.01	3.80	0.73
1907	0.60	2.90	1.30	0.80	0.85	2.54	2.70	6.32	3.25	0.34	1.20	S.
1908						4.01	0.40	5.06	0.48	0.91	1.60	0.92
1909	1.27			1.60		3.32	0.53	0.48	3.64	0.91	1.88	2.02
1910	0.40	0.30	2.20		0.42	0.57	0.28	3.04	2.22	0.11		
1911		0.13		0.60	0.10	2.61	0.85		1.04	2.50		
1912					3.60	0.80	2.53	0.60	1.33	0.30	0.80	
1913	0.10	0.10	0.10	S.	S.	0.65	0.95	1.85	1.06	2.53	0.40	
1914					0.80	0.65	0.95	1.85	1.06	2.53	0.40	
1915				1.09		1.39	2.26	0.33	0.99	0.11	0.38	
1916				0.75	1.87	2.17	1.41	1.44	3.66	0.92		
1917				0.13	2.60							
Sums.	10.38	10.92	14.62	14.20	24.17	41.67	50.69	49.51	45.11	17.13	18.23	12.26
Means.	0.60	0.73	1.05	0.79	1.27	2.23	2.41	2.48	2.15	0.81	1.07	0.87

## SWAN RIVER.

1900.									2.85	1.27	0.65	
1901	1.30	0.78	1.00	0.75	0.47	5.62	4.38	3.13	5.58	0.66	0.80	0.30
1902	0.65	0.65	1.45	0.09	2.88	7.65	3.02	1.06	1.09	1.42	1.98	1.00
1903	0.45	0.20	0.80	1.52	2.89	2.86	6.37	1.26	2.81			
1904	1.02	1.40	2.10	1.19	0.89	1.64	5.80	0.88	1.14	0.52	1.50	1.10
1905	0.70	0.70	1.00	0.20								
1908					0.90	4.96	0.72	2.05	0.31	0.85		
1909					0.83	2.21	3.67	2.58	0.49	0.49	1.20	
1910	0.05	0.50	0.45	1.76	2.63	3.17	1.30	4.47	0.79	0.22	0.75	1.30
1911	0.70			0.31	2.96	3.52	2.64	3.68	2.37	1.12	1.40	1.20
1912	0.20	0.30										
1915				2.00	0.30	3.55	3.45	1.67	1.25	0.06		
1916				0.14	2.37	3.25	2.58	0.80	5.63	0.15		
1917				0.50	0.70	3.18	1.97	2.98	0.62	1.35		
Means	0.63	0.65	1.13	0.85	1.62	3.78	3.26	2.23	2.08	0.74	1.18	0.95

## CLARKLEIGH.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1885.	0.75	0.60	0.80	1.12	2.53	0.83	3.33	1.70	0.86	0.97	0.38	0.79
1886.	0.93	1.42	0.85	2.64	1.27	0.99	2.19	0.28	1.46	1.18	0.48	0.54
1887.	1.00	1.07	1.03	1.02	2.72	2.45	2.69	0.92	2.55	0.47	1.81	0.65
1888.	1.10	0.73	1.55	1.17	0.71	6.41	2.30	1.59	1.19	1.72	0.12	0.56
1889.	1.28	0.68	0.41	0.98	3.29	0.43	2.18	3.86	3.91	0.46	1.12	1.35
1890.	0.44	2.53	1.25	0.50	3.83	2.40	3.84	3.45	3.27	4.30	0.20	1.38
1891.	1.19	2.00	0.23	0.48	0.39	8.28	1.49	2.09	1.75	1.20	1.41	2.21
1892.	0.95	2.61	0.47	2.25	1.78	3.55	1.69	1.67	0.28	0.47	1.85	0.63
1893.	2.42	1.47	0.79	1.77	1.38	3.73	6.27	2.51	1.27	1.50	3.62	1.31
1894.	1.40	0.80	0.10	1.61	1.33	4.75	0.32	0.29	1.55	0.95	0.46	0.09
Means	1.15	1.39	0.75	1.35	1.92	3.39	2.64	1.84	1.81	1.36	1.15	0.95

## DAUPHIN.

1903.					4.62	1.97	3.64	2.19	2.62	0.86		
1904.					0.00	2.06	2.43	1.26	1.58			
1905.				0.20	3.10	1.52	1.93	1.34	3.08	1.50	2.85	
1906.					3.53	6.17	3.62	2.99	1.03	0.00	3.15	0.30
1907.	0.90		0.60	0.00	0.99	2.08	2.83	6.79	1.13	0.70	0.20	0.90
1911.					4.89	1.60	2.36	3.18	2.45	1.65		0.60
1912.			0.30	0.30	2.60	2.03	6.01	2.54	6.95	0.50		0.80
1913.	1.20	1.40	0.40	0.00	0.53	2.19	0.44	2.05	1.10	0.12	0.60	S.
1914.	1.30	0.40	0.30	0.59	3.17	0.66	3.27	2.17	1.73	1.62	1.00	0.20
1915.	0.40	0.90	0.20	0.88	0.35	3.60	3.10	R.	2.90	0.80	0.70	0.90
1916.	0.10		0.65		2.10	5.38	1.64	1.03	1.68	2.35	0.20	1.60
1917.	3.15	1.10		0.30	0.10	5.02	1.94	1.30	0.60	1.11	0.08	1.20
Sums...	7.05	3.80	2.45	2.27	25.38	34.28	33.21	26.84	26.85	11.21	8.78	6.50
Means..	1.34	0.95	0.41	0.32	2.12	2.86	2.7	2.24	2.24	1.02	1.10	0.72

## DURBAN.

1916.....				0.35	5.51	5.63	1.46	0.80	4.33	2.05	1.25	1.15
1917.....	2.90	0.90	2.15	1.10	3.93	5.69	1.95	2.58	0.80	1.80	0.15	0.95

## EDEN

1883			0.64	0.38	0.88	1.81	2.51	3.17	0.43	2.77	1.33	0.82
1884	0.28	2.17	1.52	1.21	1.04	2.32	2.18	3.06	2.89	2.66	0.55	0.73
1885...	0.28	0.31	0.97	1.84	1.55	2.28	2.83	1.74	0.36	0.48	0.11	1.69
1886...	0.93	0.90	0.32	1.13	2.29	0.71	1.44	0.77	1.05	1.24	0.31	0.10
1887...	0.36	0.60	1.11	1.63	2.55	8.76	2.34	1.76	0.81	0.34	0.76	1.30
1888...	0.75	0.39	0.53	1.75	0.78	5.88	3.91	2.11	0.14	1.60	0.17	
1889...				1.29	2.43	0.38	2.28	2.45	1.18	0.16	0.25	1.05
1890...	0.60	0.93	0.78	0.71		4.22	2.45	3.95				
1891...									0.71	0.20		
Sums.....	3.20	5.30	5.87	9.94	11.52	26.36	19.94	19.01	7.57	9.54	3.48	5.69
Means	0.53	0.88	0.84	1.24	1.65	3.29	2.49	2.38	0.95	1.19	0.50	0.95

## GLADSTONE.

1883...	0.55	0.23	0.33	0.47	0.06	0.87	1.59	2.06	5.02	1.41	3.14	0.35
1884...	0.54	0.49	1.23	1.44	0.66	2.47	1.65	3.88	3.69	1.24	0.61	0.85
1885...	0.40	0.23	0.56	1.84	4.12	1.41	5.13	2.00	1.56	0.76	S. R.	1.45
1886...	1.77				1.10	0.89	1.25			1.81	0.50	0.18
1887...						8.86	2.45	3.23	2.19			
1888...	0.68		1.40	1.46		6.23	6.59	1.68	0.86			
Sums	3.94	0.95	3.52	5.21	5.94	20.73	18.66	12.85	13.26	5.22	4.25	2.83
Means	0.79	0.32	0.88	1.30	1.48	3.46	3.11	2.57	2.65	1.30	1.06	0.71

## MOOSE HORN BAY.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1910				1.65	1.83	1.54	1.45	2.17	0.88	0.31	1.05	2.15
1911	1.95	0.90	0.71	1.82	4.95	1.44	1.68	4.69	2.20	2.34	1.31	0.88
1912	0.32	0.32	1.19	1.64	2.16	1.17	2.15	2.60	3.86	0.86	0.39	1.27
1913	1.72	0.73	0.23	0.28	1.30	1.46	4.03	2.12	1.09	1.32	1.13	0.63
1914	2.05		1.02	0.75	1.18	0.78	2.93	4.40	1.25	2.01	1.51	0.58
1915	1.02	0.81	0.16	1.31	0.52	2.61	1.02	3.75	3.50	1.08	2.27	1.64
1916	1.53	0.48	0.88	0.16	3.87	4.61	1.82	0.82		1.15		1.24
1917	2.19	0.15	0.54	0.51	0.21	5.21	1.72	5.58	2.05	2.31	0.43	1.11
Sums	10.90	3.39	5.63	8.12	16.65	19.21	16.78	22.13	14.83	11.41	8.94	9.20
Means	1.57	0.56	0.72	1.01	2.08	2.40	2.40	2.77	2.12	1.43	1.28	1.15

## THE BASIN OF THE ATHABASKA.

**January.**—This stream begins east of the Yellowhead Pass and the region east of Jasper House to the Brazeau Forest Reserve is very cold with minimum temperatures (daily normal) lower than  $-12^{\circ}$  and maximum about  $17^{\circ}$  or lower. But below Jasper House observations at Jasper, Entrance and Edson, show that in the valley of the main stream and also that of the McLeod the minimum temperatures are considerably higher. Observations on the Pembina and Townsivew rivers show that from temperatures of  $15^{\circ}$  and  $-4^{\circ}$  at Wabasca there is a steady fall to  $5^{\circ}$  and  $-20^{\circ}$  at Athabaska Landing. On the west side of the stream the temperature do not fall but remain practically the same at Wabasca as at Athabaska Landing. From Wabasca to Fort Chipewyan there is a steady fall to  $-7^{\circ}$  and  $-20^{\circ}$ . On the east side of the river little is known about the temperatures and the isotherms drawn eastwards and northwards from Buffalo Lake have no observational basis until Pond du Lac at the east end of Lake Athabaska is reached. There the mean maximum is known to be  $-13^{\circ}$  and the mean minimum  $-32^{\circ}$ .

**February.**—At Edson the mean maximum is  $26^{\circ}$  and the mean minimum  $2^{\circ}$  but observations are not numerous enough at present to fix the normals for territory further upstream.

On the Pembina the temperature begins to fall rapidly near Entwistle but along the McLeod and the main stream the fall is probably quite gradual.

At Athabaska Landing the maximum and minimum are respectively  $20^{\circ}$  and  $-7^{\circ}$ . Downstream to Lake Athabaska the few observations indicate a steady fall of the maximum temperature to  $-4^{\circ}$  at Fort Chipewyan but the minimum temperature is about the same at Ft. McMurray as at Chipewyan. Probably observations at Birch Mountain would establish an area with a minimum of approximately  $25^{\circ}$ .

**March.**—At Edson the daily maximum is  $36^{\circ}$  and the mean minimum  $8^{\circ}$  while the normals for Coalspur and Mountpark are at present doubtful. The Pembina probably rises in somewhat colder territory. There is very little change on temperature as we go north till near Athabaska Landing beyond which it appears that there is a very steady fall all the way to Chipewyan where the maximum is  $14^{\circ}$  and the minimum  $-5^{\circ}$ .

**April.**—From a probable maximum of  $46^{\circ}$  and minimum of  $20^{\circ}$  at Coalspur the temperature increases to  $50^{\circ}$  and  $25^{\circ}$  at Edson. The lower part of the Pembina river is a little warmer.

At Athabaska Landing the temperature is the same as at Edson. Thence northward the maximum decreases quite rapidly and the minimum quite slowly to  $46^{\circ}$  and  $23^{\circ}$  at Ft. McMurray. At Chipewyan the temperatures are  $40^{\circ}$  and  $18^{\circ}$ .

**May.**—The temperatures of  $62^{\circ}$  and  $36^{\circ}$  at Edson seem a little higher than we should expect but the records from Edson, Coalspur and Mountpark are so short that the course of the isotherms is extremely doubtful. Coalspur and Mountpark are evidently much cooler than Edson.

The observations at Sion, Campsie and Athabaska Landing, McMurray and Wabasca show that up to latitude  $57^{\circ}$  spring is advancing nearly as rapidly as at Battleford. Below McMurray the minimum temperature remains at  $33^{\circ}$  or  $31^{\circ}$  to Chipewyan but the maximum temperature falls from  $62^{\circ}$  at McKay to  $54^{\circ}$  at Chipewyan.

**June.**—The few observations from Coalspur and Mountpark show that the month remains frosty in the Brazeau region while at Edson the maximum is  $68^{\circ}$  and minimum  $40^{\circ}$ . Between the Pembina and Edmonton the maximum is  $70^{\circ}$  and the minimum  $41^{\circ}$  to  $42^{\circ}$ .

From Athabaska Landing to Chipewyan there appears to be no change in the minimum temperature, Wabasca, McMurray and Chipewyan recording the same average of approximately  $43^{\circ}$ . Between McMurray and Chipewyan, however, the maximum decreases from  $70^{\circ}$  to  $65^{\circ}$ . At Wabasca the maximum is  $66^{\circ}$ .

**July.**—Edson, Jasper and Entrance have mean minimum temperatures of 43° or 44°, but the highlands of Coalspur and Mountpark have minima lower than 40°. At elevations of 2,000 feet the maximum is 73° and the minimum 45°. Below Athabaska Landing the minimum increases to 50° over the whole of Lake Athabaska. The maximum decreases from 74° or 75° at McMurray to 72° at Chipewyan and 69° at Foud du Lac.

**August.**—The short series of observations at the head of the Athabaska and the McLeod has been difficult of interpretation for this month. Minimum temperatures not far from the freezing point seem to be the rule near Coalspur and Mountpark while at Edson the average minimum is nearly 42° and at Jasper Lake 40; but the distribution of the maximum temperature is more doubtful. It is probably little less than 70° at Edson.

Between Pembina and Edmonton the minimum rises to 45° but at Athabaska Landing falls to 43°, rises again to 45° at McMurray and to 48° at Chipewyan. The maximum varies little from 70°.

**September.**—Frosts are of almost daily occurrence at Coalspur and Mountpark while at Edson the mean minimum is 34° and the mean maximum 64°. At the lower levels the minimum is a little higher.

From Athabaska Landing (with a maximum of 62° and a minimum of 34°) to Chipewyan (with a maximum of 54° and a minimum of 37°) the change in the maximum is a fairly steady decrease but the minimum changes irregularly.

**October.**—The Mountpark region appears to have a normal minimum less than 22°, while at Edson it is 26°. The stations east of Pembina have a minimum of nearly 27° until near the confluence where a short record indicates the probability of a minimum of 24°. In the settled regions the maximum is 48° to 50°.

From Athabaska Landing northwards the mean minimum decreases from 25° to 24° between McMurray and Wabasca, then rises again to a little more than 26° on Lake Athabaska. There is thus little change in the minimum temperature over a large area, but the maximum temperature decreases from 50° at Athabaska Landing to 40° at Chipewyan and to 38° at the eastern end of Lake Athabaska.

**November.**—The records from Edson indicate that the mean maximum is 3° higher than at Edmonton and the mean minimum 5° lower, making the normals 36° and 10°. Near Athabaska Landing the normals are 31° and 9° to 11°. At McMurray the mean maximum is practically the same but northwards to Chipewyan the fall is rapid.

**December.** From 26° and 4° near the headwaters the temperatures change slowly till the confluence of the Pembina and the Athabaska is reached. Beyond this point the fall in temperature is great and the distribution can at present be only approximately indicated.

At Athabaska Landing the mean maximum is 23° and the mean minimum -2°. At Wabasca it is 2° colder, but at Fort McMurray the corresponding temperatures are 16° and -7° and at Chipewyan 10° and -6°. East of McMurray at Buffalo Lake the mean maximum is probably 8° and the mean minimum -12°.

## RECORDS OF THE FIRST AND LAST FROSTS, BASIN OF THE ATHABASKA.

### ATHABASKA LANDING.

Year.	Late Frost.				Early Frost.			
	Month.	Day of Year.	Date.	Temp.	Month.	Day of Year.	Date.	Temp.
1902.....	June..	181	30	30.3				
*1904.....	July.....	184	3	33.0				
1905.....	June.....	174	23	33.5	Aug.....	215	5	33.0
1910.....	June.....	165	14	33.0	Aug.....	223	11	32.0
1911.....	June..	158	7	29.0	Aug.....	219	7	33.0
*1912.....	June..	159	6	25.0	July.....	226	14	29.0
1913.....	June..	177	26	33.0	Aug.....	252	30	33.0
1914.....	June..	160	9	53.0	Aug.....	237	25	32.0
1915.....	July..	182	1	30.0	Sept....	250	7	32.0
1917.....	June..	164	13	27.0	Aug.....	220	8	33.0

### CAMPBIE, ALTA.

*1913.....	June..	177	26	31.9	July..	211	30	33.0
*1914.....	June..	152	1	31.8	July..	210	29	31.6
*1915.....	July..	184	3	31.3	Aug.....	235	23	33.5
*1916.....	June..	178	27	30.2	July..	204	23	31.7
1917.....	June..	167	16	32.7	Aug.....	217	5	31.8

EDSON, ALTA.

Year	Late Frost.				Early Frost.			
	Month.	Day of Year.	Date.	Temp.	Month.	Day of Year.	Date.	Temp.
*1916	June	157	6	32.0	July	186	5	33.0
*1917	June	178	27	32.0	July	205	24	30.0

JASPER.

1916	July	204	23	32.0	Sept	251	10	32.0
1917	June	173	22	33.0	Sept	245	2	32.0

LUNNIFORD

*1910	July	183	2	33.0	Aug	225	13	32.0
*1911	June	158	7	28.5	July	201	20	31.0
*1912	June	161	10	30.0	July	195	14	28.0
1913	June	178	26	29.0	Aug	242	30	32.0

PIMBINA

*1910	July	181	3	33.0	Aug	220	8	33.0
*1911	June	171	20	32.0	July	201	20	32.5
1912	July	189	8	30.0	Sept	250	7	31.0

STON.

1911	May	147	27	30.0	Sept	264	21	27.0
*1912	June	161	10	31.0	July	191	13	33.0
*1913	June	177	26	29.0	July	193	12	30.0
1914	May	151	31	32.0	July	210	29	32.0
1915	July	184	3	29.0	Sept	250	7	30.0
*1916	June	176	25	32.0	July	196	15	28.0
1917	June	174	23	30.0	Aug	220	8	32.0

WARASCA.

1915	June	166	15	30.8	Sept	251	8	32.0
1916	June	152	1	32.0	Aug	222	10	30.3
1917	June	164	13	32.0	Sept	248	5	32.8

\*Frost every month.

RECORD OF MONTHLY PRECIPITATION, BASIN OF THE ATHABASKA RIVER.

ATHABASKA LANDING

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1900.				2.27	2.63	4.55	3.51	2.91	3.51	0.67	0.25	0.40
1901.			0.67	0.50	1.63				3.27		0.73	0.45
1902	0.26	0.31	0.43		3.78	1.89	3.23	1.35		0.63	1.01	
1903		0.25	0.37	0.80								
1904						2.17	1.17	0.89	1.22	1.40	0.10	
1905		0.15			0.73	2.37	3.66	1.63	0.25	0.39	0.25	0.05
1906	0.12	0.45	0.02									
1908									0.60	1.20	0.67	0.85
1909	0.85	0.20	0.70	1.30	3.21	2.52	2.11	1.01	0.07	0.57	2.05	0.60
1910		0.55	0.02	0.39	1.12	3.04	4.89	2.11	0.07	1.85	1.41	0.50
1911	0.92	0.48	1.16	0.34	1.87	5.48	2.39	2.02	1.38	0.38	0.50	1.03
1912	0.65	6.26	0.50	1.49	0.72	1.72	2.65	2.36	0.72	0.74	0.23	0.20
1913	1.33	0.40	0.19	0.62	0.79	4.82	6.81	2.61	0.60	0.68	0.25	3.10
1914	0.53	0.13	0.66	0.41	0.17	7.05	2.82	1.31	1.63	1.63	0.28	1.07
1915	0.45	0.20	0.05	1.83	1.98	2.46	2.44	0.81	1.34	0.39	0.35	0.63
1916	1.08	0.30	1.35	0.54	1.16	0.85	0.85	0.69	2.51	0.88	0.13	0.58
1917	1.03	0.21	0.08	0.05	0.94	4.08	2.83	1.76	0.90	0.40	0.74	0.48
Sums	7.22	3.89	6.50	10.78	26.76	13.00	38.35	21.69	18.85	11.37	8.07	6.89
Means	0.72	0.30	0.50	0.90	1.66	3.31	3.20	1.67	1.35	0.82	0.51	0.53

## CAMPBELL

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910						2.92	1.05	3.07	2.17	0.83	0.61	0.99
1911	1.07	0.28	0.43	0.46	1.47	4.56	4.88	1.77	1.48	0.35	0.50	0.18
1912	0.88	0.05	0.78	0.56	1.60	1.88		2.61	0.35	0.92	0.73	0.14
1913	1.92	0.37	0.34	0.55	0.36	5.41	5.98	2.23	0.69	0.67	0.11	0.31
1914	0.75	1.14	0.34	0.43	0.25	9.71	3.72	1.26	2.94	0.83	1.31	1.78
1915	1.14	0.23	0.04	1.30	2.21	4.10	3.84	0.46	1.66	0.05	1.13	0.10
1916	1.06	0.63	0.98	0.51	1.58	2.15	3.76	0.98	2.19	0.65	0.29	0.90
1917	1.26	0.90	0.24	0.95	2.52	3.20	1.60	2.20	1.04	0.72	0.77	1.01
Sums	8.08	3.60	3.15	4.76	9.99	33.93	27.92	14.01	12.82	5.02	5.48	5.45
Means	1.15	0.51	0.45	0.68	1.41	4.24	3.99	1.83	1.60	0.63	0.68	0.68

## COALSPUR BRAZEAU FOREST RESERVE.

1913				0.75	1.66	4.74	2.07	1.70	0.21			
1914				1.50	2.25	7.38	1.09	2.36	1.80	0.36	4.68	
1915			2.13	2.68	4.55	0.96	2.43	1.48	2.34	0.20	0.10	1.63
1916	8.28	1.50	4.08	7.95	3.49	2.14						0.50
1917	1.60	0.70		1.52	3.18	2.25	0.50	4.58	3.57	2.34	0.40	0.80
Sums	9.88	2.20	6.21	14.40	11.64	28.79	8.24	10.12	8.24	2.90	5.18	2.03
Means	4.94	1.10	3.10	2.90	2.91	5.76	1.65	2.53	2.06	0.97	1.73	0.98

## DUNSTABLE.

1911					1.89	5.75	4.11	2.18	1.76	0.31	0.58	0.20
1912	1.07	0.16	0.58	0.83	1.78	2.32	4.36	3.81	0.52	0.85	0.21	0.19
1913	2.09	0.38	0.45	0.87	0.69	2.19	7.13	2.85	0.60	0.50	0.25	0.05
1914	0.53	0.49	0.40	0.33	0.62	8.85	3.31	1.99	3.37	0.82	1.04	0.98
1915	0.49	0.15	0.07	1.47	0.85	6.36	3.64	0.90	1.69	0.31	0.71	0.29
1916	0.98	0.48	0.52	0.82	0.94	2.30	3.96	2.38	3.55	0.66		0.93
1917	0.88	1.08	0.19	0.60	2.25	2.75	4.08	2.28	0.71	0.85	0.64	0.68
Sums	6.04	2.74	2.21	4.92	9.02	30.52	30.59	16.39	12.33	4.32	3.43	3.32
Means	1.01	0.46	0.37	0.82	1.29	4.36	4.37	2.34	1.76	0.62	0.57	0.47

## FOND DU LAC, SASKATCHEWAN.

1905										1.65	0.35	0.70
1906	0.60	0.60	0.00	0.39	0.16	1.17	0.64	2.71	3.71	1.95	0.43	0.96
1907	1.20	0.32	0.10		0.05	1.52	2.44	2.26	1.56	0.96	1.00	0.90
1908	0.20	0.13	0.12		0.02	0.62	0.69	2.45	1.39	0.58	0.82	0.60
1909	0.80	0.08			1.47	0.66	1.46	2.01	0.96	0.08	0.55	0.40
1910	0.55	0.05	0.00	0.00	0.31	1.77	4.85	1.59	2.04	0.62	1.10	0.15
1911				0.02	1.11	1.51	1.35	1.84	0.45	0.40	1.50	0.00
1912	0.20	0.05			1.27	0.20	0.86			0.52	0.20	0.70
1913	0.40	0.56	1.32	0.46								
1914	0.30	0.30	0.00		0.04	0.80	1.75	2.76				
Sums	4.25	2.09	1.54	0.87	5.03	8.25	11.04	15.62	10.11	5.76	5.95	4.41
Means	0.53	0.26	0.19	0.10	0.63	1.03	1.75	2.23	1.45	0.72	0.74	0.55

## EDSON.

1915	1.50	0.60										
1916								0.40	0.45			0.70
1917	1.70	1.08	0.15	0.40	0.95				1.00	0.20		0.90

## ENTRANCE.

17						1.04	3.46	3.77	0.98	0.30	0.90	
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## LUNNFORD

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1910		1.25	0.58	0.71	1.19	3.58	3.32	3.86	1.74	1.11	0.45	1.53
1911	1.68	0.28	0.27	0.19	1.61	5.69	4.15	2.66	1.68	0.16	0.13	
1912	2.02		0.80	0.71	1.79	2.09	5.60	3.25	0.52	1.00	0.25	0.30
1913	1.77	0.30	0.30	1.18	0.15	2.33	8.07	2.83				
Sums	5.47	1.83	1.95	2.78	9.5	13.60	21.34	12.51	3.91	2.83	1.15	1.83
Means	1.82	0.16	0.19	0.69	1.21	3.10	5.14	3.14	1.31	0.91	0.38	0.92

## JASPER

1916			0.192	1.06	0.05	0.56	2.30	0.91	2.27	0.30	0.65	0.15
1917	0.31					1.06	0.71		1.13	0.70	1.22	2.26

## PLUMBINA

1908			0.60	0.36	1.25	5.61	1.31	2.24	R.	0.30	R.	
1909					2.55			1.47	0.08			
1910				0.54	1.06		0.96	1.71	1.64	0.68		0.30
1911	0.18	0.55	0.60	0.20	1.02	6.98	2.71	3.91	1.65		0.40	0.35
1912				0.70	1.67		8.00	1.21		0.45	0.35	
1913			0.30	0.75	2.50		1.22					
Sums	0.18	0.55	1.50	2.55	8.38	14.26	14.26	10.57	3.37	1.43	0.75	0.65
Means	0.18	0.55	0.50	0.51	1.68	4.75	2.85	2.11	0.81	0.48	0.25	0.33

## STON

1906					R.	7.13	2.33	1.36	0.79	0.49	2.05	2.80
1907	0.50	0.92	1.00	0.33	1.86	1.17	2.44	3.43	1.55	0.34	0.08	0.54
1908	0.50	0.59	1.61	0.23	2.67	8.11	2.18	1.88	0.87	0.11	0.54	1.05
1909	1.70	0.15	0.80	1.86	3.10	1.65	2.62	0.94	0.25	0.10	2.80	1.10
1910	0.30	0.98	0.88	1.35	1.67	3.09	4.96	3.33	1.95	1.16	1.10	1.68
1911	2.09	0.38	1.15	0.86	2.19	7.60	3.24	2.58	1.95	0.24	1.30	0.38
1912	1.47	0.42	1.10	1.56	2.21	2.88	4.20	4.80	0.83	0.98	0.99	0.25
1913	1.84	0.78	1.08	1.86	0.77	3.11	6.63	3.20	0.80	1.27	0.20	0.25
1914	1.99	1.31	0.84	0.44	1.08	10.57	3.36	1.85	3.60	0.70	1.06	1.60
1915	0.68	0.30	0.19	1.69	1.28	6.21	3.64	1.49	1.77	0.41	1.08	0.65
1916	1.20	1.32	0.88	0.80	1.32	2.64	1.19	3.88	3.58	0.81	0.59	2.97
1917	2.05	1.40	0.56	1.58	3.66	3.33	3.41	1.55	1.12	1.28		
Sums	14.19	8.85	10.32	12.55	20.64	64.67	43.23	30.29	19.06	9.11	11.16	13.23
Means	1.26	0.80	0.94	1.11	1.72	5.31	3.60	2.52	1.59	0.76	1.01	1.20

## THE PEACE RIVER COUNTRY.

**January.** In this very large but little settled country very few observations have been made. Some data has been collected recently at Hudson's Hope, Fort St. John, Grand Prairie, Beaver Lodge, and a long record exists for Fort Dunvegan, a fair record at Peace River Landing and at Fort Vermilion. Upon this data supplemented by that from Wabusea and Fort Chipewyan has been based the carrying of the isotherms to the north of the Peace River, but those who make use of the accompanying maps should bear in mind the probability that the isotherms do not run nearly so smoothly as they are shown.

The most important controls of temperature in this region are the Lesser Slave Lake and the forested region to the south of it, and the Clear Hills north of Fort Dunvegan. The isotherms are pressed to the north by the Lake but the highlands whose southern point is marked as the Clear Hills cause a lowering of temperature in the region from Dunvegan to Saskatoon Lake and Grand Prairie. Westwards beyond the Hills the headwaters of the Peace River spread out in British Columbia, fan-shape to the northwest and the southeast, and although the elevation on these slopes is higher than at Dunvegan by several hundred feet, yet the temperatures seem to have improved.

It is worthy of note that at Grand Prairie in latitude 55° 15' the January temperatures compare very closely with those of Emerson, Manitoba, on the 49th parallel. At Grand Prairie the normal daily maximum is probably 11° and at Emerson less than 10°, while the corresponding minima are respectively, -11° and -9°. Their mean monthly temperatures, therefore, differ by about half of one degree.

At Fort Dunevegan the normal temperatures are  $3^{\circ}$  and  $-20^{\circ}$  and about the same at Peace River Landing, but at Fort Vermilion are about  $-5^{\circ}$  and  $-25^{\circ}$ . Approaching Lake Athabasca we find the minimum temperature rising somewhat to  $-20^{\circ}$  and the maximum temperature falling about one degree.

**February.** At Hudson's Hope the normal temperatures are practically the same as in the Wintering Hills northeast of Calgary, and the Grand Prairie district with a daily range from  $-5^{\circ}$  to  $20^{\circ}$  is comparable with the Wetaskiwin district. At Fort Dunevegan the corresponding temperatures are  $-8^{\circ}$  and  $15^{\circ}$  and in the Clear Hills district there is probably a further decrease. The observations at Peace River Landing show a rise in temperature for some distance on the east side of the Clear Hills, but thence down to Fort Vermilion the temperature falls to  $8^{\circ}$  and  $-20^{\circ}$ .

The minimum temperature at Fort Vermilion is the same as at Fort Chipewyan but the maximum is only  $-1^{\circ}$  at Chipewyan.

There have been no observations made between Chipewyan at the west end of the Lake and Fond du Lac at the east end. In this distance of about 180 miles there is a fall of  $8^{\circ}$  or  $10^{\circ}$ .

**March.** At Hudson's Hope the daily maximum is  $34^{\circ}$  and the daily minimum  $10^{\circ}$ . North-eastward in the Clear Hills it is  $4^{\circ}$  colder and in the Grand Prairie county the maximum is  $34^{\circ}$ , the minimum  $8^{\circ}$  or  $9^{\circ}$ . From  $34^{\circ}$  and  $6^{\circ}$  at Peace River Landing the temperatures decrease downstream to  $26^{\circ}$  and  $-2^{\circ}$  at Ft. Vermilion. Thence eastward there is a further decrease to  $14^{\circ}$  and  $-5^{\circ}$  at Chipewyan.

The eastern end of Lake Athabasca, Fond du Lac, has a mean maximum of  $10^{\circ}$  and a mean minimum of  $-12^{\circ}$ .

**April.** At Hudson's Hope the maximum is  $53^{\circ}$ , minimum  $27^{\circ}$ ; at Dunevegan  $51^{\circ}$  and  $25^{\circ}$  and in the Grand Prairie district  $49^{\circ}$  and  $25^{\circ}$ . At Peace River Crossing the temperatures are  $49^{\circ}$  and  $24^{\circ}$ ; at Ft. Vermilion  $41^{\circ}$  and  $20^{\circ}$ .

From  $40^{\circ}$  and  $18^{\circ}$  at Chipewyan the temperatures decrease to  $32^{\circ}$  and  $12^{\circ}$  at the east end of Lake Athabasca.

**May.** At Hudson's Hope and the Peace River Landing the average temperatures are as high as at Regina or Moosejaw,  $64^{\circ}$  and  $36^{\circ}$ , Dunevegan and the Grand Prairie are a little cooler.

At Fort Vermilion the temperatures are  $62^{\circ}$  and  $35^{\circ}$  but from Fort Vermilion to the Lake there is a fall of  $8^{\circ}$  in the maximum temperature. The eastern end of the Lake has a maximum of  $49^{\circ}$  and a minimum of  $30^{\circ}$ .

**June.** At Hudson's Hope the maximum is  $68^{\circ}$  and the minimum  $42^{\circ}$ . At Dunevegan and Peace River Landing the corresponding temperatures are  $70^{\circ}$  and  $43^{\circ}$ . At Fort Vermilion they are the same.

The isotherms drawn west of the Peace River are not based on observation but on interpolation between Fort Vermilion and Hay River.

Chipewyan has a mean maximum of  $64^{\circ}$  and  $42^{\circ}$ . In June the steep temperature gradient between the eastern and western ends of Lake Athabasca disappears.

**July.** From Hudson's Hope to Peace River Landing the maximum is  $73^{\circ}$  and the minimum  $46^{\circ}$  or  $47^{\circ}$ . The southern portion of the Grand Prairie Region is a little cooler.

At Fort Vermilion the temperatures are the same or a little higher than at Peace River Landing.

**August.** Hudson's Hope has a normal maximum of  $74^{\circ}$  and a normal minimum of  $44^{\circ}$ . At Peace River Landing the corresponding temperatures are  $70^{\circ}$  and  $44^{\circ}$ . The Beaver Lodge valley appears to have a maximum of  $72^{\circ}$  but a lower minimum which decreases rapidly as the altitude increases.

From Fort Vermilion to Chipewyan the minimum increases from  $43^{\circ}$  to  $48^{\circ}$ .

**September.** The records at present available from Hudson's Hope indicate a normal maximum of  $66^{\circ}$ . This has not been shown in this map because it seems higher than we might expect by at least  $2^{\circ}$ .

The Grande Prairie Country has a maximum of  $61^{\circ}$  and a minimum of  $34^{\circ}$  or  $35^{\circ}$ .

Along the River from Peace River Landing to Chipewyan the minimum appears to change very little but it is of course a little higher in the region of Lake Athabasca. The maximum, however, decreases steadily to  $58^{\circ}$  at Fort Vermilion and to  $54^{\circ}$  at Chipewyan.

At the eastern end of Lake Athabasca the mean maximum is  $52^{\circ}$  and the mean minimum  $37^{\circ}$ .

**October.** Near Hudson's Hope, Fort St. John, and Peace River Landing the mean minimum is  $26^{\circ}$  and in the Grand Prairie and Dunevegan regions  $25^{\circ}$ . The maximum is  $52^{\circ}$  at Hudson's Hope and  $50^{\circ}$  at Peace River Landing.

At Fort Vermilion the mean maximum is  $43^{\circ}$  and the mean minimum  $23^{\circ}$ . Thence to Chipewyan the minimum rises to  $27^{\circ}$  and the maximum falls to  $40^{\circ}$ .

**November.**—At Hudson's Hope the mean maximum is 29° and the mean minimum 12°. In the Grand Prairie region the temperatures are much the same.

At Peace River Crossing the corresponding figures are 27° and 7° and at Fort Vermilion 22° and 4°. At Chipewyan the mean maximum is 18° and the mean minimum 4°.

The east end of the Lake does not differ much in temperature from Chipewyan.

**December.**—From a mean maximum of 21° and minimum of zero at Hudson's Hope the temperatures decrease to 10° and -8° at Fort Dunvegan. And since the lowest temperatures of the region seem to be centred at some point to the north in the Clear Hills there is a rise in temperature in passing to the northeast of the Hills to the lower level at Peace River Landing where the normals are 16° and -5°.

In the Grand Prairie District the data at present available make the average maximum 24° and the average minimum -4° or -5°.

On Lesser Slave Lake the corresponding temperatures are 22° and zero.

The mean maximum of 10° appears to follow the river to Fort Vermilion and Chipewyan.

At Chipewyan the mean maximum is 10° and the mean minimum -6° but at the eastern end of the Lake the corresponding temperatures are 3° and -13°.

### RECORD OF FIRST AND LAST FROST BASIN OF THE PEACE RIVER.

#### BEAVER LODGE, ALTA (Below).

Year	Late Frost.					Early Frost.			
	Month.	Day of Year.	Date	Temp.		Month.	Day of Year.	Date.	Temp.
1913	June.	167	6	29.5		Aug.	225	13	33.0
1914	June	173	23	31.5		July	187	6	33.5
1915	June	178	27	30.0		Sept.	251	8	27.0
1917	June	164	13	32.0		July	187	6	27.0

#### FORT DUNVEGAN, ALTA.

1880.	June	167	16	31.1		Aug.	235	23	33.4
1881.	June	166	15	33.4		Aug.	242	30	31.4
1882.	June	161	10	31.5		Aug.	230	18	32.4
1884.					Frost every month..				
1905.	June	174	23	31.0		Sept.	251	8	29.0
1906.	May.	149	29	32.0		Aug.	231	19	25.0
1907.	June	155	4	30.0		Aug.	210	7	33.0
1908.	May.	151	31	32.0		Sept.	251	8	30.5
1909.	June	171	23	32.5		Aug.	239	27	33.0
1910.	June	179	28	31.0		Aug.	236	24	25.0
1911.	June	170	19	33.0		Aug.	223	11	33.0
1912.	June	161	10	28.5		Aug.	238	26	33.0
1913.	June	154	3	29.0		Sept.	245	2	32.0
1914.						Sept.	254	11	28.0
1915.	May.	135	15	30.0		Sept.	244	1	32.0
1916.	June	162	11	32.0		Aug.	222	10	29.0
1917.	June	165	13	33.0		Aug.	235	23	33.0

#### FORT VERMILION.

1908.						Aug.	229	17	33.0
1909.	June	180	29	33.0		Aug.	230	18	30.2
1910.	June	179	28	31.9		Aug.	226	14	30.2
1911.	June	177	26	32.0	Frost every month..	July	201	20	32.2
1912.	June	181	30	29.0		July	190	9	31.0
1913.	June	177	26	27.0		July	209	28	32.9
1914.	June	177	26	32.0		Aug.	235	23	31.2
1915.	July.	184	3	31.5		Sept.	249	6	30.9
1916.	June.	165	14	29.9	Frost every month..	July	205	24	33.2
1917.	June	175	24	33.0		July	190	9	33.2

FORT VERMILION (Experimental Station)

Year	Late Frost.					Early Frost.			
	Month.	Day of Year	Date	Temp		Month.	Day of Year	Date.	Temp.
1905.	June	176	25	26.0	Frost every month.	Sept.	251	8	30.5
1906.	May	147	17	29.4		Aug.	228	16	33.5
1907.	May	150	30	27.5		Aug.	221	9	31.5
1908.	June	169	18	32.3		Sept.	252	9	28.7
1909.	June	179	28	33.0		Aug.	240	14	30.1
1910.	June	158	7	32.6		Aug.	226	11	30.5
1911.	June	177	26	32.0		July	201	20	32.2
1912.	June	161	10	30.5		July	195	11	28.0
1913.	June	177	26	30.0		Aug.	226	13	33.0
1914.	June	160	9	31.0		Aug.	235	23	30.0

GRAND PRAIRIE

1913.	July	207	26	33.0	Frost every month.	Sept.	245	2	25.0
1914.	June	171	20	30.0		July	198	17	30.0
1915.	May	149	29	31.0		Aug.	222	10	27.0
1916.	June	159	8	31.0					
1917.	May	151	31	32.0					

GROUARD.

1914.	May.	152	31	28.0		Aug. ...	235	22	33.0
1915.	June.	170	18	32.2					

PEACE RIVER CROSSING

1908.	June	164	13	32.0	Frost every month.	Sept.	251	8	31.0
1909.	June	172	21	33.0		Aug.	241	29	30.0
1910.	June	180	29	32.0		Aug.	234	22	31.0
1911.	June	155	4	31.0		July	201	20	33.0
1912.	June	161	10	31.0		Aug.	238	26	32.0
1913.	July	188	7	23.0		Sept.	250	7	28.0

SPIRIT RIVER.

1910.	June.	180	29	29.0	Frost every month.	Aug. ...	235	23	32.0
1911.	June.	158	7	30.0					

RECORD OF MONTHLY PRECIPITATION BASIN OF THE PEACE RIVER.

SHAFTSBURY-ALBERTA.

Year.	Jan.	Feb.	March.	April	May.	June.	July	Aug.	Sept	Oct.	Nov.	Dec.
1907.				0.47	0.69	2.20	2.80	0.87	0.70	0.30	0.35	0.10
1908.		0.30	0.60	0.05	0.35							

FORT VERMILION, ALBERTA. (Observer, R. E. Randall.)

1905.	0.80	0.30	0.22	0.63	0.75	0.61	1.29	1.94	2.05	0.81	0.20	0.38
1906.	0.31	0.65	0.00	0.36	0.00	3.41	1.41	0.88	2.33	0.59	0.60	0.30
1907.	0.30	0.30	1.70	0.42	0.45	2.15	3.49	1.09	0.64	0.50	1.40	0.20
1908.	0.83	0.25	0.73	1.27	0.33	2.72	2.05	1.56	0.87	0.45	1.33	0.23
1909.	0.78	0.20	0.73	1.15	2.06	0.97	2.43	1.96	1.25	0.47		
1910.	0.20	0.20	1.12	0.83	0.50	1.30	0.84	0.85	0.98	0.40	0.85	1.18
1911.	0.91	0.35	1.45	1.85	0.73	2.81	1.81	1.93	1.78	0.15	0.73	0.23
1912.	0.15	0.60	0.10	0.74		0.25	0.53	3.32	0.90	6.70	0.57	1.60
1913.	0.30	0.40	0.30	0.30	1.88	0.69	0.51	0.53	1.69	0.10	0.30	0.40
1914.	1.20	0.50	S.	S.	S.	3.60	0.67		1.38	*	2.40	
1915.	0.30	0.40	0.20		0.60				0.78	1.39		
1916.	0.40	0.10	1.00		0.60	2.05						
1917.									0.12	0.72	0.38	
Sums.	6.48	4.35	7.55	6.95	7.90	19.99	15.03	14.87	14.97	8.29	8.73	4.52
Means.	0.54	0.36	0.63	0.70	0.72	1.82	1.50	1.49	1.25	0.52	0.88	0.50

## PLACE RIVER CROSSING.

Year	Jan	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1890.						3.80	1.78	2.34	0.89	0.47	0.58	1.00
1891.	1.70	0.20	0.35	0.21	1.71	1.50	4.91	0.43	0.50	1.31	1.10	0.80
1892.	0.50	1.60	0.70	1.42	0.48	1.16	2.09	3.59	0.81	0.20	2.00	
1907.								0.77	1.11	0.29	0.56	0.08
1908.	0.10	0.23	1.20	0.21	1.33	2.92	2.38	1.83	1.35	0.63	0.15	0.65
1909.	1.20	0.50	0.15	0.81	2.65	1.35	1.54	1.71	1.02	0.90	1.80	0.40
1910.	0.28	0.08	0.70	0.50	1.54	1.98	1.70	1.24	1.15	0.27	0.65	1.06
1911.	1.65	0.40	0.50	0.15	1.29	2.67	4.08	1.76	3.02		0.75	0.90
1912.	0.80	0.15	9.30	0.95	0.80	0.71	1.24	1.24	0.59	0.59	0.30	0.95
1913.	2.10	1.85			1.60	5.08	1.01	2.91	0.77	1.10	0.30	0.60
1911.	1.60	0.45		R.	R.	8.60						
Sums.	9.93	5.46	3.90	4.25	11.13	29.77	20.76	17.53	11.21	5.79	8.19	6.44
Means.	1.10	0.61	0.56	0.53	1.24	2.98	2.31	1.75	1.12	0.64	0.85	0.72

## BEAVER LODGE (Redlow).

1912.	0.54	0.05		1.37	0.59	0.66	2.43	2.80	0.11	0.11	0.82	0.36
1913.	2.63	0.15	0.33	1.55	0.29	5.18	3.07	2.53	1.55	1.99	0.51	0.17
1914	1.10	1.45	0.35	0.31	0.11	5.74	0.52	0.32	0.74	0.41	0.37	0.75
1915.	0.25			1.15	1.53	2.10	5.66	1.24	1.54	0.77	0.65	0.30
1916.	0.50	0.30	0.83								0.55	0.30
1917.			0.50	0.03								1.00
Sums.	4.82	1.95	2.01	4.41	2.52	14.28	11.38	6.89	3.94	3.89	2.65	2.58
Means.	0.96	0.49	0.50	0.88	0.63	3.37	2.85	1.72	0.98	0.78	0.53	0.52

## UPPLR BEAVER LODGE.

1913.				0.36		2.82	1.63	1.40	0.93	0.38		
1911.	0.90	1.40	0.30	0.35	3.16	0.88	0.13			8.		
1915.						3.10	2.72	0.72	1.05	0.56	0.18	8.
1916.	0.70	0.50	1.23	0.09	0.22	0.46	3.98	0.47	0.52	0.56	0.20	1.50
1917.	2.50	1.00	0.95	0.37	6.62	1.02	0.42	0.89	0.21	1.82	0.39	2.60
Sums.	1.10	2.70	2.18	1.17	10.50	8.28	8.88	3.48	2.71	3.32	0.77	4.10
Means.	1.37	0.90	0.83	0.29	3.13	1.66	1.78	0.87	0.68	0.66	0.26	1.37

## SPIRIT RIVER.

1910	0.55	0.16	0.10	0.01	1.12	2.33	1.73	1.44	1.09	0.23	0.80	0.88
1911.	0.25	0.13	0.95	0.20	0.50	1.10	3.81	1.87	2.87			

## DUNVIGAN.

1880	1.85	0.69	1.40	0.50	0.79	3.76	1.85	1.21	1.32	1.04	0.26	0.60
1881.	2.90	1.99	0.36	0.96	6.49	6.74	1.72	5.22	2.56	2.50	2.22	1.25
1882	0.38	1.18	4.80	1.22	0.79	1.28	1.50	3.72	1.08	1.15	1.15	1.55
1884.			2.55	0.35	0.90	0.52	0.59	2.60		1.15	0.50	
1905.	0.98	0.55	0.88	0.66	1.65	1.17	1.59	2.46	0.61	0.17	0.66	0.08
1906.	0.82	0.46	0.20	0.24	0.85	4.05	1.61	1.14	1.19	1.10	1.28	2.05
1907.	R	1.45	0.45	R.	0.72	2.33	1.81	0.91	0.95	0.10	0.14	0.15
1908.	0.03	0.35	1.75	0.98	0.31	3.33	0.87	1.78	1.32	0.57	0.08	0.35
1909.	0.20	0.23	0.25	0.63	1.28	2.30	0.75	1.14	0.30	0.72	1.25	0.66
1910	0.37	0.20	0.40		2.80	2.26	1.15	1.41	0.66	0.67	0.88	1.30
1911	0.85	R.	0.40	0.41	1.18	1.01	2.32	1.36	2.15	R.	0.23	0.76
1912.	1.13	0.55	0.65	0.58	0.31	0.79	2.02	2.02	R.	0.17	0.28	
1913.	1.40	0.60	0.10	0.12	1.09	2.60	0.91	3.12	0.69	0.10	0.03	
1911	1.30	1.25	0.45	R.	0.65		R.	1.08	R.	R.	1.48	3.23
1915.	0.10	0.11	0.13	0.67	0.79	3.87	2.93	1.30	1.72	1.31	2.05	0.75
1916.	1.00	0.40	2.10	0.90	0.79	0.27	1.37	0.11	0.91	0.68	0.25	1.20
1917	1.85	0.75	0.50	0.09	2.09	1.06	1.09	1.12	0.50		0.20	0.75
Sums	15.16	10.91	17.07	7.41	22.09	36.71	24.08	31.63	16.20	12.03	13.24	14.58
Means	0.95	0.58	1.00	0.46	1.38	2.30	1.41	1.86	1.01	0.75	0.79	1.05

DECADAL MEANS AND EXTREMES IN ALBERTA.

CALGARY, ALBERTA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	20.5	30.0	11.0	29.2	8.0	60	-34	47	1.85	1892	1902.	4.6	15.5
January	11.3	21.4	1.2	27.0	-6.3	58	-48	50	1.28	0.09	0.60	4.9	12.8
February	14.5	25.5	3.6	26.7	-4.0	76	-49	56	1.94	0.03	0.60	5.5	19.4
Winter	15.4	25.6	5.3			76	-49	1.53		0.15	1.60	15.0	
March	25.1	36.7	13.4	39.9	8.8	75	-34	74	1.57	0.07	0.62	6.8	15.7
April	39.9	53.2	26.6	46.0	32.6	84	-14	73	2.05	0.60	0.90	4.6	17.8
May	48.9	62.3	35.6	57.9	44.1	90	12	2.41	8.90	0.06	8.90	3.7	31.9
Spring	38.0	50.7	25.2			90	-34	3.88		0.73	10.12	15.1	
June	55.9	68.9	42.8	59.8	49.4	94	26	3.19	8.82	1.07	8.82	0.5	6.0
July	60.7	74.7	46.7	66.4	56.3	95	29	2.58	5.54	2.40	5.06		
August	58.7	72.7	44.8	63.9	53.7	96	28	2.65	9.40	1.10	6.40	0.1	0.4
Summer	58.4	72.1	44.8			96	26	8.42		4.57	20.28	0.6	
September	50.5	63.8	37.1	56.2	44.0	89	15	1.25	3.99	0.50	1.57	2.1	10.5
October	41.9	54.8	29.1	48.0	35.9	85	-8	0.56	1.82	0.66	0.61	3.3	18.2
November	26.4	36.9	15.8	39.4	2.4	70	-31	0.75	2.72	1.30	0.39	7.4	27.2
Fall	39.6	51.8	27.3			89	-31	2.50		2.46	2.57	12.8	
Year	37.8	50.0	45.6			96	-49	16.39		7.91	34.57	43.5	

CALGARY, ALBERTA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	18.9	28.8	9.0	25.8	8.9	58	-34	0.65	1.55	1892	1888	6.2	15.5
January	9.4	21.0	-2.3	27.0	-3.5	58	-48	0.50	0.92	0.03	0.24	4.8	9.2
February	12.4	24.3	0.6	26.7	-4.0	57	-49	0.56	1.76	0.03	1.76	5.2	16.6
Winter	13.6	24.7	2.4			58	-49	1.71		0.15	2.23	16.2	
March	26.8	39.0	14.0	38.6	16.0	75	-29	0.63	1.50	0.07	0.90	5.8	15.0
April	39.1	52.8	25.3	45.2	34.0	77	-2	0.64	1.67	0.69	1.67	3.7	9.0
May	49.2	63.0	35.4	51.3	45.2	90	16	1.70	4.05	0.06	2.05	1.1	6.0
Spring	38.4	51.6	25.1			90	-29	2.97		0.73	4.62	10.6	
June	56.0	69.1	42.8	57.4	53.0	92	26	1.97	3.70	1.07	3.70		
July	60.8	75.4	46.2	63.9	56.7	94	29	2.25	3.70	2.40	3.23		
August	59.9	74.7	45.1	63.9	56.9	95	28	1.58	3.47	1.10	2.98		
Summer	58.9	73.1	44.7			95	26	5.80		4.57	9.01		
September	51.0	65.1	36.8	56.2	48.6	89	15	0.88	1.84	0.50	0.23	1.5	6.2
October	41.3	54.8	27.8	44.5	36.9	85	-8	0.40	1.01	0.66	1.01	2.9	8.9
November	27.3	39.3	15.4	39.4	19.6	70	-31	0.69	1.30	1.30	0.41	6.0	13.0
Fall	39.9	53.1	26.7			89	-31	1.88		2.46	1.65	10.4	
Year	37.7	50.6	24.7			95	-49	12.36		7.91	17.51	37.2	

CALGARY, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES

Decade II. From 1895 to 1904

Month	Temperature.					Precipitation in Inches.					Snow.		
	Mean.	Mean	Mean	Highest	Lowest	Ex- treme Highest	Ex- treme Lowest	Average Monthly Fall.	Greatest Amount in one Month	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
		Maxi- mum.	Mini- mum.	Monthly Mean.	Monthly Mean.								
December	21.8	31.0	12.5	27.9	12.4	60	-31	0.56	1.85	0.31	0.60	5.5	9.6
January	15.2	25.3	5.2	22.1	3.7	54	-37	0.45	0.96	0.15	0.40	4.2	9.6
February	13.3	23.3	3.3	21.3	-1.1	59	-40	0.68	1.91	0.15	0.60	6.8	19.4
Winter	16.8	26.5	7.0			60	-40	1.69		0.61	1.60	16.5	
March	19.7	30.7	8.6	30.1	8.8	60	-34	0.88	1.57	0.80	0.62	8.3	15.7
April	33.8	52.7	27.0	44.1	33.8	76	-11	0.64	2.04	0.14	0.60	3.4	9.0
May	49.5	63.1	35.8	57.9	44.4	88	-12	2.79	8.90	1.56	8.90	6.4	31.9
Spring	36.3	48.8	23.8			88	-34	4.31		2.56	10.12	18.6	
June	54.9	68.0	41.8	58.5	39.1	94	26	3.95	8.82	1.99	8.82	0.5	5.1
July	59.9	73.5	46.3	64.6	50.8	95	34	3.52	5.51	1.74	5.06		
August	58.1	71.5	44.6	63.0	53.7	90	30	3.60	9.40	2.75	6.40	0.4	4.1
Summer	57.6	71.0	44.2			95	26	11.07		6.48	20.28	0.9	
September	49.2	61.8	36.6	53.6	44.9	85	17	1.76	3.99	0.69	1.57	2.6	9.0
October	42.6	55.8	29.4	47.9	35.9	79	6	0.57	1.35	1.35	0.61	3.2	13.3
November	22.9	32.6	13.1	37.1	2.4	68	-30	0.92	2.54	0.20	0.39	9.2	25.4
Fall	38.2	50.1	26.4			85	-30	3.25		2.24	2.57	15.0	
Year	37.2	49.1	25.3			95	-40	20.3		11.89	34.57	51.0	

CALGARY, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.					Precipitation in Inches.					Snow.		
	Mean.	Mean	Mean	Highest	Lowest	Ex- treme Highest	Ex- treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
		Maxi- mum.	Mini- mum.	Monthly Mean.	Monthly Mean.								
December	21.0	30.3	11.6	29.2	11.6	57	-30	0.21	0.75	0.17	0.12	2.1	7.5
January	9.3	18.0	0.6	25.8	-6.3	56	-44	0.55	1.28	0.21	0.60	5.6	12.8
February	17.9	28.8	7.0	26.4	9.8	76	-40	0.45	1.15	0.88	0.08	4.5	11.5
Winter	16.0	25.7	6.4			76	-44	1.21		1.26	0.68	12.2	
March	28.7	40.4	17.0	39.9	22.0	73	-25	0.71	1.12	1.12	0.34	5.9	10.2
April	40.8	54.0	27.6	46.0	32.6	84	-13	0.92	2.05	0.30	2.05	6.6	17.8
May	48.3	60.8	35.7	50.8	44.1	83	16	2.74	6.96	1.08	1.42	3.7	22.2
Spring	39.3	51.7	26.8			84	-25	4.37		2.50	3.81	16.2	
June	56.6	69.5	43.7	59.8	52.9	90	29	3.65	7.26	1.51	4.31	0.0	6.0
July	61.3	75.2	47.5	66.4	56.3	94	33	1.97	5.20	0.41	5.20		
August	58.1	71.8	44.6	61.8	51.3	96	30	2.76	5.19	3.97	2.75	T.	S.
Summer	58.7	72.2	45.3			96	29	8.38		5.95	12.26	0.9	
September	51.3	61.5	38.0	55.3	46.5	81	18	1.10	2.49	1.50	2.80	2.1	10.5
October	41.9	53.7	30.1	48.0	37.4	85	3	0.71	1.82	0.48	1.09	3.9	18.2
November	28.9	38.9	18.9	31.5	18.6	70	25	0.72	2.72	0.34	0.68	7.0	27.2
Fall	40.7	52.4	29.0			85	-25	2.53		2.32	4.57	13.0	
Year	38.7	50.5	26.9			96	-41	16.49		12.03	21.32	42.3	

MEDICINE HAT, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years. From 1885 to 1914

Month.	Temperature.					Precipitation in Inches.					Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	21.1	31.0	11.2	31.3	15.0	68	-37	0.53	1.42	0.28	0.91	4.7	12.0
January	11.2	21.6	0.7	26.7	-8.1	62	-51	0.61	1.72	0.00	1.12	6.1	16.8
February	12.5	23.5	2.1	26.6	-9.4	64	-46	0.61	1.51	0.00	1.13	6.0	15.1
Winter	15.0	25.4	4.7			68	-51	1.75		0.28	3.16	16.8	
March	26.7	38.4	14.9	45.0	8.3	84	-38	0.61	1.62	0.32	1.17	5.0	16.2
April	43.1	58.8	31.4	51.7	36.8	96	-16	0.61	2.29	0.80	0.87	2.4	12.9
May	54.7	68.0	41.5	62.0	48.5	99	12	1.75	6.29	1.41	3.32	0.5	8.0
Spring	42.2	55.1	29.3			99	-38	2.97		2.53	5.36	7.0	
June	62.5	75.6	49.3	68.6	55.0	107	30	2.57	5.62	1.53	2.60	T.	1.2
July	68.4	82.7	54.1	75.6	64.4	108	36	1.73	4.86	0.78	3.79		
August	66.0	80.7	51.4	70.6	61.3	104	31	1.51	5.65	0.11	4.60		
Summer	65.6	79.7	51.6			108	30	5.81		2.42	10.99	T.	
September	56.3	70.2	42.7	63.1	49.6	94	17	0.92	2.41	0.19	1.66	0.4	4.0
October	45.8	58.7	32.9	51.8	40.5	93	-10	0.62	3.48	0.79	0.85	1.1	21.0
November	29.3	39.9	18.7	42.7	2.0	76	-36	0.72	3.11	0.51	0.31	6.4	31.1
Fall	43.9	56.3	31.4			91	-36	2.26		1.49	2.77	7.9	
Year	41.7	54.1	29.2			108	-51	12.79		6.72	22.28	32.6	

MEDICINE HAT, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894

Month.	Temperature.					Precipitation in Inches.					Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	19.2	29.0	9.3	30.0	9.9	68	-37	0.53	1.42	0.28	0.40	5.1	12.0
January	7.1	17.2	-3.0	26.7	-8.0	54	-51	0.52	1.72	0.00	0.45	5.0	15.8
February	9.7	20.1	-1.0	26.6	-9.4	61	-16	0.56	1.51	0.00	0.62	5.5	15.1
Winter	12.0	22.2	1.8			68	-51	1.61		0.28	1.47	15.6	
March	27.6	38.9	16.2	37.2	17.1	71	-35	0.56	1.31	0.32	0.90	5.0	9.9
April	44.3	57.5	31.2	50.4	37.4	83	10	0.60	1.48	0.80	0.20	2.3	12.4
May	54.3	67.9	40.8	56.9	48.5	94	17	1.13	2.66	1.41	2.08	0.1	1.0
Spring	42.1	54.8	29.4			91	-35	2.29		2.53	3.18	7.4	
June	62.0	75.2	48.7	65.4	58.9	98	32	2.86	5.75	1.53	3.34	0.1	1.2
July	68.3	82.7	53.8	73.5	65.1	108	36	1.64	4.78	0.78	4.78		
August	66.1	80.8	51.4	70.6	63.3	101	35	1.23	5.00	0.11	1.00		
Summer	65.5	79.6	51.3			108	32	5.73		2.42	9.12	0.1	
September	56.3	70.7	41.8	60.2	53.1	94	23	0.57	2.18	0.19	0.06	0.2	2.4
October	45.0	58.4	31.6	49.2	40.6	92	-10	0.41	0.81	0.79	0.66	0.7	2.0
November	29.3	41.2	17.6	40.0	21.3	73	-35	0.54	1.23	0.51	0.18	4.7	11.8
Fall	43.5	56.7	30.3			91	-35	1.52		1.49	0.90	5.6	
Year	40.8	53.3	28.2			108	-51	11.15		6.72	14.67	28.7	

MEDICINE HAT  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904.

Month	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Max. num.	Mean Min. num.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	23.0	33.1	12.9	31.3	11.8	65	-31	0.58	1.15	0.50	0.91	4.7	11.5
January	15.0	26.1	4.0	24.0	-0.7	62	-50	0.78	1.68	0.35	1.12	8.3	16.8
February	12.2	23.2	1.2	25.3	-0.3	60	-45	0.88	1.40	0.67	1.13	8.6	14.0
Winter	16.7	27.5	3.0			65	-50	2.24		1.52	3.16	21.6	
March	21.9	33.4	10.4	34.5	8.3	69	-38	0.87	1.62	1.20	1.17	7.0	16.2
April	44.7	58.7	30.8	50.5	38.3	82	-16	0.76	2.26	0.53	0.87	2.4	11.9
May	55.3	68.7	41.9	62.0	49.6	92		1.2	2.44	1.10	3.32	1.5	8.6
Spring	40.6	53.6	27.7			92	-28	4.07		2.83	5.36	10.9	
June	61.4	74.5	48.2	67.0	55.0	107	31	2.54	5.62	2.04	2.60		
July	67.6	81.9	53.4	71.1	64.4	102	36	2.46	4.86	1.19	3.79		
August	65.7	80.5	50.9	69.9	61.3	100	32	1.87	5.65	0.92	4.60		
Summer	64.9	79.0	50.8			107	31	6.78		4.15	10.99		
September	0	68.5	41.6	59.1	46.6	90	17	1.41	2.41	0.68	1.66	0.7	4.0
October		59.8	32.5	50.8	40.5	85	0	0.70	1.71	0.52	0.80	1.9	5.7
November		36.4	15.8	42.7	2.6	76	-36	1.10	3.11	T.	0.31	10.3	31.1
Fall	42.4	4.9	30.0			80	-36	3.24		1.20	2.77	12.9	
Year	41.2	53.8	28.6			107	-50	16.33		9.70	22.28	45.4	

MEDICINE HAT, ALBERTA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Max. num.	Mean Min. num.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	21.1	30.8	11.4	29.4	15.0	64	-32	0.47	0.95	1907 0.15	1911 0.54	4.3	9.5
January	11.3	21.5	1.0	20.3	-8.1	56	-41	0.52	1.22	0.75	0.20	5.0	10.9
February	16.5	27.0	6.0	25.8	9.6	64	-44	0.39	1.11	0.25	0.10	3.8	11.1
Winter	16.3	26.4	6.1			64	-44	1.38		1.15	0.84	13.1	
March	30.5	42.9	18.1	45.0	17.5	81	-22	0.41	1.06	0.51	0.32	3.0	10.4
April	46.1	60.1	32.2	54.7	36.8	96	-3	0.46	1.29	0.30	1.29	2.4	12.9
May	54.6	67.4	41.7	58.2	48.5	99	15	1.69	4.37	0.65	1.84	T.	0.5
Spring	43.7	56.8	30.7			99	-22	2.56		1.46	3.45	5.4	
June	64.1	77.1	51.1	68.6	59.2	102	30	2.34	3.93	1.69	3.60	T.	T.
July	69.2	83.4	55.0	75.6	65.1	104	38	1.14	1.85	0.92	4.65		
August	66.3	80.8	51.8	69.6	62.0	103	31	1.42	2.43	0.62	2.20		
Summer	66.5	80.4	52.6			104	30	4.90		3.24	7.45	T.	
September	58.1	71.5	44.0	63.1	51.5	92	20	0.75	1.75	1.01	1.75	0.3	3.0
October	46.2	57.8	34.7	51.8	42.4	85	2	0.74	3.48	0.09	0.45	0.8	21.0
November	32.5	42.4	22.6	38.5	20.7	69	26	0.52	2.20	0.01	2.20	4.1	9.5
Fall	45.6	57.2	34.7			92	26	2.01		1.02	4.40	5.2	
Year.	43.0	55.2	30.8			104	-44	10.85		6.86	16.14	23.7	

EDMONTON, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	16.0	24.7	7.3	25.0	3.9	60	-43	0.75	3.21	1889 0.31	1900 1.25	6.8	32.1
January	5.9	15.6	-3.8	21.9	-13.7	57	-57	0.76	2.49	0.05	0.78	7.0	24.1
February	10.6	21.1	0.1	23.7	-10.4	62	-57	0.67	2.33	0.00	2.18	6.7	23.3
Winter	10.8	20.5	1.2			62	-57	2.18		0.36	4.21	20.5	
March	23.4	34.9	11.9	36.6	8.5	72	-40	0.67	1.93	0.07	1.93	6.2	19.3
April	40.8	52.9	28.6	48.8	31.2	84	-15	0.80	2.60	1.17	2.60	3.6	14.0
May	51.2	64.4	38.1	57.3	43.6	90	10	1.86	4.04	0.22	2.71	1.3	15.0
Spring	38.5	50.7	26.2			90	-40	3.33		1.46	7.24	11.1	
June	57.3	70.1	44.4	61.9	52.4	94	25	3.26	8.53	1.30	3.77	T.	1.2
July	61.2	73.7	48.8	66.4	57.8	94	33	3.56	11.13	1.85	3.91		
August	59.0	71.6	46.4	63.6	55.9	90	26	2.47	6.43	1.15	4.18	T.	1.0
Summer	59.2	71.8	46.5			94	25	9.29		4.30	11.86	T.	
September	50.4	62.9	37.8	55.4	45.1	87	12	1.40	4.32	1.45	3.16	1.7	10.8
October	41.7	53.2	30.3	47.4	35.5	82	-10	0.74	1.86	0.08	1.16	3.5	16.0
November	24.5	33.3	15.6	38.0	-0.4	74	-37	0.73	3.57	0.51	0.18	6.7	35.5
Fall	38.9	49.8	27.9			87	-37	2.87		2.04	4.50	10.9	
Year	36.9	48.2	25.6			94	-57	17.67		8.16	27.81	42.5	

EDMONTON, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894.

Month	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	13.7	22.3	5.1	22.6	4.1	51	-42	0.69	3.21	1889 0.31	1890 0.47	6.6	32.1
January	2.6	12.9	-7.8	21.9	-13.7	57	-57	0.70	1.43	0.05	0.75	6.2	13.5
February	7.8	18.3	-2.7	21.9	-10.4	62	-57	0.60	2.33	0.00	0.33	6.0	23.3
Winter	8.0	17.8	-1.8			62	-57	1.99		0.36	1.55	18.8	
March	25.3	36.9	13.7	36.4	12.7	72	-40	0.61	1.72	0.07	0.90	5.4	14.0
April	39.9	51.8	28.1	47.0	33.7	78	-10	0.72	1.46	1.17	0.21	2.8	7.0
May	51.0	64.4	37.5	53.8	47.0	88	15	1.76	4.04	0.22	2.36	1.5	15.0
Spring	38.7	51.0	26.4			88	-40	3.09		1.46	3.47	9.7	
June	56.9	69.9	43.8	59.0	52.9	89	25	2.70	5.95	1.30	3.54	0.1	1.2
July	60.6	73.5	47.7	64.3	57.8	91	33	3.32	6.63	1.85	5.38		
August	59.2	72.1	46.2	63.6	56.3	89	26	2.04	4.11	1.15	4.11		
Summer	58.9	71.8	45.9			91	25	8.06		4.30	13.03	0.1	
September	50.1	62.7	37.6	54.8	47.9	85	16	1.29	2.91	1.45	2.91	0.2	2.2
October	41.2	52.7	29.6	45.3	36.1	82	-10	0.73	1.86	0.08	0.92	3.5	16.0
November	25.6	34.6	16.6	38.0	19.2	69	-35	0.43	1.68	0.51	0.13	4.0	16.5
Fall	39.0	50.0	27.9			85	-35	2.45		2.04	3.96	7.7	
Year	36.1	47.6	24.6			91	-57	15.59		8.16	22.01	36.3	

EDMONTON, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade II. From 1895 to 1904

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	18.4	26.8	9.9	25.0	-5.8	53	-43	0.85	1.25	0.28	1.25	7.2	11.5
January	10.3	19.5	1.2	18.1	-3.0	48	-40	0.72	1.91	0.24	0.78	6.9	19.1
February	10.3	20.2	0.4	22.0	-8.3	36	-42	1.00	2.18	1.22	2.18	9.9	21.8
Winter	13.0	22.2	3.8			56	-46	2.57		1.74	4.21	24.0	
March	19.0	30.3	7.7	32.9	8.5	57	-31	0.85	1.93	0.86	1.93	8.4	19.3
April	41.1	52.5	29.7	46.4	35.9	78	5	1.08	2.60	0.04	2.60	5.0	14.0
May	52.4	65.4	39.3	57.3	47.0	90	10	1.99	2.67	0.20	2.71	1.1	5.7
Spring	37.5	49.4	25.6			90	-31	3.92		1.10	7.24	14.5	
June	56.6	69.9	43.3	60.3	52.1	94	25	3.30	4.94	2.80	3.77	T.	S.
July	61.2	73.6	48.9	64.2	59.2	94	36	3.75	11.13	2.00	3.91		
August	58.9	71.2	46.6	62.9	60.0	89	32	2.50	6.43	0.85	4.18	0.1	1.0
Summer	58.9	71.6	46.3			94	25	9.55		5.65	11.86	0.1	
September	49.6	61.4	37.7	53.2	45.1	86	12	1.73	4.32	0.82	3.16	1.6	10.8
October	42.6	54.0	31.1	47.2	35.5	78	10	0.72	1.34	1.06	1.46	4.2	13.4
November	21.6	30.2	12.9	35.7	-0.1	74	-37	0.83	2.59	0.53	0.18	7.5	25.9
Fall	37.9	48.5	27.2			86	-37	3.28		2.41	4.50	13.3	
Year.	36.8	47.9	25.7			91	-46	19.32		10.90	27.81	51.9	

EDMONTON, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	15.9	24.9	6.8	22.5	3.9	60	-39	0.70	1.97	1909 0.34	1914 1.49	6.5	19.7
January	4.8	14.5	-4.9	18.0	-12.3	52	-52	0.86	2.49	0.49	1.04	7.9	24.1
February	13.7	24.8	2.5	23.7	7.1	54	-43	0.42	1.07	0.49	1.07	4.2	10.6
Winter	11.4	21.4	1.5			60	-52	1.98		1.32	3.60	18.6	
March	26.0	37.6	14.4	36.6	17.1	68	-21	0.54	1.17	0.11	0.35	4.9	11.7
April	41.2	54.4	28.1	48.8	31.2	84	-15	0.62	1.57	0.91	0.38	2.9	9.1
May	50.5	63.5	37.4	54.5	43.6	86	14	1.83	2.58	2.96	1.81	1.2	9.1
Spring	39.2	51.8	26.6			86	-21	2.99		3.98	2.54	9.0	
June	58.3	70.5	46.1	61.9	55.5	94	29	3.77	8.53	1.85	8.53	T.	S.
July	62.0	74.1	49.8	66.4	58.3	89	35	3.61	5.83	3.25	3.24		
August	59.0	71.5	46.4	61.3	55.9	90	29	2.87	4.66	2.52	2.52	T.	S.
Summer	59.8	72.0	47.4			94	29	10.25		5.99	14.29	T.	
September	51.4	64.6	38.1	55.4	49.0	87	12	1.17	2.94	0.06	2.94	0.2	1.1
October	41.5	52.8	30.1	47.4	36.3	79	2	0.78	1.81	0.36	1.07	2.7	9.5
November	26.3	35.2	17.4	33.8	13.7	65	-27	0.92	3.57	1.23	0.85	8.5	35.5
Fall	39.7	50.9	28.5			87	-27	2.87		1.65	4.86	11.4	
Year	37.5	49.0	26.0			94	-52	16.09		12.94	25.29	39.0	

DIDSBURY, ALBERTA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	22.1	32.0	12.8	32.2	10.0	61	-40	0.38	0.86	0.10	0.50	3.8	8.0
January..	11.5	21.6	1.3	27.0	-8.3	56	-54	0.58	1.30	0.30	0.30	5.8	13.0
February	18.6	30.0	1.3	28.7	-3.0	66	-46	0.42	1.90	1.00	0.40	4.2	10.0
Winter.	17.5	27.9	7.1			66	-54	1.38		1.70	1.20	13.8	
March..	29.3	41.6	17.1	41.7	14.2	80	-20	0.91	1.55	0.70	1.55	7.6	15.5
April	41.1	51.7	27.6	48.0	30.8	86	-14	0.68	1.62	0.00	1.90	4.6	14.5
May.	48.4	61.3	35.5	50.5	44.9	86	16	2.94	4.11	1.20	3.90	5.0	13.4
Spring	39.6	52.5	26.7			86	-20	4.53		1.90	6.45	17.2	
June..	56.8	68.7	44.9	59.6	51.1	90	28	5.58	10.38	3.17	4.50	1.0	10.0
July	61.5	74.1	48.9	68.5	57.0	91	32	2.68	5.46	1.95	2.63		
August.	57.5	70.3	41.6	60.1	55.1	94	28	3.39	6.47	5.25	6.47		
Summer.	58.6	71.0	46.1			94	28	11.65		0.37	13.60	1.0	
September.	50.9	64.1	37.6	55.1	47.7	90	12	1.83	7.03	1.84	1.43	2.0	10.5
October..	42.2	54.1	30.1	48.6	36.6	80	0	1.09	1.91	0.45	0.92	6.2	15.0
November..	30.4	40.8	20.0	37.5	29.5	70	-26	0.76	1.77	0.70	0.65	7.2	15.0
Fall	41.2	53.1	29.2			90	-26	3.68		2.99	3.00	15.4	
Year..	39.2	51.1	27.3			94	-54	21.24		16.96	24.25	47.4	

GLITCHEN (BLACKFOOT INDIAN RESERVE), ALTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	16.6	27.9	5.3	24.2	7.6	59	-36						
January..	7.1	18.0	-3.8	20.2	-14.7	53	-52						
February *	12.3	24.7	-0.1	22.0	6.0	58	-53						
Winter..	12.0	23.5	0.5			59	-53						
March..	26.9	39.8	11.9	39.3	16.4	74	-28						
April	39.9	55.5	24.3	48.5	30.9	88	-9						
May.	48.4	63.5	33.4	52.5	42.4	87	11						
Spring	38.4	52.9	23.9			88	-28						
June..	57.3	70.5	11.0	61.2	53.2	92	27						
July	61.7	76.3	47.2	65.4	59.1	98	34						
August..	58.8	73.5	44.0	62.3	54.4	95	28						
Summer.	59.3	73.1	45.1			98	27						
September..	50.1	65.6	35.2	51.9	46.2	89	10						
October..	40.7	54.5	26.0	44.8	30.4	81	4						
November	27.3	39.6	15.0	33.6	18.9	72	-24						
Fall	39.5	53.2	25.7			89	-21						
Year	37.3	40.8	23.8			98	-53						

NOTE: Precipitation records broke.

HILLS-DOWN, ALBERTA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914

Month	Temperature.						Precipitation in Inches.				Snow		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall	Greatest Amount in one Month	Total Amount in Driest Year	Total Amount in Wettest Year	Average Monthly Fall.	Greatest Amount in one Month
December	17.7	27.6	7.8	25.3	7.1	58	-35	0.62	1.44	0.00	0.30	5.8	11.0
January	6.2	16.9	-1.5	21.1	-11.6	53	-52	0.87	1.40	0.72	0.85	8.7	14.0
February	14.1	24.5	3.6	21.8	-6.3	59	-47	0.61	1.45	1.50	0.50	5.8	14.5
Winter	12.7	23.0	2.3			59	-52	2.10		2.22	1.65	20.3	
March	25.9	37.5	11.2	36.8	18.1	73	-20	0.91	2.00	1.23	8.0	20.0	
April	40.0	52.1	27.7	46.2	31.3	105	10	0.70	1.94	0.25	1.94	4.8	18.5
May	17.9	40.2	35.6	51.0	43.2	85	15	2.03	3.88	0.72	2.01	1.2	4.0
Spring	37.9	50.1	27.6			105	-20	3.66		2.20	4.79	14.0	
June	56.5	68.3	41.6	59.9	53.4	80	28	5.33	8.72	2.36	5.08	1.4	14.0
July	60.5	72.9	48.1	65.2	57.4	89	33	2.75	6.33	0.95	3.88		
August	57.0	69.5	44.5	50.1	54.3	88	28	2.59	6.23	1.45	3.86	0.3	3.0
Summer	58.0	70.2	45.7			89	28	10.67		4.76	12.82	1.7	
September	49.8	62.6	37.0	53.3	45.8	83	11	1.18	2.99	0.33	1.80	1.5	
October	40.3	51.7	28.8	46.1	35.9	75	1	0.94	2.69	0.51	0.97	5.5	8.0
November	26.6	36.2	17.0	32.6	17.4	72	-22	0.99	2.70	0.28	1.11	8.9	8.3
Fall	38.9	50.2	27.6			83	-22	3.11		1.12	4.00	15.9	
Year	36.9	48.1	25.3			105	-52	19.54		10.30	23.26	51.0	

## ALIX, ALBERTA

## MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1911.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall	Greatest Amount in one Month	Total Amount in Driest Year	Total Amount in Wettest Year	Average Monthly Fall.	Greatest Amount in one Month
December	14.9	26.8	3.0	22.0	3.5	65	-41	0.57	2.35	0.00	0.25	5.7	23.5
January	3.5	16.0	-9.0	15.2	-15.4	52	-56	0.88	1.54	0.82	1.20	8.7	13.4
February	11.1	24.8	-2.3	20.1	2.6	57	-58	0.47	0.95	0.95	0.48	4.2	99.5
Winter	9.8	22.5	-2.9			65	-58	1.92		1.77	1.93	18.6	
March	23.6	37.0	10.2	33.1	15.2	70	-26	0.47	1.05	0.75	0.92		10.5
April	39.3	52.6	25.9	43.7	31.1	81	-19	0.56	1.54	0.09	1.54	3.5	14.0
May	48.5	61.1	35.9	51.7	42.4	84	13	1.79	3.20	0.65	2.25	0.8	7.0
Spring	37.1	50.2	21.0			84	26	2.82		1.49	4.71	8.0	
June	56.5	67.8	45.2	61.9	53.8	92	27	3.68	6.00	2.20	5.16	1.0	10.0
July	60.5	72.5	48.4	64.1	57.3	91	31	2.74	5.33	2.42	4.14		
August	57.1	70.1	44.1	60.5	53.1	95	27	1.96	4.76	1.62	3.24		
Summer	58.0	70.1	45.9			95	27	8.38		6.24	12.54	1.0	
September	49.4	63.0	35.8	52.5	46.4	83	12	1.16	2.30	0.28	1.82	1.1	7.0
October	39.2	52.2	26.6	41.6	35.0	81	1	0.80	2.12	0.12	0.71	2.8	6.3
November	25.1	36.3	13.9	31.6	16.4	67	-24	0.71	2.46	8.0	0.75	6.6	23.1
Fall	39.0	50.5	25.5			83	-24	2.67		1.41	3.28	19.5	
..	35.7	48.3	23.1			95	-58	15.70		10.91	22.46	38.1	

LETHBRIDGE, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	23.9	34.9	12.8	30.4	9.3	66	-32						
January	14.1	26.2	2.1	29.0	1.3	60	-40						
February	19.6	31.6	7.6	29.7	11.0	65	-44						
Winter	19.2	30.9	7.5			66	-44						
March	30.5	43.5	17.5	41.9	18.8	76	-23						
April	41.0	57.9	30.0	53.1	35.4	93	-1						
May	50.9	63.4	38.1	54.5	48.4	92	19						
Spring	41.8	54.9	28.6			93	-23						
June	60.5	73.9	47.1	64.9	57.9	98	30						
July	63.3	79.7	50.8	69.0	58.6	103	36						
August	62.5	77.1	47.9	67.5	59.0	99	31						
Summer	62.8	76.9	48.6			103	30						
September	54.2	67.7	40.6	59.1	47.1	91	22						
October	45.7	59.7	31.8	52.8	39.2	86	4						
November	32.9	44.1	21.7	38.9	21.8	73	-20						
Fall	41.3	57.2	31.4			91	-20						
Year.	42.0	55.0	29.0			103	-41						

MACLEOD, ALBERTA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1904.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	26.5	36.1	16.8	34.2	21.2	77	-30	0.40	1.26	1894 0.28	1899 1.26	4.0	12.0
January	19.7	30.2	9.2	28.0	3.0	58	-41	0.63	3.22	0.00	1.08	6.3	32.2
February	18.1	28.6	7.7	31.1	5.3	61	-36	0.52	1.45	T.	0.25	5.1	14.5
Winter	21.4	31.6	11.2			77	-41	1.55		0.28	2.59	15.4	
March	23.5	35.3	11.7	33.8	14.3	64	-31	0.64	1.10	0.90	1.10	6.4	11.0
April	42.9	56.2	29.5	47.1	37.4	77	-19	0.50	1.22	0.10	0.70	1.8	6.5
May	50.4	63.3	37.6	60.2	46.6	89	5	1.42	3.43	0.15	3.43	0.9	6.0
Spring	38.9	51.6	26.3			89	-31	2.56		1.15	5.23	9.1	
June	57.9	71.1	41.6	62.4	52.1	98	14	2.17	4.31	0.65	1.92		
July	64.2	79.2	49.2	69.6	61.0	102	38	1.95	4.13	0.65	4.13		
August	62.5	77.5	47.6	67.5	59.5	96	30	1.45	4.04	1.36	2.40		
Summer	61.5	75.9	47.1			102	14	5.57		2.64	8.45		
September	52.6	65.1	40.1	57.5	46.1	80	20	1.19	2.39	0.90	1.75	0.2	1.5
October	45.6	58.2	32.9	50.5	40.1	85	2	0.42	1.67	0.35	1.67	2.8	13.7
November	27.5	37.5	17.5	42.6	4.7	79	-38	0.63	2.20	0.00	0.05	6.0	22.0
Fall	41.9	53.6	30.2			89	-28	2.24		1.25	3.47	9.3	
Year.....	40.9	53.2	28.7			102	-41	11.92		5.34	19.74	33.5	

MACLEOD, ALBERTA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914

Month	Temperature					Precipitation in Inches.					Snow		
	Mean	Mean Max. Min.	Mean Min.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	4	32.8	13.1	30.5	9.8	59	-35	0.62	2.00	0.60	1910	0.70	20.0
January	14.0	35.7	2.6	29.3	-3.8	60	-45	0.81	1.00	0.38	1911	1.20	8.1
February	19.7	30.8	7.6	28.8	10.2	62	-49	0.66	1.75	1.75	1911	1.15	6.6
Winter	18.8	29.7	7.9			62	-49	2.09			2.73	3.05	20.9
March	29.2	44.4	17.0	42.2	21.3	82	-34	0.72	1.77	0.16		0.70	6.5
April	47.5	55.5	29.4	50.6	34.3	89	3	0.51	1.33	0.16		0.45	3.7
May	48.9	60.8	37.1	52.6	44.9	88	19	2.53	6.56	0.99		2.76	1.0
Spring	40.7	52.6	27.8			89	30	3.75			1.31	3.91	11.2
June	58.6	71.1	45.8	63.8	54.7	99	30	3.60	6.83	0.78		4.61	
July	61.0	78.5	49.5	67.4	59.7	102	35	1.75	3.32	1.91		2.77	
August	61.3	75.8	46.7	65.7	57.2	99	29	1.90	3.26	1.04		2.79	0.3
Summer	61.3	75.2	47.3			102	29	6.95			3.73	10.17	0.3
September	53.1	66.4	40.4	58.0	48.5	91	18	1.12	3.11	1.34		3.14	1.6
October	43.9	55.8	22.0	50.3	40.1	81	-4	0.68	2.46	0.03		0.34	4.9
November	32.3	42.1	22.6	37.7	21.2	68	-24	0.66	1.66	0.68		0.63	6.1
Fall	42.2	54.7	31.7			91	-21	2.46			2.65	4.11	12.6
Year	49.9	54.1	28.7			102	-49	15.28			9.82	21.21	45.0

BANFF, ALBERTA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1901.

Month	Temperature					Precipitation in Inches.					Snow.		
	Mean	Mean Max. Min.	Mean Min.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	20.8	27.5	14.0	26.1	13.7	49	-30	1.16					9.4
January	16.8	25.4	8.2	23.4	8.6	50	-43	1.20					11.6
February	16.3	25.9	6.7	24.9	6.2	47	-49	0.91					8.8
Winter	18.0	26.3	9.6			50	-49	3.27					29.8
March	30.8	32.2	9.4	28.0	14.6	55	-32	1.65					14.6
April	40.7	46.2	35.4	41.6	32.1	71	4	1.06					7.1
May	46.0	58.1	34.0	52.0	40.3	81	12	2.42					8.5
Spring	35.8	45.5	26.2			81	-32	5.13					30.2
June	51.2	64.4	38.0	56.0	47.1	88	25	3.34					2.1
July	59.7	70.5	41.8	60.0	53.5	88	30	3.20					
August	54.6	68.9	49.1	59.0	50.2	85	27	2.41					0.2
Summer	54.0	67.9	40.1			88	25	8.95					2.3
September	45.8	57.2	34.4	49.8	41.4	76	13	1.77					2.4
October	39.4	49.2	29.6	43.8	35.0	71	9	0.95					4.4
November	22.9	30.2	15.5	35.9	1.7	57	-41	1.95					17.1
Fall	36.0	45.7	26.5			76	-41	4.67					23.9
Year	46.3	46.8	25.6			88	-49	22.02					86.2

BANFF, ALBERTA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES

Decade III. From 1905 to 1911

Month	Temperature.						Precipitation in Inches.			Snow			
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Total Amount in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	17.4	25.6	9.2	22.4	9.7	45	-11						
January	10.3	19.4	1.2	19.6	-4.1	47	-48						
February	16.6	27.2	0.0	23.0	8.8	49	-9						
Winter	14.8	24.1	5.5			49	-48						
March	20.3	37.3	15.4	34.2	18.3	60	-32						
April	36.9	48.1	25.7	42.1	29.0	75	-11						
May	44.5	56.2	32.9	46.9	42.8	77	-17						
Spring	35.9	47.2	24.7			77	-32						
June	52.3	65.2	39.1	55.9	49.7	86	21						
July	57.9	72.0	43.1	62.8	53.2	91	28						
August	54.4	68.3	40.6	57.0	51.6	89	28						
Summer	54.9	68.7	41.0			91	21						
September	47.7	59.5	35.8	50.9	33.9	80	18						
October	38.2	47.5	29.0	41.6	32.6	68	-3						
November	29.8	34.5	19.1	30.2	17.5	58	-37						
Fall	37.6	47.2	28.0			80	-37						
Year	35.8	49.8	24.8			91	-48						

BANFFURLY, ALBERTA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1911.

Month.	Temperature.						Precipitation in Inches.			Snow.			
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	11.5	21.8	-1.1	19.6	-1.1	55	-12	0.80	2.27	0.78	2.27	7.5	22.1
January	-1.0	10.1	-12.1	11.2	-16.0	59	-57	0.78	1.27	0.98	0.84	7.4	12.7
February	6.0	17.4	-5.4	11.3	-1.0	49	-50	0.59	1.27	0.55	1.15	5.4	12.7
Winter	5.5	19.4	-5.5			59	-57	2.17		2.31	4.26	20.3	
March	19.7	32.0	7.3	31.9	9.6	73	-31	0.76	1.91	0.37	0.46	7.0	19.1
April	37.7	51.1	24.3	45.7	24.9	85	-18	1.11	3.73	0.14	3.73	4.8	10.5
May	47.7	61.0	34.5	52.3	39.0	87	6	2.05	4.10	0.88	1.62	1.0	4.8
Spring	35.0	48.0	22.0			87	-11	3.92		1.39	5.81	12.8	
June	57.0	68.8	45.2	61.1	54.2	95	29	3.88	6.61	2.79	6.51		
July	60.5	72.3	48.7	64.6	56.9	90	31	3.20	5.01	2.46	4.40		
August	57.4	69.8	45.0	59.9	51.0	99	28	2.81	4.82	1.32	0.75		
Summer	58.3	70.3	46.1			93	28	9.89		7.07	11.66		
September	49.8	62.8	36.8	51.6	45.8	87	15	1.48	2.77	1.94	0.79	0.1	0.5
October	38.9	50.5	27.3	41.2	33.5	78	-1	0.82	1.69	0.86	0.19	2.9	10.8
November	22.8	32.3	13.3	30.9	12.0	64	-28	0.91	3.07	0.29	3.07	7.8	27.9
Fall	37.2	48.5	25.8			87	-28	3.21		3.09	4.05	10.8	
Year	34.0	45.8	22.2			93	57	19.19		13.86	25.78	43.9	

## DECADAL MEANS &amp; EXTREMES IN SASKATCHEWAN.

SWIFT CURRENT, SASK.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

10 Years. From 1885 to 1914.

Month	Temperature								Precipitation in Inches.			Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
									1894	1891			
December	17.0	25.5	8.4	26.6	6.8	58	-36	0.61	1.00	0.37	1.24	6.2	30.0
January	6.9	15.4	1.6	21.7	8.6	59	-46	0.62	1.11	0.10	0.39	6.1	13.4
February	8.7	18.3	0.8	21.6	6.0	60	-50	0.65	1.48	0.50	0.41	6.4	14.8
Winter	10.9	19.7	2.0			69	-50	1.90		1.27	2.04	18.7	
March	21.6	31.1	12.0	40.7	4.9	72	-34	0.75	2.02	1.02	1.44	7.3	20.2
April	41.3	51.6	28.7	49.6	30.6	86	6	0.78	3.48	0.95	1.52	3.2	11.6
May	51.3	64.2	38.5	59.7	42.6	92	16	1.91	5.07	2.64	1.16	2.0	12.4
Spring	38.1	49.7	26.1			92	34	3.44		4.61	4.12	12.5	
June	60.2	72.7	47.7	65.8	55.2	104	26	3.06	7.24	1.35	6.80	T	1.0
July	65.7	79.6	51.7	72.5	60.7	107	34	2.41	6.27	0.62	3.56		
August	63.3	77.3	49	63.4	57.6	101	31	1.81	4.75	0.56	3.20		
Summer	63.0	76.5	49.6			107	24	7.28		2.53	13.36	T	
September	53.4	66.4	40.1	58.1	46.8	96	19	1.18	3.81	0.63	1.64	1.3	20.0
October	42.0	53.4	30.7	48.3	36.2	89	11	0.79	3.04	0.40	2.07	2.1	17.9
November	26.1	35.3	16.9	36.8	4.0	77	-32	0.57	1.94	0.22	1.32	5.0	15.9
Fall	40.5	51.7	20.2			96	-32	2.51		1.25	5.03	8.4	
Year	38.1	49.4	26.8			107	-56	15.14		9.66	24.55	39.6	

SWIFT CURRENT, SASK.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Droevle 1. From 1885 to 1891.

Month	Temperature								Precipitation in Inches.			Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
									1894	1891			
December	16.3	25.2	7.1	26.6	7.7	58	-36	0.89	1.00	0.37	1.24	8.9	30.0
January	3.4	11.0	-1.1	10.3	3.1	49	-4	0.66	1.34	0.10	0.36	6.6	13.4
February	7.0	17.5	1.4	19.8	6.6	60	-60	0.80	1.48	0.50	0.44	7.8	14.8
Winter	8.9	17.9	0.0			66	-50	2.35		1.27	2.04	23.3	
March	22.6	32.2	13.0	33.6	12.5	68	-27	0.75	1.44	1.02	1.44	7.2	12.4
April	41.1	54.1	28.0	47.1	32.7	76	4	1.23	3.38	0.95	1.52	4.3	11.6
May	50.7	64.5	36.9	54.7	45.7	92	16	1.58	3.16	2.61	1.16	2.3	8.0
Spring	38.1	50.3	26.0			92	-27	3.56		4.61	4.12	13.8	
June	60.6	73.4	46.6	63.4	57.2	96	26	3.12	6.80	1.35	6.80		
July	66.0	80.9	51.2	71.4	62.3	107	34	1.97	3.70	0.62	3.56		
August	64.2	79.0	49.3	63.4	57.6	101	31	1.62	3.20	0.56	3.20		
Summer	63.4	77.8	49.6			107	26	6.74		2.53	13.36		
September	53.9	68.2	39.6	57.9	51.2	9	16	0.80	2.74	0.63	1.64	1.0	9.2
October	41.0	52.5	29.4	47.2	37.2	82	4	0.96	3.04	0.40	2.07	3.1	17.9
November	26.2	36.7	15.8	35.2	19.3	67	-31	0.59	1.90	0.22	1.32	5.7	12.2
Fall	40.4	52.5	28.3			96	-31	2.44		1.25	5.03	9.6	
Year	37.7	49.6	25.8			107	-50	15.06		9.66	24.55	46.7	

SWIFT CURRENT, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904.

Month	Temperature							Precipitation in Inches.				Snow		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December	18.2	26.2	10.1	21.2	9.0	54	-30	0.46	0.89	0.56	1899	0.33	4.6	8.9
January	11.0	19.8	2.2	21.7	3.5	59	-40	0.67	1.12	1.29	0.62	0.62	6.6	13.2
February	8.4	17.4	-0.7	21.6	-4.1	50	-42	0.66	1.04	0.50	0.30	0.30	6.5	10.2
Winter	12.5	21.1	3.9			59	-42	1.79		2.35	1.25	1.25	17.7	
March	17.4	26.5	8.1	28.2	4.9	67	-34	0.98	2.02	0.20	1.31	0.8	9.8	20.2
April	41.4	53.2	29.5	48.7	36.2	83	6	0.41	0.93	0.04	0.25	2.3	9.2	
May	53.3	66.0	40.5	59.7	47.5	92	14	2.26	5.07	1.77	2.40	2.0	12.4	
Spring	37.4	48.6	26.1			92	34	3.65		2.01	3.96	14.1		
June	59.8	72.0	47.6	65.8	55.2	104	30	2.56	4.47	3.02	3.47	0.1	1.0	
July	65.7	79.3	52.0	69.2	62.6	99	37	3.21	6.27	3.32	3.95			
August	63.0	76.8	49.3	67.2	59.1	96	32	1.97	4.75	0.38	4.75			
Summer	62.8	76.0	49.6			104	30	7.74		6.72	11.87	0.1		
September	51.0	64.1	39.7	58.1	46.8	88	23	1.67	3.81	0.97	0.61	0.6	5.0	
October	44.4	55.0	31.7	48.3	37.3	82	16	0.49	1.33	0.04	1.07	0.6	3.7	
November	23.9	32.3	15.4	39.8	4.0	77	-32	0.60	1.50	0.24	0.50	5.0	11.6	
Fall	39.7	50.5	28.0			88	-32	2.76		1.25	2.30	6.2		
Year.	38.1	49.0	27.1			104	-42	15.94		12.32	19.38	38.1		

SWIFT CURRENT, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December	16.4	25.1	7.6	23.4	6.8	58	-32	0.51	1.17	0.27	1910	0.29	5.2	11.7
January	6.1	15.3	-3.0	17.7	-8.6	56	-41	0.72	1.02	0.14	0.50	0.50	5.2	10.2
February	10.0	19.9	1.8	17.2	4.3	58	-41	0.50	1.42	0.58	0.24	4.9	14.2	
Winter	11.1	20.1	2.1			58	-41	1.56		0.99	1.03	15.3		
March	24.7	34.7	14.6	40.7	12.0	72	-22	0.53	1.37	0.06	0.56	4.8	13.7	
April	41.5	54.4	28.7	49.6	30.6	86	-2	0.69	1.00	0.96	0.45	2.9	9.4	
May	50.1	62.2	38.0	53.3	42.6	89	12	1.88	3.75	0.80	2.52	1.7	6.6	
Spring	38.8	50.4	27.1			89	-22	3.10		1.72	3.33	9.4		
June	60.7	72.6	48.8	63.9	57.1	98	30	3.49	7.24	1.78	6.40	T.	0.4	
July	65.3	78.5	52.0	72.5	60.7	102	38	2.05	4.36	1.76	4.66			
August	62.0	76.0	49.2	67.3	57.6	101	31	1.83	3.59	2.28	2.26			
Summer	62.0	75.7	50.0			102	30	7.37		5.82	13.38	T.		
September	53.9	66.8	40.9	57.7	48.2	91	18	0.99	2.17	0.88	0.70	2.2	20.0	
October	41.0	52.8	31.0	46.3	38.2	84	-16	0.84	2.58	0.40	0.44	2.6	13.8	
November	28.2	37.0	19.5	34.7	15.3	65	-21	0.53	1.94	0.32	0.38	4.6	15.9	
Fall	41.3	52.2	30.5			91	-21	2.36		1.60	1.52	9.4		
Year.	38.5	49.6	27.4			102	-41	14.39		10.13	19.26	34.1		

QU'APPELLE, SASK  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
30 Years—From 1885 to 1914

Month	Temperature					Precipitation in Inches.					Snow		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month	Total Amount in Driest Year	Total Amount in Wettest Year	Average Monthly Fall.	Greatest Amount in one Month
December	10.7	18.5	2.8	20.1	0.7	19	10	0.72	3.11	1886	1901	7.1	31.1
January	-0.6	8.5	-9.7	13.8	0.2	50	7	0.63	2.28	0.40	2.28	6.9	22.8
February	2.0	11.2	-7.2	12.1	9.7	50	55	0.81	2.85	0.80	1.59	8.1	28.5
Winter	1.0	12.7	-4.7			50	55	2.24		1.78	5.38	22.1	
March	16.0	25.7	6.2	36.0	1.3	76	47	1.02	3.11	0.70	0.91	9.6	41.1
April	37.3	49.1	25.5	47.8	25.8	89	21	1.10	3.59	1.38	3.59	6.7	31.0
May	49.8	62.4	37.3	59.3	51.7	92	8	2.71	6.95	1.99	0.81	3.1	20.3
Spring	31.4	45.7	23.0			92	47	4.83		4.07	5.31	19.4	
June	59.6	70.8	48.4	64.4	53.0	101	27	3.69	7.19	0.32	1.83	T.	0.7
July	63.8	75.9	51.7	70.1	57.6	100	34	2.81	7.25	2.34	5.17		
August	61.1	73	48.9	68.0	56.8	100	27	2.01	5.03	0.72	0.77		
Summer	61.5	73.3	49.7			101	25	8.57		3.38	11.07	T.	
September	52.0	64.0	39.9	59.6	46.2	93	12	1.38	1.61	0.14	4.17	1.0	8.5
October	40.8	51.5	30.2	46.2	34.0	86	12	0.98	1.35	0.12	0.37	1.5	28.4
November	21.8	30.4	13.3	35.5	0.7	73	30	0.98	2.51	0.65	0.17	8.4	19.5
Fall	38.2	48.6	27.8			93	30	3.34		0.91	4.71	13.9	
Year	34.5	45.1	23.9			101	55	18.96		10.14	26.47	55.4	

QU'APPELLE, SASK  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade I—From 1885 to 1894

Month	Temperature					Precipitation in Inches.					Snow		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	10.6	17.6	3.6	19.4	0.7	19	-10	0.50	1.29	1886	1890	4.8	12.9
January	-4.4	5.4	-11.2	13.8	-14.2	41	-47	0.43	0.65	0.40	0.30	1.3	6.5
February	1.6	8.3	-11.6	7.8	-9.7	46	55	0.75	1.87	0.80	1.87	7.5	18.7
Winter	1.5	10.4	-7.4			49	55	1.68		1.78	2.20	16.6	
March	15.6	25.4	5.7	31.3	3.2	65	37	0.72	1.40	0.76	1.18	7.1	14.0
April	35.1	48.4	22.0	45.5	28.1	81	0	1.20	1.94	1.58	1.19	7.5	15.4
May	49.3	62.2	36.3	53.2	43.6	92	16	1.60	2.21	1.99	2.69	1.6	4.3
Spring	33.3	45.2	21.3			92	35	3.52		4.07	4.76	16.2	
June	60.6	72.5	49.3	64.4	55.8	99	28	3.21	7.19	0.32	4.28		
July	64.4	77.4	51.4	70.1	61.1	100	37	2.54	4.81	2.34	4.84		
August	62.0	75.4	48.7	68.0	56.8	100	27	1.46	2.65	0.72	1.87		
Summer	62.3	75.0	49.8			100	27	7.24		3.38	10.99		
September	52.0	64.8	39.3	55.2	48.8	91	12	0.95	2.55	0.14	2.55	0.8	5.4
October	40.2	50.8	29.6	46.2	34.0	85	12	1.12	3.35	0.12	3.35	1.8	15.0
November	21.2	30.2	12.1	32.4	15.8	62	27	0.74	1.41	0.65	0.12	6.9	12.8
Fall	37.8	48.6	27.0			91	27	2.81		0.91	6.02	12.5	
Year	33.7	44.8	22.7			100	55	15.25		10.14	23.97	45.3	

QU'APPELLE, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904.

Month.	Temperature.					Precipitation in Inches.					Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	10.2	18.6	1.7	13.6	3.3	43	-36	0.71	1.51	1897	1901	7.1	15.1
January	2.6	11.1	-5.8	11.7	-8.7	43	-46	0.89	2.28	0.46	2.28	8.9	22.8
February	2.6	11.1	-6.0	12.1	-7.7	43	-43	1.12	2.85	0.75	1.59	11.1	28.5
Winter	5.1	13.6	-3.4			43	-46	2.72		1.64	5.38	27.1	
March	12.2	21.8	2.6	20.2	1.3	55	-45	1.46	4.11	0.41	0.91	14.0	11.1
April	38.3	49.1	27.3	47.8	32.0	80	-24	1.10	3.59	0.39	3.59	8.1	34.0
May	52.6	65.4	39.7	59.3	45.9	92	19	2.56	6.95	0.25	0.81	2.7	20.3
Spring	34.4	45.5	23.2			92	-45	5.12		1.05	5.31	24.8	
June	58.2	70.0	46.3	63.1	53.0	101	25	3.61	4.83	4.81	4.83	T.	0.3
July	63.5	75.8	51.1	66.2	60.6	97	34	2.89	5.47	1.77	5.47		
August	60.8	73.5	48.2	63.3	58.9	95	28	2.02	5.03	1.24	0.77		
Summer	60.8	73.1	48.5			101	25	8.52		7.82	11.07	T.	
September	51.0	62.7	39.3	59.6	46.5	89	20	1.78	4.17	0.31	4.17	2.0	8.5
October	41.6	53.0	30.3	46.0	34.1	80	-1	0.83	2.83	0.69	0.37	5.9	28.2
November	19.5	28.4	10.7	35.5	0.7	73	-30	1.05	1.97	1.14	0.17	10.2	19.4
Fall	37.4	48.0	26.8			89	-30	3.66		2.14	4.71	18.1	
Year.	34.4	45.0	23.8			101	-46	20.02		12.65	26.47	70.0	

QU'APPELLE, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914

Month.	Temperature.					Precipitation in Inches.					Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	11.3	19.4	3.2	20.1	2.4	46	36	0.94	3.11	1912	1909	9.4	31.1
January	-0.1	8.9	-9.1	11.3	-12.1	70	17	0.75	1.54	0.94	3.11	7.5	15.4
February	5.0	14.2	-4.1	9.5	-2.3	60	17	0.56	1.12	0.16	0.54	5.6	11.2
Winter	5.4	14.2	-3.3					2.25		1.45	4.41	22.5	
March	20.2	30.0	10.3	36.0	9.4	76	-32	0.87	1.77	0.68	0.52	7.7	17.6
April	38.5	49.7	27.2	45.1	25.8	89	-5	1.00	1.78	1.29	1.78	4.5	10.2
May	47.8	59.6	36.0	51.5	39.7	87	8	2.98	4.79	3.96	3.96	5.0	12.8
Spring	35.5	46.4	24.5			89	-32	4.85		5.93	6.27	17.2	
June	59.8	70.0	49.6	61.1	56.1	95	27	4.22	6.11	1.73	2.26	0.1	0.7
July	63.5	74.4	52.6	69.5	57.6	97	35	3.09	7.25	4.42	7.25		
August	60.3	70.9	49.8	64.8	57.0	98	30	2.65	4.34	1.95	3.96		
Summer	61.2	71.8	50.7			98	27	9.96		8.10	13.47	0.1	
September	52.9	64.6	41.2	57.3	46.2	93	17	1.42	4.61	1.64	0.08	0.3	3.0
October	40.8	50.8	30.8	46.2	34.2	86	-4	1.00	2.10	0.46	0.28	2.8	15.5
November	24.8	32.6	17.0	30.1	13.3	61	-21	1.16	2.51	0.48	1.24	8.1	19.5
Fall	39.5	49.3	29.7			93	-21	3.58		2.58	1.60	11.2	
Year.	35.4	45.4	25.4				-47	20.61		18.06	25.75	50.9	

PRINCE ALBERT, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	5.3	15.1	-4.5	16.6	-10.3	58	-57	0.80	2.61	1919 0.18	1899 0.81	8.0	26.0
January	-5.9	5.3	-17.1	8.1	-18.8	53	-67	0.82	2.00	0.81	1.96	8.2	20.0
February	-1.3	11.3	-13.9	9.8	-13.5	52	-70	0.69	2.15	0.45	0.04	6.8	21.5
Winter	-0.6	10.6	-11.8			58	-70	2.31		1.44	2.81	23.0	
March	12.1	26.2	-2.1	32.0	1.5	68	-41	0.87	2.56	0.31	1.84	7.7	24.5
April	36.1	48.7	23.6	44.5	22.2	86	-23	0.82	3.37	0.40	1.03	4.4	13.8
May	48.9	62.6	35.2	57.7	47.0	90	2	1.50	4.87	0.69	1.97	1.6	9.5
Spring	32.4	45.8	18.9			90	-41	3.19		1.40	4.84	13.7	
June	58.1	71.0	45.1	63.9	52.5	96	17	2.67	7.30	0.34	1.36		
July	62.0	74.2	49.8	67.1	58.9	93	33	2.31	5.31	1.37	4.86		
August	58.8	71.7	46.0	62.3	56.1	94	22	2.31	8.01	0.69	8.01		
Summer	59.6	72.3	47.0			96	17	7.29		2.40	17.23		
September	49.4	61.7	37.1	55.7	42.3	87	14	1.39	2.94	0.79	2.31	0.7	8.0
October	38.3	49.2	27.4	43.8	31.4	85	-5	0.80	1.97	0.19	1.53	2.3	9.0
November	18.5	27.4	9.5	30.3	1.1	66	-41	0.99	3.06	1.21	1.16	8.7	30.6
Fall	35.4	46.1	24.7			87	-41	3.18		2.16	5.00	11.7	
Year.	31.7	43.7	19.7			96	-70	15.97		7.40	29.88	48.4	

PRINCE ALBERT, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I From 1885 to 1894.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	2.1	14.2	-10.0	11.5	-10.3	58	-57	0.54	1.20	1885 1.15	1890 1.20	5.4	12.0
January	-10.7	2.4	-23.8	6.0	-18.8	51	-67	0.66	1.33	0.22	1.38	6.6	13.8
February	-6.2	8.2	-20.6	1.9	-13.5	52	-70	0.65	1.67	0.44	1.26	6.3	14.7
Winter	-4.9	8.3	-18.1			58	-70	1.85		1.81	3.84	18.3	
March	10.7	25.7	-4.3	26.0	4.9	57	-44	0.69	1.96	0.17	1.96	5.9	19.6
April	34.2	46.7	21.6	43.5	22.2	80	-23	0.70	1.55	0.25	0.57	4.5	13.8
May	46.6	61.0	32.3	51.1	42.6	89	13	1.11	2.68	1.12	1.59	1.5	5.5
Spring	39.5	44.5	16.5			89	-44	2.50		1.54	4.12	11.9	
June	57.6	71.7	43.5	61.0	55.9	96	26	2.31	3.65	2.40	3.49		
July	61.5	75.5	47.5	65.6	58.4	93	33	1.33	2.82	0.17	2.40		
August	58.8	74.1	43.5	63.4	54.2	94	22	1.47	3.24	0.25	2.18		
Summer	59.3	73.8	41.8			96	22	5.31		2.82	8.07		
September	49.0	63.3	34.7	53.2	42.3	87	14	0.85	2.03	0.09	0.78	0.7	6.6
October	37.2	49.3	25.1	42.8	31.3	85	2	0.73	1.97	0.88	1.97	2.8	7.6
November	17.1	27.5	6.6	28.8	10.2	58	-41	0.52	1.05	0.91	0.29	4.4	12.1
Fall	34.4	46.7	22.1			87	-41	2.10		1.88	3.04	7.9	
Year.	29.8	43.3	16.4			96	-70	11.76		8.05	19.07	38.1	

PRINCE ALBERT, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1904.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	6.4	16.1	-3.3	10.3	0.1	52	-39	0.79	2.10	1895 0.76	1899 0.81	7.8	21.0
January	-1.8	8.8	-12.5	6.2	-11.2	53	-51	1.00	1.96	1.72	1.96	10.0	19.6
February	-0.2	11.5	-12.0	9.3	-11.4	52	-51	0.78	1.86	0.37	0.01	7.6	18.6
Winter	1.4	12.1	-9.3			53	-51	2.57		2.85	2.81	25.4	
March	8.0	23.2	-7.2	17.9	1.5	54	-38	1.29	2.56	0.26	1.84	11.8	24.5
April	37.5	50.3	24.7	44.5	31.3	81	-17	0.92	3.37	0.35	1.03	4.5	13.0
May	51.3	65.1	37.4	57.7	47.0	90	16	2.12	4.87	2.19	1.97	1.2	9.5
Spring	32.3	46.2	18.3			90	-38	4.33		2.80	4.84	17.5	
June	57.2	69.5	44.8	60.2	52.5	93	24	2.76	4.36	2.03	4.36		
July	61.7	73.2	50.2	63.7	58.9	93	35	3.03	4.86	1.47	4.86		
August	58.8	70.6	46.9	61.7	56.0	87	26	2.67	3.01	1.13	8.01		
Summer	59.2	71.1	47.3			93	24	8.46		4.63	17.23		
September	49.0	60.3	37.8	51.6	44.0	84	21	1.83	2.94	1.85	2.31	1.5	8.0
October	39.1	50.0	28.2	43.8	33.3	77	-4	0.79	1.89	0.37	1.53	2.0	9.0
November	16.7	25.5	8.0	30.3	1.1	66	-35	1.31	3.06	1.64	1.16	12.1	30.6
Fall	35.0	45.3	24.7			84	-35	3.93		3.86	5.00	15.6	
Year	32.0	43.7	20.2			93	-51	19.29		14.14	29.88	58.5	

PRINCE ALBERT, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	7.5	15.1	-0.1	16.6	-1.0	45	-45	1.07	2.61	1910 0.18	1908 1.81	10.7	26.0
January	-5.2	4.6	-15.1	8.1	-18.0	44	-54	0.79	2.00	0.81	0.40	7.9	20.0
February	2.4	14.1	-9.2	9.8	-5.2	49	-49	0.65	2.15	0.45	2.15	6.5	21.5
Winter	1.6	11.3	-8.1			49	-54	2.51		1.44	4.36	25.1	
March	17.5	29.8	5.2	32.0	8.7	68	-35	0.64	1.82	0.31	0.35	5.3	12.0
April	36.7	49.0	24.4	43.9	23.3	86	-15	0.85	2.82	0.40	2.82	4.2	9.2
May	48.8	61.7	35.9	53.2	37.9	86	2	1.28	2.54	0.69	0.58	2.2	8.2
Spring	34.3	46.8	21.8			80	-35	2.77		1.40	3.75	11.7	
June	59.4	71.7	47.1	63.9	55.3	96	17	2.95	7.36	0.34	7.36		
July	62.9	74.0	51.7	67.1	58.6	93	36	2.38	5.31	1.37	0.36		
August	58.9	70.3	47.6	62.3	56.1	88	30	2.78	7.49	0.69	3.03		
Summer	60.4	72.0	48.8			96	17	8.11		2.10	10.75		
September	50.2	61.6	38.7	55.7	46.0	85	17	1.50	2.53	0.79	0.53	T.	0.4
October	38.6	48.3	28.9	42.1	32.3	81	-5	0.88	1.80	0.16	1.03	2.2	9.0
November	21.5	29.3	13.8	27.0	11.9	55	-28	1.15	2.26	1.21	1.13	9.5	22.6
Fall	36.8	46.4	27.1			85	-28	3.53		2.16	3.29	11.7	
Year	33.3	44.1	22.4			96	-54	16.92		7.40	22.15	48.5	

BATTLEFORD, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1904.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	9.6	18.8	0.3	14.6	-0.7	48	-10	0.42	0.57	1895	1900	3.9	5.7
January	1.5	8.6	-5.5	9.5	-10.2	46	-13	0.52	1.16	0.30	0.27	5.1	11.2
February	0.7	10.6	-9.2	12.6	-12.9	48	-46	0.59	1.78	0.23	0.66	5.9	17.8
Winter	3.9	12.7	-4.8			48	-46	1.53		0.82	1.56	14.9	
March	11.3	21.8	0.8	18.9	1.9	53	-42	0.81	1.81	0.08	0.36	7.4	18.1
April	38.7	50.6	26.9	46.6	32.6	75	-13	0.51	1.41	0.07	0.68	3.1	17.6
May	53.3	66.1	40.4	58.1	48.0	89	18	2.13	3.70	2.13	2.80	1.6	13.1
Spring	34.4	46.2	22.7			89	-42	3.75		2.28	3.84	12.1	
June	58.6	70.5	46.7	61.8	52.1	97	28	3.56	4.45	2.29	3.21	T.	T.
July	63.5	75.6	51.4	66.4	60.8	96	37	2.39	4.67	2.86	4.21		
August	61.0	73.6	48.4	61.4	58.6	89	31	2.15	5.24	1.53	5.24		
Summer	61.0	73.2	48.8			97	28	8.10		6.68	12.66	T.	
September	50.7	63.1	38.4	56.1	46.1	8	18	1.37	3.27	1.36	1.21	0.8	8.2
October	41.3	53.3	29.2	45.2	35.4	80	1	0.52	1.07	0.24	0.87	0.4	2.1
November	18.0	26.5	9.4	33.6	-1.9	69	40	0.71	1.37	0.63	0.23	6.4	13.7
Fall	36.7	47.6	25.7			88	-40	2.60		2.23	2.31	7.6	
Year	34.0	41.9	23.1			97	-46	15.98		12.01	20.37	34.6	

BATTLEFORD, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	9.4	17.1	1.6	19.1	1.1	52	-40	0.50	1.46	1910	1911	5.0	14.6
January	-3.5	5.4	-12.5	8.2	-17.7	47	-53	0.43	1.30	0.20	0.50	4.2	13.0
February	3.6	13.5	-6.3	9.6	-4.4	48	-46	0.28	1.01	0.10	0.50	2.7	9.7
Winter	3.2	12.0	-5.7			52	-53	1.21		0.50	2.30	11.9	
March	20.4	31.1	9.6	34.1	9.0	73	-31	0.11	1.66	0.20	0.10	1.1	18.0
April	39.7	52.1	27.1	47.4	26.6	88	-10	0.41	1.02	0.19	0.50	2.2	5.6
May	50.5	63.0	37.9	54.6	40.6	91	10	1.34	2.86	2.35	2.60	0.1	9.6
Spring	36.9	48.7	25.0			91	-31	2.35		2.74	3.20	6.4	
June	60.9	72.9	48.9	65.6	56.5	98	28	3.32	7.60	1.53	7.14		
July	64.1	76.5	51.6	69.5	59.2	96	38	2.48	5.35	0.06	3.39		
August	61.1	73.9	48.3	63.9	57.2	98	32	1.73	2.74	1.08	2.23		
Summer	62.0	74.4	49.6			98	28	7.53		3.57	12.76		
September	53.1	65.8	40.1	58.1	49.6	91	20	1.53	3.97	1.46	1.29		
October	41.0	52.1	29.8	46.2	34.9	82	0	0.58	2.26	0.18	0.11	1.7	8.0
November	23.4	31.4	15.4	29.8	13.9	60	-26	0.15	0.85	0.30	0.81	4.0	8.0
Fall	39.2	49.8	28.5			91	-26	2.56		1.94	2.21	5.7	
Year	35.4	46.2	24.4			92	-55	13.65		8.73	20.47	24.0	

PENSE (GATESGARTH), SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount Driest in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	10.2	21.1	-0.7	16.4	2.3	55	-37						
January	-0.8	9.8	-11.4	11.1	-14.6	49	-49						
February	4.6	15.4	-6.3	9.7	-1.6	59	-46						
Winter	4.7	15.4	-6.1			59	-49						
March	20.0	31.8	8.1	35.3	9.6	79	30						
April	38.5	52.8	24.2	45.5	25.1	90	-13						
May	48.0	61.6	34.5	51.6	40.4	89	7						
Spring	35.5	48.7	22.3			90	-30						
June	58.9	71.5	46.2	62.0	51.4	91	22						
July	62.9	76.1	49.7	70.0	56.2	69	34						
August	60.7	75.1	45.3	63.8	57.2	99	30						
Summer	60.8	74.2	47.4			99	22						
September	51.8	67.1	36.2	57.0	47.7	99	10						
October	40.2	53.8	26.5	44.9	35.6	91	-2						
November	24.5	35.1	14.0	31.0	13.6	65	-25						
Fall	38.8	52.1	25.0			99	-25						
Year.	34.9	47.6	22.3			99	-49						

NOTE.—Precipitation record broken.

CANNINGTON MANOR, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount Driest in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	8.9	18.6	-0.9	13.6	6.1	47	-40						
January	2.0	11.8	-7.7	9.8	-0.8	49	-42						
February	1.0	11.3	-9.3	10.3	-5.8	47	-40						
Winter	4.0	13.9	-6.0			49	-42						
March	12.0	21.8	2.2	15.9	2.2	49	-29						
April	37.5	48.8	26.1	45.4	32.6	79	-7						
May	51.0	64.2	37.9	54.9	45.7	92	12						
Spring	33.5	44.9	22.1			92	-29						
June	57.3	69.0	45.5	61.7	53.3	110	29						
July	62.8	75.3	50.4	65.8	59.8	97	55						
August	60.7	73.4	48.0	63.8	59.1	94	27						
Summer	60.3	72.0	48.0			110	27						
September	45.9	63.4	36.4	61.0	45.7	92	18						
October	39.5	51.6	27.4	41.0	32.4	82	-2						
November	19.0	29.0	8.9	33.4	3.2	68	-29						
Fall	36.1	48.0	24.2			92	-29						
Year.	33.5	44.9	22.1			110	-42						

NOTE.—Precipitation record broken.

MOOSOMIN, SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade III From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount Driest in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	8.3	16.8	-0.2	16.6	0.3	45	-33						
January	3.2	4.3	10.7	9.6	-14.0	43	-47						
February	2.0	10.6	-6.5	9.2	-6.3	50	-39						
Winter	2.4	10.6	-5.8				-47						
March	18.0	27.8	8.2	36.0	8.0	71	27						
April	37.3	49.3	25.3	41.6	24.2	82	2						
May	47.3	59.3	35.2	51.1	38.1	87	5						
Spring	31.2	45.5	22.9			87	27						
June	54.0	61.0	47.4	62.6	55.0	100	26						
July	62.7	74.5	50.8	65.0	60.0	94	34						
August	59.7	72.2	47.3	63.7	57.4	91	31						
Summer	58.9	66.2	48.5			100	26						
September	50.7	63.6	37.7	55.9	46.5	91	20						
October	39.6	49.9	29.3	43.7	31.0	85	2						
November	21.5	30.7	12.4	29.6	11.9	65	-21						
Fall	37.3	48.1	26.5			91	-24						
Year	33.2	43.4	23.0			100	-47						

NOTE—Precipitation record broken.

GRENFELL (BROWN HILL), SASK.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade III From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount Driest in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	9.2	19.0	-0.6	16.4	2.1	50	-34	0.68	1.60	1908 0.30	1909 0.70	6.9	16.0
January	-1.0	8.5	-10.5	12.0	-12.4	45	-45	0.92	2.10	2.00	0.80	8.7	21.0
February	4.8	14.4	-1.8	11.3	-6.1	51	-37	0.58	2.00	2.05	1.18	5.8	20.0
Winter	4.3	14.0	-5.3				-45	2.18		4.35	2.68	21.4	
March	19.7	29.9	9.4	36.1	7.0	75	-33	1.20	2.65	2.20	2.85	9.1	20.5
April	38.3	50.4	26.2	45.1	26.9	85	-4	1.63	3.17	1.62	2.81	9.0	28.5
May	48.0	60.4	35.6	51.4	39.4	89	9	2.64	4.83	2.10	1.00	1.3	8.0
Spring	35.3	46.9	23.7			89	-33	5.47		5.92	6.66	19.4	
June	59.4	70.9	47.8	64.5	53.6	97	25	3.48	6.67	1.55	7.09		
July	63.0	75.0	51.1	69.4	58.0	102	37	2.56	7.09	1.46	2.45		
August	60.6	73.3	47.8	65.2	56.7	95	26	2.16	3.64	0.98	0.29		
Summer	61.0	73.1	48.9			102	25	8.20		3.99	1.83		
September	52.0	65.2	38.7	58.8	46.4	94	19	1.95	5.15	1.29	0.53		
October	40.4	52.0	28.9	46.8	33.7	87	-3	0.82	1.89	0.70	1.95	1.0	10.0
November	24.2	33.4	14.9	32.6	11.3	60	-23	1.32	3.02	0.60	0.80	12.2	26.0
Fall	38.9	50.2	27.5			91	-23	4.09		2.59	3.28	13.2	
Year	34.9	46.1	23.7			102	45	19.94		16.85	22.45	54.0	

DECADAL MEANS AND EXTREMES IN MANITOBA.

WINNIPEG, MANITOBA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914.

Month.	Temperature.								Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December	7.2	16.7	-2.4	19.1	-6.5	19	-44	0.92	3.99	1886	1898	8.6	39.9	
January	-3.5	6.8	-13.8	7.8	-15.2	42	-46	0.82	2.12	0.61	0.61	8.1	21.2	
February	-0.5	10.7	-11.8	10.4	-8.8	46	-46	0.75	1.80	0.50	1.07	7.4	17.5	
Winter	1.1	11.4	-9.3			49	-46	2.49		1.50	2.57	24.1		
March	15.2	26.7	1	34.1	3.2	73	-37	1.17	3.00	0.38	2.56	9.6	30.0	
April	18.7	50.1	27	47.9	26.9	90	-13	1.54	5.64	1.73	0.98	4.4	14.8	
May	51.5	64.5	38	57.3	39.7	94	11	2.15	6.38	1.19	0.89	0.9	9.6	
Spring	35.1	47.1	23.2			94	-37	4.86		3.30	4.43	14.9		
June	62.6	74.9	50.2	68.4	57.0	101	21	3.03	6.30	1.20	6.10			
July	66.2	78.1	54.3	72.2	61.3	96	35	3.25	7.14	0.67	1.77			
August	62.7	75.0	50.4	67.6	59.3	103	30	2.18	4.75	1.17	2.15			
Summer	63.8	70.0	51.6			103	21	8.16		3.04	10.02			
September	54.1	65.9	42.2	61.1	49.0	99	17	2.08	5.49	4.75	2.50	0.1	2.3	
October	41.6	52.0	31.3	51.0	32.5	85	-3	1.36	5.67	1.22	5.67	1.4	10.2	
November	22.0	30.8	13.3	34.7	6.9	71	-33	0.99	2.31	0.57	2.00	8.2	22.7	
Fall	39.2	49.6	28.9			99	-33	4.43		6.54	10.17	9.7		
Year.	34.8	40.0	23.6			103	-46	20.24		14.38	27.19	48.7		

WINNIPEG, MANITOBA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade 0. From 1875 to 1884.

Month.	Temperature.								Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December	-2.0	11.9	-7.8	25.9	-14.7	47	-34	0.96	2.29	1881	1878	8.7	24.2	
January	-0.6	4.3	-17.5	8.3	-16.2	40	-48	0.51	1.56	0.12	0.12	5.1	16.7	
February	-0.5	10.9	-11.9	22.9	-14.8	44	-44	0.91	3.74	3.74	1.20	8.7	39.3	
Winter	-1.7	9.0	-12.4			47	-48	2.38		4.19	2.68	22.5		
March	11.3	23.6	-0.9	34.8	4.4	61	-38	0.80	2.48	0.61	2.45	4.7	25.8	
April	34.5	45.6	23.4	45.5	30.1	77	-14	1.38	3.98	0.75	3.98	4.2	13.0	
May	52.3	64.4	40.1	57.4	45.6	89	18	2.47	5.88	2.07	3.62	0.9	11.8	
Spring	32.7	44.5	20.9			89	-38	4.65		3.43	10.05	9.8		
June	61.2	73.1	49.3	66.5	56.6	94	28	3.98	6.98	2.66	3.99	0.1	0.5	
July	65.9	78.2	53.6	69.8	66.6	98	37	2.40	7.10	0.87	5.47			
August	63.9	76.2	51.5	66.9	61.2	98	32	2.99	9.42	1.82	1.53			
Summer	63.7	75.8	51.5			98	28	9.37		5.35	10.99	0.1		
September	52.0	63.3	40.6	55.2	50.8	85	19	1.63	4.13	2.60	1.80	T.	T.	
October	38.2	48.3	28.1	43.9	34.7	80	4	1.83	3.97	1.51	3.50	4.4	11.7	
November	17.2	26.3	8.2	30.8	8.1	64	-34	0.89	2.64	2.64	0.22	7.7	26.6	
Fall	35.8	46.0	25.6			86	-34	4.35		6.75	5.52	12.1		
Year.....	32.6	43.8	21.4			98	-48	20.75		19.72	29.24	44.5		

WINNIPEG, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	5.4	15.4	-4.7	11.7	-6.5	45	-42	0.76	1.38	1886	1890	7.4	13.8
January	8.9	21	-18.5	7.0	-15.2	39	-16	0.88	1.88	0.61	0.51	8.7	18.8
February	4.0	7.0	-15.7	2.6	-8.6	16	46	0.82	1.52	0.50	0.82	8.2	15.2
Winter	-2.3	8.4	-13.0			46	46	2.46		1.50	1.79	21.3	
March	12.7	25.0	0.3	27.2	5.9	62	37	0.92	1.69	0.58	1.54	8.2	16.3
April	37.0	48.0	25.9	43.8	26.9	90	-9	1.76	2.55	1.73	1.20	5.7	14.8
May	44.6	62.9	36.3	55.7	42.6	94	15	1.58	2.23	1.19	2.10	1.3	9.6
Spring	33.1	45.3	20.8			94	37	4.20		3.20	4.86	15.2	
June	63.0	76.1	50.0	68.2	59.0	97	21	2.56	1.72	1.26	2.46		
July	65.7	78.0	53.5	70.2	61.3	96	36	2.88	5.01	0.67	5.61		
August	62.0	75.3	48.8	67.6	59.7	103	30	1.97	3.90	1.17	3.05		
Summer	63.6	76.5	50.8			103	21	7.41		3.04	11.12		
September	53.1	65.3	40.9	57.1	39.0	91	24	2.04	4.75	4.75	3.06	0.1	0.3
October	40.6	50.5	29.4	44.6	32.5	78	3	1.45	3.67	1.22	3.67	1.6	10.2
November	20.0	29.4	10.6	29.6	14.7	59	-33	1.18	2.31	0.57	0.43	11.0	22.7
Fall	37.7	48.1	27.0			91	-33	4.67		6.54	7.16	12.7	
Year	33.0	46.7	21.4			103	-16	18.80		11.38	24.91	52.2	

## WINNIPEG, MANITOBA

## MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	6.8	17.0	-3.3	10.7	-2.2	41	-35	0.86	1.75	1903	1898	6.9	16.5
January	-0.4	10.7	-11.5	7.5	-7.6	40	-14	0.86	1.77	0.28	0.89	8.5	17.7
February	0.5	12.1	-11.1	10.1	-7.8	16	16	0.70	1.18	0.10	1.07	6.9	11.2
Winter	2.3	13.4	-8.6			46	-46	2.42		1.40	2.57	22.3	
March	14.1	25.8	-2.5	26.2	3.2	54	-35	1.48	3.00	1.08	2.56	11.9	30.0
April	40.1	52.2	28.0	47.9	35.1	79	-13	1.50	5.61	0.54	0.98	1.8	7.7
May	54.3	67.7	40.9	57.3	50.5	92	14	2.32	5.32	3.40	0.89	0.2	0.6
Spring	36.2	48.6	23.3			92	-35	5.30		5.02	4.13	13.9	
June	61.6	72.9	49.5	66.3	57.0	101	28	3.83	6.10	0.46	6.10		
July	66.0	77.8	53.1	69.3	63.3	94	35	3.21	5.55	3.03	1.77		
August	62.9	75.3	50.5	67.4	61.0	92	31	1.90	3.66	2.00	2.15		
Summer	63.3	75.3	51.3			101	28	8.99		5.54	10.02		
September	53.1	65.1	41.1	61.1	39.0	93	17	2.45	4.22	2.77	2.50	T.	T.
October	42.2	52.8	31.5	46.1	37.5	85	11	1.50	5.67	0.89	5.67	0.7	4.4
November	20.0	30.0	11.8	31.7	9.9	71	-32	0.93	2.00	1.50	2.09	6.6	19.0
Fall	38.7	49.3	28.1			93	-32	4.58		4.96	10.17	7.3	
Year	45	49.6	23.6			100	-46	21.29		16.92	27.19	43.5	

WINNIPEG, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	9.2	17.6	-0.7	19.1	-1.2	49	-41	1.14	3.99	1913	1911		
January	-1.9	7.5	-11.3	7.8	-11.3	42	-45	0.73	2.12	0.75	0.43	11.4	39.9
February	1.9	12.4	-8.5	8.7	-8.8	40	-39	0.72	1.80	0.61	0.71	7.1	21.2
Winter	3.1	12.5	-6.4			49	-45	2.59		1.62	1.73	25.7	17.5
March	18.7	29.4	8.0	34.1	9.6	73	-26	1.11	2.67	0.36	0.28	8.7	18.3
April	39.2	50.1	28.2	47.0	28.2	81	2	1.37	2.57	0.41	2.57	5.8	14.5
May	50.6	63.0	38.2	55.2	39.7	88	11	2.54	6.38	0.53	0.38	1.2	5.4
Spring	36.2	47.5	24.8			88	-26	5.02		1.30	0.23	15.7	
June	63.6	75.6	51.5	68.4	58.5	99	31	2.69	6.30	3.27	2.27		
July	66.9	78.4	55.4	72.2	64.2	96	37	3.64	7.11	2.06	2.06		
August	63.2	74.4	52.0	66.9	60.2	95	30	2.87	4.75	4.71	2.33		
Summer	61.6	76.1	53.0			99	30	9.00		10.07	7.56		
September	55.9	67.3	41.5	60.8	50.8	99	22	2.05	5.49	1.27	2.13	0.2	2.3
October	42.8	52.7	32.9	51.0	36.7	85	5	1.11	2.22	0.77	1.81	1.8	5.7
November	25.3	33.0	17.6	31.1	17.0	60	-21	0.86	1.87	0.75	0.59	7.1	11.8
Fall	41.3	51.0	31.7			99	-21	4.05		2.79	4.86	9.1	
Year	30.3	46.8	25.8			99	-45	20.66		15.78	23.38	50.5	....

MINNEDOSA, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years. From 1885 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	8.0	17.0	-1.7	15.9	-2.7	47	-43	0.62	1.23	1889	1886		
January	-2.4	8.5	-13.4	10.0	-15.8	48	-52	0.80	1.83	1.06	0.94	6.2	12.3
February	0.2	11.8	-11.5	11.5	-8.8	52	-52	0.61	2.30	1.04	1.37	8.0	18.3
Winter	1.9	12.6	-8.9			52	-52	2.03		2.61	2.45	20.3	23.0
March	15.0	26.9	3.1	34.5	0.2	70	-42	0.72	2.58	0.23	1.28	5.8	17.7
April	37.6	49.5	25.7	47.6	25.6	86	-15	1.03	2.77	0.69	2.77	5.1	15.4
May	49.8	63.0	36.5	57.7	38.6	96	9	1.93	4.65	1.74	3.07	1.0	7.0
Spring	34.1	46.5	21.8			96	-42	3.68		2.66	7.12	11.9	
June	59.9	72.4	47.4	65.6	51.3	104	22	3.15	7.00	0.94	2.98	0.1	2.4
July	63.7	76.3	51.1	70.6	58.8	101	33	2.63	4.78	1.50	3.56		
August	60.6	74.1	47.4	65.5	54.5	103	24	2.12	5.42	1.80	3.69		
Summer	61.4	74.3	48.6			101	22	7.90		4.24	10.18	0.1	
September	52.0	61.9	39.0	60.5	45.4	97	11	1.51	4.16	1.23	1.83	0.4	5.8
October	40.2	51.3	29.1	47.8	31.2	83	-11	0.95	2.86	0.28	0.41	2.1	10.4
November	21.7	30.7	12.8	34.4	6.6	67	-37	0.97	2.42	0.41	1.88	8.9	23.7
Fall	38.0	49.0	27.0			97	-37	3.46		1.95	4.15	11.4	
Year	33.8	45.0	22.1			101	-52	17.67		11.46	23.90	43.7	

MINNEDOSA, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	6.4	17.5	-4.7	14.3	-2.7	47	-43	0.59	1.08	1889	1890	5.9	10.8
January	-6.7	5.0	-18.3	10.0	-15.8	41	-52	0.70	1.83	1.06	0.60	7.0	18.3
February	-3.5	9.1	-16.0	2.1	-8.7	45	-52	0.81	2.30	0.51	0.33	8.1	23.0
Winter	-1.3	10.5	-13.0			47	-52	2.10		2.61	3.23	21.0	
March	13.3	26.2	0.4	27.8	3.2	66	43	0.48	1.00	0.23	0.23	4.6	10.0
April	35.9	48.0	23.8	41.3	28.1	86	15	1.06	2.10	0.60	0.61	4.0	10.1
May	47.8	61.9	33.8	53.1	42.1	96	9	1.51	2.34	1.71	1.89	1.5	4.6
Spring	32.3	45.4	19.3			96	-12	3.05		2.66	2.73	11.0	
June	59.7	73.3	46.1	63.6	51.9	99	22	3.24	4.00	0.91	4.72	T.	0.5
July	63.0	76.6	49.3	67.0	58.8	98	33	2.35	4.59	1.50	2.72		
August	59.7	71.8	44.7	55	54.5	100	24	1.71	3.81	1.80	3.81		
Summer	60.8	71.9	46.7			103	22	7.30		4.21	11.25	T.	
September	51.0	65.5	36.6	55.6	45.4	93	11	0.95	1.90	1.23	1.90	T.	0.5
October	38.7	50.4	27.1	42.6	31.2	83	-14	1.02	2.20	0.28	1.63	3.4	8.4
November	21.1	30.3	11.9	25.6	15.1	67	-37	0.81	2.42	0.41	0.39	7.5	22.8
Fall	36.9	48.7	25.2			93	-37	2.80		1.95	3.92	10.9	
Year.	32.2	44.9	19.5			103	52	15.25		11.46	21.13	42.9	

MINNEDOSA, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1904.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December..	9.1	19.0	-0.8	13.9	3.0	43	-36	0.63	0.94	1897	1896	6.2	9.3
January....	1.4	12.4	-9.6	9.5	-6.7	48	-44	0.92	1.70	0.94	1.37	9.1	15.4
February..	1.5	12.9	-9.9	11.5	-8.8	46	-20	0.43	1.16	1.70	0.14	4.3	11.6
Winter	4.0	14.8	-6.8			48	-50	1.98		3.07	2.45	19.6	
March...	13.4	25.0	1.7	23.5	0.2	47	-36	1.04	2.58	1.67	1.28	7.7	17.7
April	39.2	50.5	27.8	47.6	32.9	79	-11	1.05	2.77	0.87	2.77	5.4	13.3
May	52.8	66.0	39.7	57.7	47.2	92	16	2.12	4.65	1.02	3.07	0.3	1.2
Spring	35.1	47.2	29.1			92	-36	4.21		3.56	7.12	13.4	
June	59.4	70.9	47.3	63.3	54.3	104	25	3.43	6.64	1.88	2.93	0.2	2.1
July	64.0	75.9	52.1	67.0	60.8	94	39	2.81	4.78	1.77	3.56		
August	61.3	73.7	48.8	65.0	59.1	95	30	2.36	4.56	1.76	3.69		
Summer	61.5	73.7	49.4			104	25	8.62		5.41	10.18	0.2	
September	51.0	63.6	39.6	60.5	47.0	96	17	1.81	4.16	0.32	1.83	0.8	5.8
October	41.3	52.3	30.3	45.6	36.4	79	3	1.11	2.86	1.01	0.41	2.0	10.4
November	20.4	29.4	11.4	34.4	6.6	66	-25	1.06	1.88	0.62	1.88	9.7	9.3
Fall	37.8	48.4	27.1			96	-25	3.98		1.95	4.15	12.5	
Year..	34.6	46.0	23.2			104	-50	18.79		13.99	23.99	45.7	

MINNEDOSA, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914

Month	Temperature.							Precipitation in Inches.				Snow.	
	Mean Minimum	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex- treme Highest	Ex- treme Lowest	Average Monthly Fall.	Greatest Amount in one Month	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month
December	8.3	16.3	0.3	15.9	2.2	47	-49	0.64	1.23	1910 0.76	1911 0.47	6.4	12.3
January	-2.0	8.2	12.2	9.0	-12.7	46	-45	0.78	1.76	0.03	1.19	7.8	17.6
February	2.4	13.3	-8.6	10.1	-8.0	52	-45	0.58	1.85	0.30	0.94	5.8	18.5
Winter	2.9	12.6	-6.8			52	-45	2.00		1.09	2.60	20.0	
March	18.3	29.5	7.1	34.5	7.1	76	-29	0.63	1.07	0.82	0.23	5.0	7.1
April	37.8	49.9	25.6	46.1	25.6	83	-5	0.98	1.64	1.46	0.62	5.0	15.4
May	48.7	61.2	36.1	52.6	38.6	86	-13	2.16	3.98	1.07	2.87	1.3	7.0
Spring	34.9	46.9	22.0			86	-29	3.77		3.35	3.72	11.3	
June	60.9	72.9	48.8	64.7	57.5	99	30	2.77	5.33	2.63	3.05		
July	64.1	76.4	51.8	70.6	60.2	104	36	2.71	3.93	1.60	2.05		
August	61.3	73.8	48.8	65.4	58.1	98	29	2.29	5.42	1.73	5.42		
Summer	62.1	74.4	49.8			104	29	7.77		5.96	10.52		
September	53.2	65.7	40.7	58.6	47.7	97	-20	1.87	3.13	1.48	2.77	0.3	2.9
October	40.6	51.2	29.9	47.8	34.2	83	0	0.72	1.86	0.18	1.80	0.8	2.9
November	23.7	32.4	15.1	28.4	13.1	63	-26	1.01	2.37	1.52	0.83	9.5	23.7
Fall	39.2	49.8	28.6			97	-26	3.60		3.18	5.46	10.6	
Year	34.8	45.9	23.6			104	-45	17.14		13.58	22.30	41.9	

AWEME (ST. ALBANS) MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
30 Years. From 1885 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Ex- treme Highest	Ex- treme Lowest	Average Monthly Fall.	Greatest Amount in one Month	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	7.7	17.9	-2.6	17.9	-1.6	49	-48	0.62				6.0	
January	-2.6	8.3	-13.6	11.5	-13.2	45	-50	0.74				7.3	
February	0.3	12.0	-11.4	9.7	-11.7	52	-48	0.62				6.2	
Winter	1.8	12.7	-9.2			52	-50	1.98				19.5	
March	16.0	28.4	3.5	35.9	2.4	80	-42	0.96				7.4	
April	39.3	52.1	26.6	48.5	28.0	92	-12	1.25				6.5	
May	51.8	66.3	37.3	60.0	41.6	102	7	1.87				1.5	
Spring	35.7	48.9	22.5			102	-42	4.08				15.4	
June	65.0	76.8	49.1	68.1	57.8	107	25	2.97					
July	67.4	81.9	53.0	71.9	63.4	107	34	2.80					
August	64.3	78.9	49.6	67.9	60.1	108	25	2.25					
Summer	64.9	79.2	50.6			108	25	8.02					
September	54.6	68.3	40.8	61.9	48.3	102	10	1.67				T.	
October	41.5	53.3	29.8	47.6	35.9	89	-2	1.03				1.1	
November	22.0	31.7	12.3	34.5	5.1	73	-32	0.82				7.6	
Fall	39.4	51.1	27.6			102	-32	3.52				8.7	
Year.	35.4	48.0	22.9			108	-50	17.60				43.6	

AWEME (ST. ALBANS), MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894

Month	Temperature.						Precipitation in Inches.			Snow.			
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	6.3	17.3	-4.8	15.6	-1.6	49	-48	0.50				4.8	
January	-5.9	5.1	-16.9	11.5	-13.2	45	-46	0.59				5.0	
February	-2.3	9.3	-14.0	2.7	-8.0	49	-48	0.59				5.0	
Winter	-0.7	10.6	-11.9			49	-48	1.68				16.6	
March	15.1	28.0	2.2	30.5	0.1	71	-33	0.58				5.3	
April	38.1	50.8	25.7	46.1	29.5	92	-11	1.52				6.9	
May	50.7	65.8	35.6	57.5	43.5	99	7	1.45				0.6	
Spring	34.7	48.2	21.2			99	-33	3.55				12.8	
June	63.4	77.8	49.0	66.9	59.8	102	25	3.31					
July	67.7	82.5	52.9	71.9	63.4	102	37	2.93					
August	64.3	78.8	48.7	67.9	60.1	108	25	1.77					
Summer	65.1	80.0	50.2			108	25	8.03					
September	54.6	69.1	40.1	58.4	50.0	100	18	1.31					
October	40.7	52.1	29.3	45.0	35.9	86	2	1.16				2.0	
November	21.4	31.5	11.3	31.1	16.1	67	-32	0.73				6.8	
Fall	38.9	50.9	26.9			100	-32	3.22				8.8	
Year	34.5	47.4	21.6			108	-48	16.48				38.2	

AWEME (ST. ALBANS), MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904

Month.	Temperature.						Precipitation in Inches.			Snow.			
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	7.8	18.0	-2.5	11.9	6.4	44	-40	0.66				6.1	
January	0.3	11.1	-10.5	9.5	-8.6	44	-50	0.68				6.6	
February	0.5	12.3	-11.2	8.4	-7.2	47	-45	0.70				6.9	
Winter	2.9	13.8	-8.1			47	-50	2.04				19.6	
March	14.3	25.2	3.4	21.1	2.4	56	-42	1.29				9.5	
April	40.2	53.1	27.2	48.5	35.2	87	-12	0.82				3.3	
May	54.1	68.6	39.7	60.0	48.8	102	15	1.88				0.4	
Spring	36.2	49.0	23.4			102	-42	3.99				13.2	
June	61.6	75.0	48.2	67.0	57.8	107	25	3.29					
July	66.7	80.7	52.7	69.7	64.0	101	34	2.88					
August	63.7	77.8	49.6	67.7	61.7	100	30	2.27					
Summer	64.0	77.8	50.2			107	25	8.44					
September	53.2	66.2	40.1	61.9	48.3	97	16	2.09				0.1	
October	41.8	53.8	29.8	47.6	36.7	84	5	1.01				2.0	
November	20.0	29.4	10.6	34.5	5.1	73	-29	0.85				7.9	
Fall	38.3	49.8	26.8			97	-29	3.86				10.0	
Year.	35.4	47.6	23.1			107	-50	18.53				42.6	

AWLME (ST ALBANS), MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III From 1905 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall	Greatest Amount in one Month.
December	-9.1	18.5	-0.4	17.9	-0.5	46	-41	0.70				7.0	
January	-2.4	8.6	-13.5	9.0	-12.2	45	-43	0.95				9.4	
February	-2.8	11.5	-9.0	9.7	-11.7	52	-47	0.57				5.7	
Winter	-1.2	13.9	-7.6			52	-47	2.22				22.1	
March	18.5	31.9	5.0	35.0	-9.5	80	-26	1.01				7.4	
April	39.6	52.4	26.8	46.8	28.0	86	0	1.40				9.3	
May	50.6	61.6	36.6	54.3	41.6	96	12	2.28				3.1	
Spring	36.2	49.6	22.8			96	-29	1.69				20.1	
June	63.8	77.5	50.0	68.1	57.9	104	80	2.36					
July	68.0	82.5	53.5	70.0	64.5	107	34	2.58					
August	64.7	79.1	59.4	67.4	60.0	105	30	2.70					
Summer	65.5	79.7	51.3			107	30	7.57					
September	56.0	69.7	42.3	61.7	51.1	102	19	1.70					
October	42.1	53.9	30.2	46.8	37.8	99	0	0.92				1.1	
November	24.5	34.1	14.9	30.0	13.5	63	28	0.89				8.0	
Fall	40.9	52.6	29.1			102	-28	3.48				9.1	
Year	36.4	48.0	23.9			107	-47	17.96				51.3	

HILLVIEW, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years. From 1885 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall	Greatest Amount in one Month.
December	0.5			16.5	-4.0			0.80	2.20	1889 1.35	1911 0.40	8.0	22.0
January	-4.3			11.9	-16.0			0.98	2.60	0.65	2.30	9.8	26.0
February	-1.6			9.2	-12.5			0.78	2.20	1.20	0.70	7.8	22.0
Winter	0.3							2.56		3.20	3.40	25.6	
March	13.0			34.8	0.1			1.19	3.48	0.65	0.50	9.3	34.0
April	37.7			46.6	25.7			1.22	3.34	1.17	0.30	4.9	17.0
May	49.9			57.5	38.9			1.99	4.51	1.66	3.73	0.8	6.0
Spring	33.5							4.40		3.48	4.53	15.0	
June	59.9			64.7	51.6			3.16	7.19	0.67	2.82		
July	63.9			69.6	60.6			2.69	6.75	1.03	4.16		
August	61.1			65.9	56.8			2.31	6.82	2.38	6.82		
Summer	61.6							8.16		1.29	13.86		
September	51.8			59.6	45.6			1.68	4.87	0.70	1.62	0.5	12.0
October	39.7			47.9	34.4			1.76	3.33	0.20	2.56	1.7	10.5
November	20.4			31.0	1.9			1.10	3.00	0.99	1.60	10.0	30.0
Fall	37.3							1.54		1.50	5.78	12.2	
Year	33.2							19.66		12.46	27.51	52.8	

HILLVIEW, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I From 1885 to 1894.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	6.0			16.5	-4.0			0.66	1.40	1.35	0.25	6.5	14.0
January	-6.7			11.9	16.0			0.80	2.10	0.65	0.20	8.0	21.0
February	-4.4			2.4	-12.5			0.88	1.50	1.20	1.50	8.8	15.0
Winter	-1.7							2.34		3.20	1.95	23.3	
March	12.9			28.5	3.4			0.97	2.30	0.65	0.25	9.3	23.0
April	36.5			42.9	28.9			1.71	2.31	1.17	1.32	4.7	12.0
May	48.3			54.8	42.3			1.37	2.10	1.66	2.10	0.3	2.0
Spring	32.6							4.05		3.48	3.67	14.3	
June	60.5			64.6	56.0			3.34	7.10	0.67	4.42		
July	64.6			69.0	63.4			2.29	4.41	1.03	4.41		
August	60.8			64.8	56.8			2.06	5.11	2.58	5.41		
Summer	62.0							7.69		4.28	14.21		
September	50.8			54.4	46.0			1.01	3.19	5.70	3.19		
October	38.4			43.5	34.4			1.32	3.33	0.20	1.78	1.0	4.0
November	20.1			28.6	15.6			0.95	2.61	0.60	0.25	8.6	24.0
Fall	36.4							3.28		1.50	5.22	9.6	
Year	32.3							17.36		12.46	25.08	47.2	

## HILLVIEW, MANITOBA

## MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II From 1895 to 1901.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	6.2			10.6	-0.6	41	-39	0.93	1.70	1.94	1.86	9.2	17.0
January	-1.7			8.9	-3.7	44	-43	1.10	2.64	0.70	2.66	11.0	26.0
February	-1.4			9.2	-9.9	40	-16	0.96	2.50	2.20	0.41	9.6	22.0
Winter	1.0							2.90		4.30	4.71	29.8	
March	11.4			21.3	0.1	50	-16	1.64	3.65	3.65	1.75	12.7	34.0
April	38.4			46.6	32.4	85	-12	0.94	3.34	0.50	3.34	4.8	16.5
May	52.6			57.5	46.6	96	17	2.32	4.51	1.06	3.84	0.7	3.0
Spring	34.1							4.90		5.21	8.93	18.2	
June	58.8			64.0	54.6	104	23	3.38	6.96	3.49	3.84		
July	63.2			66.5	60.9	92	33	2.94	6.75	0.88	3.49		
August	60.8			61.4	58.1	95	30	2.50	5.14	2.36	2.08		
Summer	60.9							8.82		6.73	9.41		
September	50.9			59.6	45.6	98	15	2.27	1.87	1.23	0.92	1.4	12.0
October	40.6			43.0	35.8	79	3	1.17	2.79	0.48	0.35	1.8	8.0
November	18.1			31.0	1.9	75	-40	1.31	3.00	0.50	3.00	12.0	30.0
Fall	36.3							4.75		2.23	4.27	15.2	
Year	33.1							21.46		18.47	27.32	63.2	

HILLVIEW, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	7.3	15.4	-0.8	14.0	0.9	39	-35	0.82	2.20	0.05	0.40	8.2	23.0
January	-4.5	4.2	-13.1	8.7	-15.9	38	-46	1.04	2.30	1.20	2.30	10.4	23.0
February	1.0	10.8	-8.7	8.1	-9.3	43	-43	0.50	1.00	0.30	0.70	5.0	10.6
Winter	1.3	10.1	-7.5			43	-46	2.36		1.55	3.40	23.6	
March	14.6	25.7	3.5	34.8	1.9	75	-32	0.95	2.45	0.70	0.50	5.9	16.0
April	38.2	49.4	27.0	44.8	25.7	81	6	1.01	1.87	1.30	0.30	5.1	17.0
May	48.8	61.2	36.3	52.1	38.9	90	6	2.29	3.73	2.07	3.73	1.5	6.0
Spring	33.9	45.4	22.3			90	-32	4.25		3.57	4.53	12.5	
June	60.5	71.6	49.4	64.7	56.0	99	27	2.75	3.98	3.09	2.82		
July	64.0	75.2	52.8	69.6	60.6	101	37	2.84	4.63	2.64	4.16		
August	61.6	73.4	49.7	65.9	59.0	97	30	2.36	6.82	0.79	6.82		
Summer	62.0	73.4	50.6			101	27	7.95		6.52	13.80		
September	53.8	66.2	41.3	59.1	48.2	98	20	1.70	4.05	1.13	1.62	0.1	1.0
October	40.6	51.6	29.6	47.9	34.7	84	2	2.79	2.77	2.77	2.56	2.2	10.5
November	23.1	31.6	14.7	29.0	11.6	61	-27	1.04	2.15	0.14	1.60	9.5	17.0
Fall	39.2	49.8	28.5			98	-27	5.59		4.04	5.78	11.8	
Year	34.1	44.7	23.5			101	-46	20.15		15.68	27.51	47.9	

OAKBANK, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.87	2.50	0.35	0.80	8.7	23.0
January								0.84	2.30	0.45	0.90	8.3	23.0
February								0.80	1.80	0.38	1.70	7.8	18.0
Winter								2.51		1.18	3.40	24.8	
March								1.22	3.78	0.29	0.50	9.9	27.4
April								1.71	5.83	1.33	2.69	5.0	20.5
May								2.26	6.24	1.38	6.24	0.9	8.5
Spring								5.19		3.00	9.43	15.8	
June								3.25	8.60	0.48	3.07		
July								2.92	5.95	0.83	5.47		
August								2.10	4.18	1.06	2.48		
Summer								8.27		2.37	11.02		
September								2.07	6.05	0.77	2.71	0.1	2.6
October								1.31	5.73	0.67	1.33	1.4	12.0
November								0.99	2.30	0.55	0.90	9.0	23.0
Fall								4.37		1.99	4.94	10.5	
Year								20.34		8.54	28.79	51.1	

OAKBANK, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean Minimum.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex- treme Highest.	Ex- treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.71	1.80	0.35	1886	1793	
January								0.75	1.90	0.45	1.90	7.4	18.0
February								0.92	1.50	0.38	1.30	9.2	15.0
Winter								2.41		1.18	3.90	24.1	
March								0.67	1.20	0.29	0.50	6.4	12.0
April								1.99	3.62	1.31	2.42	6.5	20.5
May								2.11	3.88	1.38	3.04	1.2	8.5
Spring								4.77		3.00	5.96	14.1	
June								3.11	6.23	0.48	4.94		
July								2.60	3.92	0.83	2.41		
August								2.08	3.85	1.06	2.02		
Summer								7.79		2.37	9.37		
September								1.71	3.40	0.77	1.20		
October								1.18	2.81	0.67	1.42		8.1
November								1.04	2.30	0.55	2.30	9.7	23.9
Fall								3.96		1.99	4.92	9.7	
Year								18.93		8.54	24.15	47.9	

## OAKBANK, MANITOBA.

## MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II From 1895 to 1904

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex- treme Highest.	Ex- treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.72	1.70	1.00	1903	1896	
January								0.92	1.70	0.60	1.10	9.2	17.0
February								0.66	1.14	0.40	0.49	6.4	11.4
Winter								2.30		2.00	1.85	22.8	
March								1.49	2.74	0.60	1.92	12.6	27.4
April								1.61	5.83	1.06	5.83	2.6	0.6
May								2.05	3.62	1.75	5.62	0.1	
Spring								5.15		3.41	13.37	15.3	
June								3.88	8.60	1.37	4.27		
July								3.01	5.13	3.48	1.62		
August								1.79	3.86	2.33	1.45		
Summer								8.68		7.18	7.31		
September								2.09	4.59	2.70	1.97		
October								1.55	5.73	0.56	0.88	1.2	7.0
November								1.09	1.50	1.20	1.49	9.3	15.0
Fall								4.73		4.46	4.25	10.5	
Year								20.80		17.05	26.81	48.6	

OAKBANK, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Total Amount in Driest Year.	Total Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December	8.3	15.4	-1.2	18.2	-0.5	48	-42	1.15	2.30	0.30	1913	1911	11.5	23.0
January	3.0	4.9	-10.8	6.3	-13.1	40	-49	0.85	2.30	1.20	0.90	0.90	8.3	23.0
February	0.8	9.9	-8.3	9.0	-10.1	42	-46	0.82	1.80	1.00	1.70	1.70	7.9	18.0
Winter	2.0	10.1	-6.0			48	-49	2.82		2.50	3.40	2.77		
March	16.9	26.8	7.0	30.6	8.0	70	-31	1.49	3.78	0.90	0.50	10.8	24.0	
April	37.6	47.5	27.7	45.8	26.5	78	-3	1.52	3.91	0.64	2.69	5.9	14.0	
May	49.3	60.5	38.0	51.4	38.5	88	9	2.61	6.24	0.52	6.24	1.4	5.0	
Spring	31.6	44.6	24.2			88	-31	5.62		2.06	9.43	18.1		
June	61.5	72.7	50.2	65.3	58.3	95	30	2.75	6.02	3.52	3.07			
July	64.4	75.5	53.3	69.7	61.4	93	36	3.15	5.95	1.48	5.17			
August	60.8	71.5	50.1	63.9	57.6	90	30	2.44	4.18	4.18	2.48			
Summer	62.2	73.2	51.2			95	30	8.34		9.18	11.02			
September	54.1	62.4	45.7	50.4	48.8	96	21	2.38	6.65	1.31	2.71	0.3	2.6	
October	41.4	50.3	32.6	49.8	36.0	84	0	1.21	2.00	0.75	1.33	3.1	12.0	
November	24.3	30.8	17.8	30.6	14.9	59	-25	0.83	1.56	0.63	0.90	8.0	14.0	
Fall	39.0	47.8	32.0			96	-25	4.42		2.69	4.94	11.4		
Year	31.7	41.0	25.4			96	-49	21.20		16.43	28.79	57.2		

TREHERNE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.74	2.50	1897	1911	7.4	25.0
January								0.67	1.89	0.40	0.47	6.7	18.9
February								0.55	1.13	0.00	0.69	5.5	11.3
Winter								1.96		1.70	2.22	19.6	
March								0.86	2.20	1.08	0.52	7.2	22.0
April								1.51	3.66	0.00	2.36	5.9	20.9
May								2.27	6.65	1.00	6.58	1.2	14.0
Spring								4.64		2.08	9.46	14.3	
June								3.28	6.49	1.87	1.97		
July								2.52	6.59	2.02	2.06		
August								1.73	5.29	1.07	3.74		
Summer								7.53		4.96	7.77		
September								1.39	4.00	0.00	2.11	T.	0.2
October								1.00	4.77	1.00	2.30	1.9	10.0
November								0.85	2.50	0.20	1.05	7.6	25.0
Fall								3.24		1.20	5.46	9.5	
Year								17.37		9.94	24.91	45.4	

TREHERNE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1886 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maxi- mum.	Mean Mini- mum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex- treme Highest.	Ex- treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.79	1.76	1.76	0.33	7.7	17.6
January								0.45	0.78	0.20	0.50	4.5	7.8
February								0.56	1.13	0.60	0.40	5.6	11.3
Winter								1.80		2.56	1.23	17.8	
March								0.64	1.53	0.35	0.30	5.6	15.3
April								1.90	3.52	1.33	2.80	5.2	15.5
May								1.86	3.70	2.25	1.92	1.4	7.0
Spring								4.40		3.93	5.02	12.2	
June								3.68	6.49	0.34	2.90		
July								2.94	6.59	1.00	3.56		
August								1.56	4.24	1.20	4.24		
Summer								8.18		2.54	10.70		
September								1.25	2.63	1.58	2.63		
October								1.42	4.77	0.03	4.77	1.3	7.0
November								0.72	1.64	0.47	0.29	5.9	15.0
Fall								3.39		2.08	7.69	7.2	
Year								17.77		11.11	24.64	37.2	

TREHERNE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade II. From 1895 to 1904.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maxi- mum.	Mean Mini- mum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex- treme Highest.	Ex- treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	8.9	19.2	-1.4	15.2	2.0	52	-36	0.53	0.80	0.40	0.50	5.3	10.0
January	2.7	14.2	-8.9	11.3	-3.7	47	-44	0.67	1.35	0.40	1.05	6.7	10.5
February	1.1	11.4	-9.1	10.5	-10.8	50	-47	0.58	1.12	0.90	0.90	5.7	11.2
Winter	4.2	14.9	-6.5			52	-47	1.78		1.70	2.45	17.7	
March	14.0	25.2	2.8	23.3	4.1	52	-31	1.07	2.20	1.08	2.20	8.0	22.0
April	39.0	51.2	26.7	46.2	33.7	80	-3	1.10	4.95	0.09	0.20	3.2	14.0
May	52.5	66.4	38.9	59.7	47.8	99	16	2.20	6.65	1.00	1.45	T.	
Spring	35.2	47.5	22.8			99	-31	4.37		2.08	3.85	11.2	
June	59.5	71.5	47.4	65.2	55.9	104	23	3.80	8.00	1.87	8.00		
July	64.3	76.5	52.2	66.6	60.7	98	35	2.82	4.50	2.02	3.30		
August	60.6	72.9	48.2	64.2	58.2	90	32	1.00	2.00	1.07	1.10		
Summer	61.5	73.6	49.3			104	23	7.62		4.96	12.40		
September	51.9	64.2	39.6	60.4	48.6	96	17	1.21	2.05	0.00	1.95		
October	42.3	53.4	31.2	48.9	35.0	79	40	0.68	1.73	1.00	0.74	2.6	10.0
November	20.6	30.5	10.6	34.9	4.9	73	-33	0.93	1.65	0.20	1.05	8.2	16.5
Fall	38.3	49.4	27.1			96	-33	2.82		1.20	3.74	10.8	
Year	34.8	46.4	23.2			104	-47	16.59		9.94	22.44	39.7	

TREHERNE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	8.5	16.9	0.1	20.0	-4.3	47	-41	0.91	2.50	0.20	0.47	9.1	25.0
January	-2.7	5.9	11.3	8.2	-12.7	42	-43	0.88	1.89	1.40	1.06	8.8	18.9
February	1.1	10.5	-8.3	7.8	-6.3	45	-42	0.52	2.95	0.30	0.69	5.2	9.5
Winter	2.3	11.1	-6.5			47	-43	2.31		1.90	2.22	23.1	
March	16.3	27.2	5.4	35.5	8.5	74	-24	0.88	2.00	1.00	0.52	8.1	20.0
April	36.5	47.4	25.6	44.8	21.7	83	-5	1.54	3.66	1.50	2.36	9.3	20.9
May	47.8	60.0	35.5	54.3	36.0	92	10	2.75	6.58	0.64	6.58	2.3	14.0
Spring	33.5	44.9	22.2			92	-24	5.17		3.14	9.46	19.7	
June	60.7	72.6	47.7	66.4	52.2	101	27	2.37	4.54	1.88	1.97		
July	64.7	76.0	52.6	73.0	59.1	104	33	1.79	4.32	0.17	2.06		
August	62.2	74.1	50.3	63.5	59.2	99	30	2.64	5.29	5.29	3.74		
Summer	62.5	74.5	50.5			104	27	6.80		7.34	7.77		
September	54.6	66.8	42.4	58.4	47.2	95	15	1.72	4.00	0.87	2.11	T.	0.2
October	41.6	52.4	30.8	50.6	35.6	86	2	0.90	1.23	0.30	2.30	1.8	6.5
November	24.6	33.1	16.0	31.9	14.8	62	-29	0.91	2.50	0.40	1.05	8.8	25.0
Fall	40.3	50.8	29.7			95	-29	3.53		1.57	5.46	10.6	
Year.	34.6	45.3	24.0			104	-43	17.81		13.95	24.91	53.4	

## BRANDON, MANITOBA.

## MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.69	2.70	1894 0.23	1887 0.60	6.9	27.0
January								0.96	2.45	1.07	0.60	9.6	24.5
February								0.72	2.70	0.38	0.55	7.2	27.0
Winter.								2.37		1.68	1.75	23.7	
March								0.80	4.73	1.60	0.80	6.5	43.0
April								1.07	2.65	0.70	2.65	4.0	11.5
May								1.85	4.14	0.70	3.71	0.4	5.0
Spring								3.72		3.00	7.16	10.9	
June								3.10	10.17	1.70	7.27	0.2	6.0
July								2.50	6.46	0.79	3.32		
August								2.27	6.24	0.66	3.69		
Summer								7.87		3.15	14.28	0.2	
September								1.42	5.00	0.37	1.20	0.4	12.0
October								0.84	2.87	0.25	0.05	0.7	4.0
November								0.81	2.37	0.00	0.52	7.5	23.7
Fall								3.07		0.72	1.77	8.6	
Year.								17.03		8.55	24.96	43.4	

BRANDON, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest	Amount	Amount	Average Monthly Fall.	Greatest
									Amount in one Month.	in Driest Year.	in Wettest Year.		Amount in one Month.
December								0.36	1.23	1894 0.23	1887 0.60	3.8	12.3
January								0.62	1.20	1.07	0.60	6.2	12.0
February								0.76	1.70	0.38	0.55	7.6	17.0
Winter								1.77		1.68	1.75	17.6	
March								0.51	1.60	1.60	0.60	4.8	16.0
April								1.30	2.65	0.70	2.65	4.2	8.0
May								1.39	3.71	0.70	3.71	0.3	1.0
Spring								3.20		3.00	7.16	9.3	
June								3.12	7.27	1.70	7.27		
July								2.03	4.50	0.79	3.52		
August								1.82	5.10	0.66	3.69		
Summer								6.97		3.15	14.28		
September								0.76	2.00	0.47	1.20		
October								0.89	2.00	0.25	0.05	1.0	3.5
November								0.54	1.54	0.00	0.52	5.1	15.4
Fall								2.19		0.72	1.77	6.1	
Year								14.13		8.55	24.96	33.0	

BRANDON, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II From 1895 to 1904.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest	Amount	Amount	Average Monthly Fall.	Greatest
									Amount in one Month.	in Driest Year.	in Wettest Year.		Amount in one Month.
December	7.0	17.4	-3.4	11.3	-1.1	30	-40	0.79	1.30	1897 0.65	1896 1.00	7.9	13.0
January	-0.8	10.8	-12.4	8.7	-9.8	44	-44	1.15	1.93	1.93	1.85	11.5	19.3
February	-0.8	11.3	-12.8	10.0	-8.4	46	-48	0.98	2.70	1.35	0.35	9.8	27.0
Winter	1.9	13.2	-9.5			46	-48	2.92		3.93	3.20	29.2	
March	12.8	24.2	1.4	23.5	3.5	56	-42	1.02	4.73	1.90	1.57	8.8	43.0
April	39.8	52.1	27.4	51.1	34.2	88	-12	0.86	2.65	0.40	2.64	3.5	11.5
May	53.2	67.5	39.0	58.2	51.2	99	-12	1.80	4.14	0.35	3.09	0.1	0.5
Spring	35.3	47.9	22.6			96	-42	3.68		2.65	7.30	12.4	
June	59.3	72.0	46.0	61.9	55.4	106	26	3.61	10.17	0.66	3.76	0.6	6.0
July	64.3	77.1	51.4	68.1	61.4	96	33	2.64	5.53	1.56	2.99		
August	61.5	75.0	48.1	65.8	59.0	96	27	2.40	5.87	2.29	2.39		
Summer	61.7	74.7	48.7			106	26	8.65		4.51	9.14	0.6	
September	51.8	61.9	38.6	61.5	46.1	96	20	1.75	5.00	0.37	0.61	1.2	12.0
October	49.8	53.5	28.2	46.4	36.4	81	4	0.95	2.87	1.14	0.40	0.9	4.0
November	18.3	29.2	7.4	32.8	3.1	69	-41	1.02	2.37	2.05	2.37	9.3	23.7
Fall	37.0	49.2	24.7			96	-41	3.72		3.56	3.38	11.4	
Year	31.0	46.3	21.6			106	-48	18.97		14.65	23.02	53.6	

BRANDON, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature							Precipitation in Inches.				Snow.	
	Mean.	Mean Maxi- mum.	Mean Mini- mum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex- treme Highest.	Ex- treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	7.3	17.8	-3.3	5.9	-0.4	41	-45	0.90	2.70	1913	1907	9.0	27.0
January	-4.5	5.6	-14.7	7.3	-14.3	40	-50	1.10	2.45	1.10	0.20	11.0	24.5
February	0.2	12.2	-11.8	7.4	-3.7	48	-49	0.43	0.90	0.60	0.25	4.3	9.0
Winter	1.0	11.9	-9.9			48	-50	2.43		1.70	2.90	24.3	
March	17.6	30.1	5.0	24.6	6.8	78	-30	0.87	1.55	0.50	1.55	6.0	14.0
April	38.3	51.5	25.1	45.8	27.1	81	-1	1.04	1.10	0.35	1.05	4.4	10.5
May	49.0	62.3	35.7	52.5	39.8	90	9	2.37	3.41	1.04	2.75	0.9	5.0
Spring	35.0	48.0	21.9			90	-30	4.28		1.89	5.35	11.3	
June	60.5	73.9	47.1	64.6	57.1	102	25	2.56	4.53	2.34	2.51		
July	65.0	78.4	51.6	70.2	62.1	105	33	2.82	6.46	1.70	2.45		
August	62.0	75.7	48.3	66.2	58.7	102	29	2.58	6.21	3.56	6.24		
Summer	62.5	76.0	49.0			105	25	7.96		7.60	11.90		
September	53.9	67.6	40.1	58.5	47.6	100	18	1.75	3.49	0.68	0.82		
October	40.8	53.2	28.4	47.1	34.2	85	-3	0.68	1.54	0.73	0.20	0.3	1.0
November	23.1	33.7	13.1	29.4	10.6	62	-28	0.86	2.10	0.29	0.35	8.2	21.0
Fall	39.4	51.5	27.2			100	-28	3.29		1.70	1.37	8.5	
Year.	34.5	46.8	22.1			105	-50	17.96		12.89	20.82	44.1	

PORTAGE LA PRAIRIE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maxi- mum.	Mean Mini- mum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex- treme Highest.	Ex- treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.75	2.18	1886	1896	0.72	
January								0.79	3.05	0.44	0.89	0.78	
February								0.62	1.58	0.76	T.	0.60	
Winter								2.16		1.27	1.29	21.0	
March								0.83	2.82	0.09	1.50	7.4	
April								1.32	4.76	1.88	4.66	4.2	
May								2.09	4.84	0.93	4.84	0.8	
Spring								4.24		2.90	11.00	12.4	
June								3.26	8.16	1.79	4.22		
July								2.67	4.43	1.56	2.39		
August								2.05	4.87	1.37	2.61		
Summer								7.98		4.72	9.22		
September								1.94	6.54	1.37	2.82	T.	
October								1.19	3.65	1.33	0.40	1.5	
November								0.89	2.40	0.47	2.40	7.8	
Fall								4.02		3.17	5.62	9.3	
Year								18.40		12.06	27.13	42.7	

PORTAGE LA PRAIRIE, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade I From 1885 to 1894

Month.	Temperature						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Amount in Driest Year	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month
December								0.69	1.38	1885	1891	6.0	13.8
January								0.69	1.40	0.41	0.43	6.9	14.0
February								0.76	1.22	0.76	0.87	7.6	12.2
Winter								2.14		1.27	2.00	20.5	
March								0.50	1.40	0.09	0.30	5.7	14.0
April								1.06	3.19	1.88	1.29	6.2	15.5
May								2.05	4.50	0.93	0.34	1.4	4.1
Spring								4.30		2.90	1.13	13.4	
June								3.79	8.16	1.79	8.16		
July								2.89	4.43	1.56	3.97		
August								1.83	3.50	1.37	3.59		
Summer								8.51		4.72	15.72		
September								1.44	2.16	1.37	2.16		T.
October								1.06	3.65	1.33	2.39	1.8	7.0
November								0.84	2.11	0.47	0.90	6.7	11.2
Fall								3.94		3.17	5.45	8.5	
Year								18.89		12.06	25.87	42.4	

PORTAGE LA PRAIRIE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II From 1895 to 1904.

Month.	Temperature						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean	Lowest Monthly Mean	Extreme Highest	Extreme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month
December	7.5	19.3	-4.4	16.4	2.3	47	-31	0.69	1.60	1903	1896	6.9	16.0
January	2.2	13.0	-8.5	8.4	-6.7	49	-40	0.70	1.05	0.65	0.89	6.7	10.5
February	2.6	13.7	-8.5	8.3	-8.9	48	-46	0.46	1.05	0.30	8.	4.6	10.3
Winter	4.1	15.3	-7.1			49	-46	1.85		2.55	1.29	18.2	
March	15.2	25.5	4.0	18.5	1.6	56	-36	1.18	2.82	0.43	1.50	10.2	28.2
April	39.2	50.6	27.8	47.5	31.3	86	-10	1.05	4.76	0.00	4.66	1.8	6.3
May	54.2	67.1	41.0	58.3	48.1	97	-20	1.85	4.84	2.37	4.84		
Spring	36.2	47.8	24.6			97	-36	4.08		2.80	11.00	12.0	
June	59.4	69.8	49.0	64.3	57.0	101	31	3.62	6.06	0.59	4.22		
July	64.9	75.8	54.0	66.8	62.8	96	40	2.72	4.41	2.81	2.39		
August	62.5	74.2	50.8	66.1	59.7	90	33	1.95	4.32	2.26	2.61		
Summer	62.3	73.3	51.3			101	31	7.69		5.66	9.22		
September	52.6	63.8	41.3	60.4	48.3	92	-24	2.16	4.57	0.76	2.82		T.
October	42.3	53.0	31.6	47.5	37.9	81	-6	1.12	2.33	1.03	0.40	1.5	4.0
November	20.5	29.8	11.3	35.6	13.9	72	-22	0.97	2.40	1.30	2.40	9.2	24.0
Fall	38.5	48.9	28.1			92	-22	4.25		3.09	5.62	10.7	
Year	35.3	46.3	24.2			101	-46	17.87		14.10	27.13	40.9	

PORTAGE LA PRAIRIE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES

Decade III. From 1905 to 1914

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	9.4	17.8	0.4	19.9	0.6	48	-35	0.88	2.48	0.50	1911	8.8	21.8
January	2.2	7.8	-12.2	8.0	-12.7	42	-43	0.98	3.05	0.68	2.25	9.8	30.5
February	2.3	11.7	-7.1	10.9	-9.8	47	-40	0.63	1.58	1.58	0.00	5.9	12.5
Winter	3.1	12.4	6.3			48	-43	2.49		2.76	2.38	24.5	
March	18.4	28.2	8.3	35.2	7.7	70	-27	0.71	1.55	1.55	0.03	6.5	15.5
April	37.6	48.0	27.3	44.4	26.1	85	3	1.26	2.86	1.04	1.35	4.6	10.0
May	49.7	61.0	38.4	54.8	38.7	90	12	2.38	4.64	1.63	4.29	0.9	4.0
Spring	35.2	45.7	21.7			90	-27	4.35		4.22	5.87	11.8	
June	62.0	73.0	51.0	65.0	56.4	100	31	2.99	5.70	1.83	5.70		
July	66.2	77.0	55.3	72.5	62.7	100	40	2.41	4.09	1.09	2.11		
August	62.7	73.6	51.8	65.9	59.8	99	33	2.36	4.87	1.75	2.58		
Summer	63.6	74.5	52.7			100	31	7.76		5.27	10.42		
September	55.0	66.3	43.7	59.1	50.1	96	21	2.21	6.54	1.13	1.77	0.1	0.8
October	41.8	52.6	31.1	49.1	36.7	84	-6	0.80	1.34	0.38	2.28	1.3	5.0
November	21.7	33.0	10.4	30.9	15.0	62	-22	0.87	1.80	1.17	0.98	7.5	15.3
Fall	40.5	50.6	30.4			99	-22	3.88		2.68	5.03	8.9	
Year	35.6	45.8	25.1			100	-43	18.48		14.93	23.70	45.2	

MORDEN, MANITOBA.

MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.76	3.19	0.35	1886	0.48	31.0
January								0.75	2.36	0.58	1896	0.75	23.6
February								0.71	2.60	0.49		0.20	26.0
Winter								2.22		1.42	1.33	22.1	
March								0.89	3.56	0.45	1.25	7.2	35.6
April								1.37	5.35	1.20	5.35	5.2	19.7
May								1.99	5.18	0.73	5.18	1.1	15.5
Spring								4.25		2.50	11.78	13.5	
June								3.20	8.24	1.50	6.07		
July								2.38	8.60	0.90	1.54		
August								1.91	4.69	1.00	2.12		
Summer								7.49		3.40	9.73		
September								1.59	4.43	0.80	2.09	0.2	3.0
October								1.16	3.60	1.20	1.31	1.5	10.0
November								0.93	2.76	0.55	1.85	8.0	23.3
Fall								3.68		2.55	5.25	9.7	
Year								17.64		9.77	28.09	45.3	

MORDEN, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1891.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest	Extreme Lowest	Average Monthly Fall	Greatest Amount in one Month	Amount in Year		Average Monthly Fall.	Greatest Amount in one Month
										1886	1891		
December								0.78	3.40	0.35	3.10	7.8	31.0
January								0.48	1.20	0.58	0.50	4.8	12.0
February								0.59	1.05	0.49	0.70	5.9	10.5
Winter								1.85			1.12	4.30	18.5
March								0.58	1.20	0.45	0.40	5.6	12.0
April								1.52	2.75	1.20	1.05	3.8	10.5
May								1.62	3.21	0.75	1.10	0.7	4.5
Spring								3.72			2.50	3.15	10.1
June								3.45	7.51	1.50	5.00		
July								1.92	3.20	0.90	3.20		
August								1.61	4.69	1.00	3.35		
Summer								6.68			3.10	11.55	
September								1.12	2.30	0.80	1.75	T.	
October								1.15	2.81	1.20	1.00	1.5	10.0
November								0.70	1.35	0.55	1.00	6.5	13.5
Fall								2.97			2.55	3.75	8.0
Year.								15.22			9.77	22.75	36.6

MORDEN, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1901.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest	Extreme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Amount in Year		Average Monthly Fall.	Greatest Amount in one Month.
										1895	1896		
December								0.47	0.7	0.12	0.38	4.4	9.7
January								0.68	1.15	1.00	0.75	6.8	11.5
February								0.46	1.10	0.56	0.20	4.6	11.0
Winter								1.61			1.68	1.33	15.8
March								1.01	3.56	R.S.	1.25	7.0	35.6
April								1.27	5.35	0.38	5.35	4.0	19.7
May								2.11	5.18	2.58	5.18		T.
Spring								4.39			2.96	11.78	11.0
June								4.44	8.24	2.27	6.07		
July								2.67	7.50	2.69	1.54		
August								2.27	3.25	2.29	2.12		
Summer								9.68			7.25	9.7	
September								2.05	1.43	0.65	2.09	0.1	1.0
October								1.35	3.00	1.30	1.31	0.0	4.5
November								0.82	1.85	0.35	1.85	7.1	18.5
Fall								1.22			2.36	5.2	8.4
Year.								19.30			14.19	28.09	35.2

MORDEN, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1911.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December	14.4	29.3	-2.4	21.6	-1.9	46	-35	1.02	1.97	1913	1906	10.2	19.7
January	1.2	14.2	-8.8	14.0	-11.0	47	-43	1.08	2.36	1.20	1.00	10.8	23.6
February	4.8	15.8	-6.1	8.4	-6.3	54	-43	1.07	2.60	1.40	1.04	10.7	26.0
Winter	5.8	15.8	-4.2			51	-43	3.17		2.80	2.65	31.7	
March	20.8	32.0	0.5	38.6	9.6	83	-25	1.08	1.80	1.50	0.45	9.1	16.3
April	38.7	51.1	26.3	47.8	27.9	99	4	1.32	1.86	0.57	0.51	7.9	19.5
May	49.5	62.0	37.0	53.0	41.0	94	8	2.25	3.93	0.54	3.25	2.5	15.5
Spring	36.3	48.4	24.3			94	-25	4.65		2.61	4.21	19.5	
June	62.7	74.7	50.7	68.5	57.6	103	29	2.30	5.66	0.83	5.38		
July	66.4	78.7	54.2	72.3	62.8	102	36	2.55	8.60	1.01	8.60		
August	63.7	76.2	51.2	67.7	60.0	97	35	1.86	3.59	3.59	1.02		
Summer	64.3	76.5	52.0			103	29	6.74		5.43	15.00		
September	56.1	68.8	44.3	62.0	51.5	104	22	1.61	3.93	1.19	0.90	0.5	3.0
October	43.0	54.8	31.2	51.2	37.6	90	1	0.98	1.74	1.10	0.65	2.0	8.4
November	26.6	35.6	17.6	33.0	16.4	67	-29	1.27	2.70	0.25	2.53	10.2	23.3
Fall	41.9	53.1	30.7			104	-29	3.86		2.54	4.08	12.7	
Year.	37.1	48.4	25.7			104	-43	15.39		13.38	25.94	63.9	

CARTWRIGHT, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

30 Years. From 1885 to 1914.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.64	2.79	1894	1899	6.4	25.5
January								0.68	2.49	T.	0.35	6.7	23.3
February								0.61	2.05	0.20	0.20	6.0	20.5
Winter								1.93		0.40	1.05	19.1	
March								1.08	3.98	0.20	1.00	8.8	39.8
April								1.64	4.04	2.05	3.50	3.7	12.8
May								2.13	4.66	0.88	2.42	0.6	8.0
Spring								4.85		3.13	6.92	13.4	
June								3.18	6.76	2.55	5.42		
July								2.58	5.60	0.33	2.87		
August								2.29	6.29	0.54	4.15		
Summer								8.05		3.42	12.44		
September								1.73	5.67	1.84	0.74		
October								1.28	4.16	2.33	4.16	1.4	19.6
November								0.86	3.30	1.25	0.83	6.1	18.3
Fall								3.87		5.42	5.60	7.5	
Year								18.70		12.37	26.14	39.7	

CARTWRIGHT, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade I. From 1885 to 1894

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.59	2.79	1894	1891		
January								0.50	0.85	0.20	0.63	5.9	21.0
February								0.56	1.30	0.20	0.65	5.6	13.0
Winter								1.65		0.40	4.07	16.5	
March								0.73	2.46	0.20	0.93	7.1	21.6
April								1.81	3.06	2.05	2.19	3.7	10.0
May								1.32	3.25	0.88	0.58	0.2	1.5
Spring								3.86		3.13	3.70	11.0	
June								3.71	6.11	2.55	4.94		
July								2.94	5.60	0.33	3.70		
August								1.06	2.94	0.54	2.94		
Summer								8.31		3.12	11.67		
September								1.39	3.02	1.84	1.94		
October								1.20	2.33	2.33	1.46	0.7	4.0
November								0.93	2.02	1.25	1.20	6.4	18.5
Fall								3.52		5.12	1.60	7.1	
Year.								17.34		12.37	24.04	31.6	

CARTWRIGHT, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1901.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.48	0.99	0.55	0.35	4.8	9.0
January								0.52	0.90	0.99	0.50	5.2	9.0
February								0.71	1.50	0.20	0.20	7.0	15.0
Winter								1.71		1.65	1.05	17.0	
March								1.38	3.98	0.80	1.00	11.4	39.8
April								1.47	4.04	0.81	3.50	2.6	9.0
May								2.28	4.62	0.26	2.42	1.4	8.0
Spring								5.13		1.87	6.92	15.4	
June								3.40	6.76	4.69	5.42		
July								2.82	4.26	2.52	2.85		
August								2.70	6.29	3.00	3.15		
Summer								8.92		10.21	12.44		
September								1.78	5.61	2.36	0.71		
October								1.66	4.16	0.87	4.16	2.6	19.6
November								0.53	1.00	0.03	0.83	4.4	10.0
Fall								3.97		3.26	5.70	7.0	
Year.								19.73		16.99	26.11	39.4	

CARTWRIGHT, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES  
Decade III From 1905 to 1914

Month	Temperature.						Precipitation in In' s.				Snow.			
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December								0.86	2.55	0.15	1914	2.55	8.4	25.5
January								1.04	2.49	2.49	1909	0.80	9.9	23.3
February								0.55	2.05	0.43	1903	1.03	5.5	20.5
Winter								2.42		3.07	4.38		23.8	
March								1.12	1.90	1.25	1.90	1.12	8.0	19.0
April								1.65	3.77	1.75	1.12	4.9	12.8	
May								2.80	4.66	1.45	4.66	0.2	1.5	
Spring								3.57		4.45	7.68		13.1	
June								2.42	4.71	1.95	1.90			
July								1.97	3.04	1.35	1.78			
August								2.51	3.89	0.95	2.62			
Summer								6.90		4.25	6.30			
September								2.01	5.67	0.70	1.13			
October								0.99	2.06	1.10	1.23	1.0	6.0	
November								1.11	3.30	0.60	3.30	7.5	15.5	
Fall								4.11		2.40	5.66	8.5		
Year								19.00		14.17	24.02	45.4		

RAPID CITY, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
30 Years. From 1885 to 1914.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum	Mean Minimum	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.61	1.63	1.57	0.20	6.1	16.3
January								0.88	2.55	1.02	0.22	8.8	25.5
February								0.76	2.64	0.87	2.00	7.6	26.1
Winter								2.25		3.46	2.42	22.5	
March								0.96	4.40	0.34	0.84	8.4	44.0
April								1.04	3.41	0.87	1.14	4.4	14.7
May								1.79	4.57	1.49	0.05	0.4	7.0
Spring								3.79		2.70	5.03	13.2	
June								3.01	6.61	0.80	3.84	0.1	2.3
July								2.75	5.60	0.91	4.42		
August								2.29	5.56	2.23	4.27		
Summer								8.05		3.94	12.53	0.1	
September								1.47	4.81	1.13	2.65	0.4	1.5
October								1.14	3.41	0.05	1.67	1.8	14.0
November								0.79	2.23	0.42	0.26	6.9	22.3
Fall								3.40		1.60	4.55	8.1	
Year								17.49		11.70	24.56	44.0	

RAPID CITY, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.53	1.57	1.57	1900	5.3	15.7
January								0.82	1.40	1.02	0.22	8.2	14.0
February								1.07	2.61	0.87	2.00	10.7	26.1
Winter								2.42		3.46	2.42	21.2	
March								0.73	2.36	0.34	0.84	7.1	23.6
April								1.17	2.51	0.87	1.14	5.0	13.3
May								1.30	2.71	1.49	3.05	0.2	2.0
Spring								3.20		2.70	5.03	12.3	
June								3.43	6.61	0.80	3.84		
July								2.61	5.27	0.91	4.42		
August								1.90	4.27	2.23	4.27		
Summer								7.94		3.94	12.53		
September								0.95	2.65	1.13	2.65	S.	
October								1.20	2.10	0.05	1.67	3.1	14.0
November								0.72	2.23	0.42	0.26	6.9	22.3
Fall								2.87		1.60	4.58	10.0	
Year.								16.43		11.70	24.56	46.5	

RAPID CITY, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1904.

Month.	Temperature.							Precipitation in Inches.				Snow.	
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.60	1.63	1.87	1896	6.0	16.3
January								0.89	1.40	1.72	1.40	8.9	14.0
February								0.73	1.42	1.47	0.15	7.3	14.2
Winter								2.22		3.81	2.20	22.2	
March								1.48	4.40	2.12	1.00	12.7	44.0
April								0.93	3.41	0.84	3.41	4.7	14.7
May								2.06	4.57	0.60	3.00	0.0	S.
Spring								4.47		1.56	7.41	17.4	
June								3.23	6.57	0.74	4.08	0.2	2.3
July								2.74	5.60	2.36	2.27		
August								2.42	5.01	1.53	3.45		
Summer								8.39		4.63	9.80	0.2	
September								1.87	4.81	0.10	1.10	1.2	1.5
October								1.17	3.41	0.99	0.30	1.4	7.0
November								0.90	1.85	1.23	1.85	8.1	18.5
Fall								3.94		2.32	3.25	10.7	.....
Year.								19.02		14.32	22.66	50.5	.....

RAPID CITY, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade III. From 1905 to 1914.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.71	1.62	1.62	0.26	7.1	16.2
January								0.93	2.55	0.48	1.37	9.3	25.5
February								0.49	0.79	0.60	0.61	4.9	7.9
Winter								2.13		2.70	2.24	21.3	
March								0.67	1.39	0.59	0.24	5.4	11.8
April								1.01	2.15	1.11	0.85	3.6	11.1
May								2.00	4.41	1.29	3.35	1.2	7.0
Spring								3.68		2.96	4.44	10.2	
June								2.36	4.22	1.87	2.28		
July								2.90	4.95	2.82	4.95		
August								2.55	5.50	0.42	4.83		
Summer								7.81		5.11	12.06		
September								1.60	3.52	0.88	1.69		T
October								1.05	3.06	0.94	3.07	0.8	4.0
November								0.66	1.11	0.39	0.89	5.8	11.1
Fall								3.31		2.21	5.65	6.6	
Year								16.93		12.98	24.39	38.1	

TURTLE MOUNTAIN, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.52	1.85	0.30	1886 0.05	5.2	18.5
January								0.68	0.90	0.80	0.58	6.8	9.0
February								0.46	1.15	0.30	0.90	4.5	11.5
Winter								1.66		1.40	1.53	16.5	
March								0.78	3.60	0.30	0.40	7.2	33.0
April								2.11	4.90	2.18	4.88	3.9	12.5
May								1.72	6.12	1.35	1.71	0.5	3.0
Spring								4.61		3.83	6.99	11.6	
June								4.43	7.28	3.41	4.56		
July								3.44	6.37	1.23	2.53		
August								2.50	4.45	1.63	4.45		
Summer								10.37		6.27	11.54		
September								1.74	3.37	1.45	3.37		
October								1.59	5.79	1.34	5.79	1.4	3.7
November								0.80	1.90	0.30	0.29	5.5	12.0
Fall								4.01		3.09	9.40	6.9	
Year								20.68		14.59	29.51	35.0	

FURLE MOUNTAIN, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II From 1895 to 1904

Month.	Temperature.							Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December								0.29	1.75	0.12	1897	1901	2.9	17.5
January								0.49	1.90	0.96		0.85	1.9	19.0
February								0.79	1.82	1.60		0.29	6.9	18.2
Winter								1.57			2.68	0.60	14.7	
March								1.35	3.30	1.20		0.80	11.1	33.0
April								1.12	3.25	0.51		3.35	2.7	12.0
May								2.47	4.65	1.03		4.65		14.0
Spring								4.94			2.71	8.80	13.8	
June								3.23	7.61	1.47		6.94		4.0
July								3.01	6.02	1.80		6.02		
August								3.18	5.48	1.59		2.32		
Summer								9.42			4.86	15.28		
September								2.24	7.16	0.53		4.06	0.8	8.0
October								2.16	4.52	1.08		3.90	2.1	17.0
November								0.94	3.00	9.35	S	R	8.6	30.0
Fall								5.34			1.96	7.96	11.8	
Year								21.27			12.24	33.64	40.3	

FOXTON, MANITOBA  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894

Month.	Temperature.							Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.	
December								0.17	1.10	0.26	1886	1890	4.7	11.0
January								0.63	1.35	0.58		0.19	6.3	13.5
February								0.89	2.00	0.94		1.10	8.9	20.0
Winter								1.99			1.58	1.59	19.9	
March								0.7	1.50	0.54		0.82	6.1	15.0
April								1.52	2.51	1.65		2.35	4.3	19.0
May								1.97	2.77	1.39		2.77	1.7	14.5
Spring								3.65			3.58	5.91	12.1	
June								3.11	7.58	0.74		2.78		
July								3.34	5.04	1.46		3.21		
August								1.85	3.26	0.21		3.26		
Summer								8.66			2.41	9.25		
September								1.54	2.88	2.88		2.01	T	
October								1.08	3.49	0.66		3.49	0.7	3.5
November								0.69	2.10	0.73		0.00	6.6	20.0
Fall								3.31			4.27	5.50	7.3	
Year								17.55			14.84	22.28	30.3	

RUSSELL (BARNARDO), MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December							0.69					6.2	
January							0.64					6.4	
February							0.78					7.8	
Winter							2.11					20.4	
March							0.69					6.4	
April							1.04					6.2	
May							1.59					1.5	
Spring							3.32					14.1	
June							4.06						
July							2.54						
August							2.17						
Summer							8.77						
September							1.00					0.6	
October							1.00					3.1	
November							0.74					6.5	
Fall							2.74					10.2	
Year							16.94					44.7	

RUSSELL, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade II. From 1895 to 1904.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Extreme Highest.	Extreme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December							0.84	1.75	1.897			8.4	17.5
January							0.37		1.25			9.7	
February							0.79		1.30			7.9	
Winter							2.60		4.30			26.0	
March							1.10		1.30			9.9	
April							0.99		0.66			4.4	
May							1.76	3.00	1.44			1.4	
Spring							3.85		3.40			15.7	
June							2.95	5.24	1.21				
July							1.85	2.50	1.73				
August							2.28	7.60	2.08				
Summer							7.08		5.02				
September							1.81	4.15	0.11			0.9	4.0
October							0.91	3.11	0.46			2.9	23.0
November							0.92	1.70	1.70			8.6	17.0
Fall							3.64		2.27			12.4	
Year							17.17		11.99			54.1	

HARTNEY, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Max.	Mean Min.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.84	2.40	1889 1.65	1887 1.25	8.4	21.0
January								1.01	1.90	0.80	1.60	10.4	19.0
February								0.98	2.00	0.50	1.40	9.8	20.0
Winter								2.86		2.95	4.25	28.6	
March								0.92	3.05	0.30	0.90	9.2	30.5
April								1.85	2.55	0.85	1.50	7.0	14.0
May								1.61	2.45	1.31	2.36	1.2	3.0
Spring								4.38		2.49	4.76	17.4	
June								3.64	7.91	0.99	7.76		
July								2.17	7.03	1.43	4.67		
August								2.10	4.42	1.99	4.42		
Summer								8.90		4.41	16.85		
September								1.32	3.45	2.45	1.21		
October								1.41	3.59	0.28	0.41	3.6	9.0
November								0.91	1.50	0.80	0.90	8.6	15.0
Fall								3.64		3.53	2.55	12.2	
Year.								19.78		13.38	28.46	58.2	.....

FORT ELICE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.

Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean	Mean Max.	Mean Min.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest	Ex-treme Lowest	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.59	1.15	1889 1.15	1890 0.26	5.9	11.5
January								0.88	3.00	0.70	0.24	8.8	30.0
February								0.94	2.12	0.70	2.12	9.4	21.2
Winter								2.41		2.55	2.62	24.1	
March								0.82	1.45	0.23	0.35	7.8	14.5
April								1.06	1.67	0.40	1.18	4.3	11.0
May								1.77	2.97	0.83	2.33	0.6	5.0
Spring								3.65		1.46	3.86	12.7	
June								3.61	6.58	2.95	3.86		
July								3.09	6.80	1.65	2.90		
August								1.60	3.48	0.57	3.48		
Summer								8.30		5.17	10.24		
September								1.05	3.67	0.91	3.67		
October								1.04	2.00	0.06	2.00	1.6	5.0
November								0.93	2.57	0.30	2.54	6.5	14.0
Fall								3.02		1.30	8.21	8.1	
Year.								17.38		10.48	24.93	44.9	.....

SHOAL LAKE, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								0.56	1.13	0.20	0.23	5.6	11.3
January								0.67	2.15	0.60	0.25	6.7	21.5
February								0.76	2.00	T.	2.00	7.0	20.0
Winter								1.99		0.80	2.48	19.9	
March								0.66	1.07	1.37	0.20	5.1	11.0
April								1.06	2.46	0.78	1.15	5.2	24.0
May								1.34	3.37	1.18	3.57	0.6	2.0
Spring								3.06		3.33	4.92	11.2	....
June								2.95	6.02	0.60	2.00		
July								2.59	5.89	1.14	2.63		
August								1.66	2.70	0.90	2.70		
Summer								7.20		2.64	7.33		
September								0.98	3.06	1.00	3.06		
October								1.13	2.64	0.40	1.76	3.9	12.0
November								0.77	2.10	0.25	0.55	6.7	19.5
Fall								2.88		1.65	5.37	19.6	.....
Year.								15.13		8.42	20.10	41.7	.....

CLARKLEIGH, MANITOBA.  
MONTHLY, SEASONAL AND ANNUAL MEANS AND EXTREMES.  
Decade I. From 1885 to 1894.

Month.	Temperature.						Precipitation in Inches.				Snow.		
	Mean.	Mean Maximum.	Mean Minimum.	Highest Monthly Mean.	Lowest Monthly Mean.	Ex-treme Highest.	Ex-treme Lowest.	Average Monthly Fall.	Greatest Amount in one Month.	Amount in Driest Year.	Amount in Wettest Year.	Average Monthly Fall.	Greatest Amount in one Month.
December								1.15	1.58	0.54	1.31	8.7	15.8
January								1.19	2.12	0.33	2.12	11.9	21.2
February								1.34	2.53	1.42	1.97	13.4	25.3
Winter								3.68		2.89	5.70	34.0	
March								0.72	1.55	0.85	0.79	6.8	15.5
April								1.38	2.67	2.67	1.77	4.9	19.8
May								1.92	3.83	1.27	1.38	1.4	10.0
Spring								4.02		4.79	2.94	13.1	
June								3.57	6.41	0.99	3.73		
July								2.64	6.27	2.19	6.27		
August								1.74	3.86	0.28	2.51		
Summer								7.95		3.46	12.5		
September								1.81	3.27	1.46	1.27		
October								1.36	4.30	1.18	1.50	2.5	7.9
November								0.95	2.62	0.48	3.62	2.0	25.2
Fall								4.12		3.12	6.39	4.5	
Year.								19.77		11.20	28.54	51.6	.....

## APPENDIX.

## ADJUSTMENT OF THE OBSERVATIONAL DATA.

By far the larger part of the meteorological data which has resulted from observations made in these western provinces since 1871 consists of records covering short periods. For the period 1872 to 1883 the observations were confined to points near Winnipeg but after 1883 they were taken further west. After the railroads had given a stimulus to settlement, requests for instruments from voluntary observers became of frequent occurrence but in the majority of instances the observers ceased to send in records after the lapse of a short interval, usually one to five years. Most of these short records were in the earliest years confined to points near the line of the Canadian Pacific Railway, but since 1905 the observations have been very widely distributed.

To weld together these records of various lengths to produce averages equivalent to those which would have been obtained from records continuous throughout the period 1888 to 1917, has been the aim of the different methods of reduction of the observations. The averages so obtained have been entered on maps and isotherms and isohyets drawn through them. The distribution of temperature and precipitation thus indicated is only approximately true, of course; first, because the network of observing stations is not sufficiently close to give evidence of many local peculiarities which no doubt exist, and secondly because the reduction of short records to equivalent long-record systems must carry within it unknown sources of error.

As the maps stand they give, however, the best presentation of the temperature and precipitation distribution at present possible. But to prevent any misunderstanding as to their reliability some description of the methods of reduction of the short records is here given.

The records from Edmonton, Calgary, Medicine Hat, Swift Current, Battleford, Prince Albert, Qu'Appelle, Minnedosa and Winnipeg, (with one exception), are continuous from 1888 to 1917. And during this time telegraph-reporting stations were maintained at these points and inspected from time to time. The records from these places have therefore been chosen as standards of reference with which the shorter records are compared. From these comparisons corrections have been deduced and applied to the short records. The necessity for such corrections may be seen in the diagrams of Plate I, on which the yearly totals of precipitation at the standard stations have been plotted. Stations reporting for the period 1883 to 1896, only, would provide data whose simple average would be much below the thirty-year normal, while data for the years 1896 to 1904, and for the years 1905 to 1911, would yield, respectively, averages much above and much below the normal, and data for the years 1911 to 1917 on account of the violent fluctuations of that period would provide a heterogeneous system of averages. It should be noticed that neither the absolute nor the relative amounts of the annual variation from normal are the same at the different standard stations, nor even in the case of the noteworthy periods mentioned above is there agreement in phase.

On Plate II the variations of the temperature from the normal are plotted. It appears that the mean temperature of March-April is subject to extremely large variations and that the mean of May-June occupies an intermediate position in this regard between that of March-April and that of July-August. But it should be noted in this case also that there is no close parallelism between the curves of the standard stations.

The customary methods of reduction of short records to a long period average involve the comparison of the average of the short period with the average of the same period at the nearest station with a long record. The proportion between the two short period averages is assumed to hold true for the long period and this proportion of the average of the standard station is taken as the normal for the station with the short record. But if a strict test of this method be made through a series of years, it will be found to be very dependable only when the two stations to be compared are so close together that the effect on the values in question of the seasonal and annual variations is sensibly the same for both stations. When the stations are at a distance from each other the fortuitous variations of the seasonal or annual differences from normal at the two stations do not (in the Prairie Provinces at least) bear any fixed relation to each other as the method implicitly requires. And these fortuitous variations from season to season are in some districts much greater in magnitude than any fixed proportion which may exist between any two stations in virtue of topographical influences. For instance we may consider a station on the south slope of a water-shed and a station on the north slope of the same water-shed, the ridge running east and west. If the normal track of rain-bearing currents in a given season is against the south slope we may expect the station on that slope will have greater normal precipitation than the station on the north slope. But if during the short term of years that we have a simultaneous record at both stations the normal track of rain-bearing currents is not followed, and suppose that the track during this period is more nearly parallel to the ridge than perpendicular to it, then we should find that the both stations receive approximately the same precipitation. In such a case the proportion for the period is unity and if such proportion be applied to, say a thirty-year record at the station on the south slope, the

resulting deduced normal for the northern station will be far too great. This is, of course, an extreme hypothetical case and is given only to make the point clear.

This leads to an hypothesis which although nowhere stated by meteorologists, seems to have been tacitly and generally assumed, viz., that if the record at two stations continues long enough the sum of the fortuitous variations due to the vagaries of atmospheric movements will approach zero, and that then the constant difference between the two stations will be revealed. Stated in this manner the method of reduction we have been considering becomes acceptable but the answer is then required to the question: How long a period is required? The existence of such a period will require that there be some mean position for the path of each type of atmospheric movement; or else that for the influence on the meteorological factor in question of all likely combinations and sequences of the atmospheric movements there can be found an average or normal effect. To approach a solution by a study of atmospheric movements has not at present seemed feasible although no doubt as data accumulates for a longer period it might become possible. Only the temperature and precipitation data before us at this time have been considered.

We may examine this method of comparisons as applied to the record of precipitation annually at Alix and at Edmonton. At Edmonton we have a record for 30 years and at Alix for 13 years. In the following table the proportion of the total annual precipitation at Alix to that at Edmonton is given for each year of the simultaneous record.

ANNUAL COMPARISON OF PRECIPITATION

Year	Total at Alix	Total at Edmonton	Percentage Alix-Edmonton.
1905	14.93	15.56	95.9
1906	15.46	19.35	79.9
1907	14.93	16.62	89.8
1908	14.16	12.50	113.0
1909	14.45	12.94	111.7
1910	15.39	11.93	129.1
1911	4.46	29.67	108.7
1912	8.27	20.18	51.0
1913	10.9	19.54	55.8
1914	17.7	25.29	70.1
1915	18.02	18.61	96.7
1916	21.65	24.95	114.8
1917	11.38	17.5	111.3

If these percentages are arranged as a frequency-graph the figures will show the wide dispersion of the annual percentages about their mean value. The mean is 91.9 which is the value which would be chosen by this method for the correction of the Alix mean. The mode, or most frequently occurring value, lies between 110 and 115, and there is just as much reason, if not more, for assuming that the precipitation at Alix is normally 112 per cent of that at Edmonton, as there is for assuming that it is normally 92 per cent. Instances like this make one doubt the precision of this method of reduction of short records to a long period.

As another instance we may compare Didsbury with Calgary. Here again the precision is of a very low order, the percentages varying from 96 to 246. The most frequently occurring values are grouped between 95 and 145, while the average is 137, or, if the year 1916 be rejected, 129. By the ordinary method of reduction the normal precipitation at Didsbury is to be taken as 135 per cent of the normal amount at Calgary, but a frequency-graph will show that there is no apparent reason why any value between 95 and 140 should be more highly regarded than any other within the same limits.

Year	Total at Calgary	Total at Didsbury	Percentage Didsbury-Calgary.
1905	22.77	21.80	96
1904	11.89	14.26	120
1905	14.32	23.00	161
1906	16.24	18.12	112
1907	14.76	27.01	181
1908	18.25	20.89	114
1909	13.56	20.99	154
1910	12.03	16.96	140
1911	19.47	24.25	124
1912	21.32	22.24	104
1913	17.03	19.83	112
1914	17.70	17.05	96
1915	17.85	28.38	159
1916	13.91	34.26	246

A modification of the comparison method was given a thorough test. This consisted in setting out upon a map the percentage of their respective thirty-year normal precipitation which had fallen at the standard stations in any given year of the thirty. There was, therefore, a map for each year, each a field with known points only where the points corresponded to a standard station. Each of the fields were differentiated by lines of equal variation from normal. And this procedure assumes that there is a continuity of increase or decrease of variation from normal at every point on the field, i. e., that there are no abrupt changes in magnitude of the variation without intervening graduation. In the use of such maps we may choose any point on the map and read off the variation from normal for each of a series of years. We shall then have a series of percentages to use for correction of the observed data at that point. Thus in the case of Alix, already considered, we have the following results.

Year.	Annual Precipitation at Alix		Estimate of Normal.
	Percentage read	Total Precipitation	
1905	70	16.98	24.26
1906	105	21.05	22.90
1907	80	18.02	22.53
1908	95	17.71	18.66
1909	80	10.91	13.64
1910	75	18.27	21.36
1911	115	22.46	11.85
1912	115	15.30	13.59
1913	102	11.45	14.65
1914	130	11.46	10.89
1915	85	13.93	16.29
1916	112	15.46	13.80
1917	70	14.93	21.30

We see from the table that the annual data furnish values which are most frequent between 13 and 15 inches with the bulk of the remainder in the groups 15-17, and 17-19. But if our reduction is sound in principle we should get in the estimates of the normal a high frequency in one class. In fact, however, the distribution is not improved. We have now a double mode (in the classes 13-15 and 21-23) which shows that we are not right in assuming any principle of continuity of variation in respect to precipitation, in regard to its variation from normal over any large area at least. Precipitation, unlike temperature, is not continuous with time. There is neither time nor space without temperature while precipitation is everywhere discontinuous in both respects. During those intervals of time in which precipitation occurs its distribution over the area affected is generally very irregular as the readings of gauges have conclusively shown, and it is a common experience during the thunderstorms which account for such a large part of the western rainfall, to find narrow paths heavily watered while near areas escape with little or no rain. And in a month during which practically all the rainfall occurred in thundershowers over a large area we may easily conceive of the paths of the showers as crossing and recrossing each other in a network occasioned by the varying points of origin and the varying directions of propulsion of the thunder-showers. And at the points in the network where the paths cross we shall probably have the heaviest rainfall and at those points where the paths do not fall we shall evidently have the minimum rainfall, in extreme cases zero. If the rainfall of a month or a season occur as described we shall have several possibilities. The standard station may be on a path and the station whose short record is to be adjusted may be in an interval between the paths, or vice versa. The standard station may be at a crossing of two or more shower paths and the station to be adjusted in an interval of minimum rainfall, or vice versa. In such instances we have the cases where the percentages as read from a map agree very badly with the actual percentage as computed. Where both stations fall on paths (even if one be a "knot" and the other on a "single strand") or where both stations happen to fall in areas of minimum rainfall, then the agreement between the percentage read off the map and the computed percentage will be much closer.

For very short periods such as single day of local showers or even a week of scattered thundershowers we must picture the network so that we may assign no rainfall to the areas between the paths. But for a period such as that from the 1st of May to the 15th of August during which rains covering a fairly large territory may occur on some days and thunderstorms following erratic paths on many other days the network of local shower paths may be regarded as superimposed upon a surface watered by the general rains.

Such considerations, although a mere introduction to the question of the erratic distribution of precipitation in these provinces, serve to point out how unlikely it is that free interpolation of isovars of precipitation upon the maps as described above, will give accurate results. Some idea, however, is necessary of the gain in accuracy which will follow from increase in the length of time covered by the observations. And for this purpose we have fortunately the pair of

stations Qu'Appelle and Indian Head. Qu'Appelle has been a telegraph-reporting station for the full 30-year period. Indian Head has been a climatological station (on the Dominion Experimental Farm) for nearly the full period. In a few of the years a month's record is missing. The total for such years is omitted from the following table. The two stations are quite near, about ten miles apart, and therefore one might expect the method of comparison to give excellent results. In this case the method as modified by the use of maps, as described, will not differ from the ordinary method, since the stations are so close that nothing is to be gained by attempting to draw curves of variation between them.

ANNUAL PRECIPITATION AT QU'APPELLE AND INDIAN HEAD

Year	Precipitation Qu'Appelle.	Percentage of 35 Year Normal.	Precipitation Indian Head	Derived Normal (on Indian Head)
1891	19.02	98	17.11	17.45
1895	15.29	79	15.12	19.11
1896	21.63	119	14.89	12.51*
1897	12.65	65	16.40	25.22†
1898	21.65	111	20.81	18.76
1899	19.27	99	11.34	14.48
1900	16.52	85	15.36	18.07
1901	26.17	136	23.26	17.10
1902	21.37	125	16.01	12.90
1903	20.09	103	18.95	18.33
1904	22.22	114	20.09	17.60
1905	24.55	126	22.82	18.24
1906	20.39	105	17.59	16.71
1907	18.53	95	17.41	18.33
1908	18.67	96	18.27	19.03
1909	25.75	133	19.37	14.56
1911	20.61	107	23.69	22.14
1913	21.24	109	19.71	18.08
1914	19.77	101	13.85	13.70
1915	18.67	96	16.82	17.52
1916	26.54	150	21.64	15.91
1917	16.69	86	13.95	16.21

\*Least Value

†Greatest Value

When two stations are so close to each other as these two are, we should expect that the "normals" as derived from the series of annual percentages should differ but little from each other, if the method of reduction is accurate. But the estimates of the Indian Head normal vary from 12.51 to 25.22 inches, nor do the great majority of the estimates fall within one group of values unless the width of the group is quite large. The width of the group necessary to enclose a given proportion of the estimates will give an idea of the reliability of the method, and since this group-width is large when the proportion demanded is high, we see that even in this very favourable combination of Qu'Appelle and Indian Head, we should not be able to say with great certainty the normal annual precipitation at either one if we had to depend only on the long record at the other.

Numerically, the improvement of the observed values by the corrections at Indian Head is found by the standard deviations. The standard deviation of the observed values is 2.99 and of the estimates of the normal is 2.80, while the coefficient of variability of the former is 16.55 per cent and the latter is 16.1 per cent. The improvement of the simple average of the short record at Indian Head by weighting the yearly totals by comparison with the 30-year record at Qu'Appelle is therefore not so great as we might have expected.

Since there is some improvement, however, it seems that the mean of the estimates of the normal by comparison at Indian Head is nearer the true average than the mean of the observed values. It seemed that if this is so, the progressive means formed out of the adjusted values should show less variation than the progressive means formed out of the observed values. Progressive means were, therefore, formed from the two series of figures. Means of the first two years, of the second two years, of the third two years and so on till the series is exhausted; means of the first three, the second three and so on, finally groups of ten; the resulting series and their variability are given in the tables below.

## PROGRESSIVE MEANS OF ANNUAL PRECIPITATION AT INDIAN HEAD.

Period.	2 years.	3 years.	4 years.	5 years.	7 years.	9 years.	10 years.
1st	16.12	15.68	15.84	16.00	16.28	17.03	17.22
2nd	14.97	15.15	16.79	16.20	17.10	17.23	17.52
3rd	15.61	17.35	16.60	16.35	17.29	17.78	18.29
4th	18.02	17.19	16.73	18.04	17.88	18.07	18.57
5th	17.59	16.81	18.15	17.06	18.41	18.81	18.67
6th	11.85	17.66	17.21	17.58	18.60	18.42	18.41
7th	19.31	18.21	18.89	18.73	19.15	18.86	18.91
8th	19.61	19.41	19.58	20.23	19.13	19.31	19.75
9th	17.48	18.35	19.47	19.99	18.73	19.78	19.04
10th	19.52	20.62	19.80	19.37	19.36	19.20	18.96
11th	21.16	20.17	19.48	19.24	19.36	18.81	19.12
12th	20.20	19.25	19.02	19.09	18.81	18.71	18.24
13th	17.50	17.70	18.16	19.00	18.56	18.30	
14th	17.89	18.43	19.68	19.00	19.05		
15th	18.02	20.41	20.20	19.16	18.69		
16th	21.53	20.92	19.16	18.69	18.43		
17th	21.70	19.08	18.52	19.11			
18th	10.78	10.79	18.00	17.19			
19th	15.34	17.41	16.57				
20th	19.21	17.47					
21st	17.80						
Standard Deviation	1.98	1.70	1.30	1.14	0.92	0.76	0.69
Coefficient of Variability	10.00	7.51	7.08	6.18	4.90	4.10	3.69

## PROGRESSIVE MEANS OF ESTIMATES OF NORMAL AT INDIAN HEAD.

Period	2 years.	3 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
1st	18.30	16.37	18.62	17.03	17.05	17.84	17.29	17.40
2nd	15.83	18.96	18.02	18.03	17.89	17.28	17.39	17.41
3rd	18.85	18.83	17.81	17.09	17.01	17.18	17.22	17.32
4th	21.99	19.40	18.73	17.79	17.84	17.81	17.85	17.74
5th	16.62	17.10	18.26	16.81	16.75	16.93	16.90	17.05
6th	16.25	16.55	16.18	16.12	16.67	16.68	16.86	17.08
7th	17.59	16.02	16.80	17.01	16.99	17.14	17.37	17.09
8th	15.00	16.11	18.81	16.82	17.04	17.28	16.98	17.49
9th	15.61	16.28	16.66	17.02	17.31	16.96	17.54	17.59
10th	17.97	18.06	17.81	18.04	17.51	18.12	18.11	17.67
11th	17.92	17.52	17.98	18.17	18.09	18.09	17.60	17.59
12th	17.47	17.76	17.27	18.14	18.16	17.60	17.59	17.42
13th	17.52	15.02	18.15	17.64	17.51	17.51	17.33	17.22
14th	18.68	17.31	18.43	17.50	17.62	17.40	17.27	
15th	16.80	18.58	17.30	16.99	17.28	17.13	17.18	
16th	18.35	18.26	17.20	17.26	16.87			
17th	20.11	17.97	17.47					
18th	15.89	16.43	16.28					
19th	15.61	15.71						
20th	16.72	16.55						
21st	16.06							
Standard Deviation	1.63	1.08	0.90	0.58	0.48	0.41	0.33	0.22
Coefficient of Variability	9.37	6.27	5.15	3.35	2.79	2.37	1.88	1.26

Even although on account of the imperfection of the method of reduction, the various estimates of the normal did not yield a constant value, yet, if it has any merit at all, we should find as the length of the period involved increases, the progressive means tending more rapidly to a fixed value in the case of the adjusted totals than in the case of the observed totals. The tables of progressive means with the appended standard deviations and coefficients of variability do shew this to be the case. To make a graphical comparison between the two sets, we must fit the values of the coefficients to a curve. Plotting coefficients against periods, we obtain a curve which resembles the exponential curve  $y = ab^{-x}$ . Rejecting the coefficients for the values taken singly, and using only those for periods of 2 years and greater, we find after fitting by least squares, for the curve of variability of the observed values that

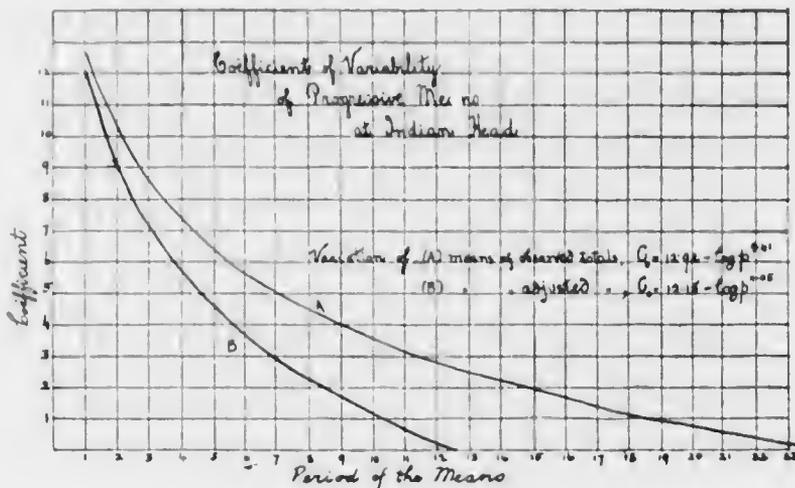
$$C_o = 12.92 - \log p^{2.41}$$

and that for the curve of variability of the adjusted totals

$$C_a = 12.18 - \log p^{11.05}$$

The curve of variability of the adjusted totals has therefore considerably greater negative slope, that is to say the variability of means from the adjusted totals tends to vanish in a shorter period of years than from the observed values. Putting the coefficient equal to zero, we have the curve crossing the axis of  $p$  where  $\log p = 1.373$ , or at the point where  $p$  is 23.6 years in the case of the observed totals. And similarly in the case of the adjusted totals the variability vanishes for  $p = 12.7$  years.

We may say then that the mean of any 13 successive annual approximations to the normal by the method of comparisons, will probably give as good a normal at Indian Head as the mean of any 23 successive annual observations. From a particular case such as this we are scarcely warranted in drawing any general conclusions, but the fact is that in this case the results of careful analysis of the data prove that the generally accepted belief that means adjusted by comparison with a long record made near by, give a better approximation to the true normal, is true to a certain extent.



It is, however, evident that the number of years necessary to give a fair approximation to the normal is not decided by this one instance. In the first place the distance between the stations considered is only ten miles and we shall not be able to say how rapidly the accuracy decreases with increasing distance. In the second place the absolute variability of the precipitation in this particular district is a determining factor in setting the number of years necessary for a good normal. We shall see this more readily if we consider that 23 years of observation at Indian Head yield by simple averaging a normal which will be but little changed by the addition of future observations, while if the observations at Calgary for 30 years are treated in the same way as above (by forming means for various periods) we obtain for the variability of the annual precipitation at Calgary,

$$C = 40.22 - 27.59 \log p$$

The averages then become constant when  $p = 28.7$  years, or the average of any 29 successive years will not sensibly differ from the average of any other 29 such years. It follows that approximations to normals made by comparisons with Calgary will not be so reliable as in the case of stations near Indian Head and compared with either Indian Head or Qu'Appelle.

If we agree to accept an error of 0.50 inch either way as allowable or accurate enough for mapping purposes and compare the figures at Calgary and Indian Head on this basis we shall find an important difference. The normal in the neighbourhood of Indian Head is about 18.5 inches, and of this 0.50 is 2.7 per cent. Substituting for C in the equation

$$C = 12.92 - 9.41 \log p$$

we have the period 12.2 years. Substituting in the Calgary equation

$$C = 40.22 - 27.59 \log p$$

we obtain the period 22.2 years (since the normal at Calgary is 16.4 and 0.50 inch is therefore 3.05 per cent). In other words 22 years of observation are required at Calgary to give as good an average as 12 years of observation will give at Indian Head.

Substituting 2.7 for C in the equation for the adjusted values at Indian Head we get p equal to 7.2 years. We may assume, therefore, that in that part of Saskatchewan where the variability of the annual precipitation is no greater than at Indian Head that a series of 7 or 8 years' observations when adjusted by a close standard station's record will give an annual normal precipitation which will be satisfactory for mapping. And giving p various integral values we have the following table of probable errors.

Period	C <sub>v</sub>	C <sub>v</sub> x 18.5	Period	C <sub>v</sub>	C <sub>v</sub> x 18.5
2 years	8.85	1.64	7 years	2.81	0.52
3 "	6.91	1.28	8 "	2.20	0.41
4 "	5.51	1.02	9 "	1.61	0.30
5 "	4.36	0.81	10 "	1.11	0.21
6 "	3.58	0.66			

Owing to the scarcity of records which are complete for long periods it is not possible to give the above table a very satisfactory test. But after considerable labour in investigating the variability of the records in Saskatchewan and Manitoba, it was decided that after adjustment by comparison with a standard station a great part of the normals so derived in these two provinces were probably nearer than one inch to true normal annual precipitation. "True normal" in this connection means, of course, only the average for the period 1888-1917. On account of the broken character of the records nothing more definite regarding the probable accuracy of the normals can at present be given.

In the province of Alberta as we pass from prairie and tablelands to the greatly diversified country of the foothills of the Rocky Mountains we find our system of reduction of rainfall data to a homogeneous system not so satisfactory in application as in Saskatchewan and Manitoba. The figures for Alix and Didsbury were given some consideration at the outset of this discussion. Referring again to these tables we compare the observed totals more carefully with the adjusted totals by computing the square root of the mean square deviation of the different items from their average. We find the standard deviation of the observed totals at Didsbury for 14 years is 5.1 and of the adjusted totals 3.6; or, referring to the averages we have the coefficients of variability as respectively 23.1 and 20.4. The adjustment has therefore improved the normal even better here than in the case of Indian Head. But in the case of Alix the standard deviation of 13 observed totals is 3.4 (coef. of var. 20.4) and of the adjusted totals 4.8 (coef. of var. 27.4). In this case the attempt to adjust has made the figures vary more widely than as observed. The mean of the observed totals is, however, very little different from the mean of the adjusted totals, the difference amounting to an increase of 0.8 inch by adjustment. Other stations which yielded poor results when adjusted were Blackfalds, Delia, Hartmann, Hillsdown, Bashaw, and Springle in Central Alberta, Beaver Mines in the south, Sion, Dunstable, Wabamun, and Bon Accord in the north. In many cases, however, the results were very good indeed, and on the whole the cases where the derived normals were open to much doubt amounted to less than 20 per cent. Most of these cases occurred where the contour-lines are very irregular.

With regard to annual precipitation-normals as read off the accompanying map our conclusion is that they may be depended upon to give a fairly accurate approximation to the truth in Manitoba and Saskatchewan but that in the mountainous region of Alberta they must be accepted with some reserve, especially where the precipitation gradient is very steep.

So far we have been considering only the normal annual precipitation. We hoped, however, to give the normal distribution of this precipitation throughout the year. A method which has been often considered sound in theory and practice determines the average percentage of the annual precipitation which has fallen in each month during the duration of the record and then proceeds to distribute the normal annual total through the year according to these percentages. It has even been said that in some climates the monthly percentages of precipitation are less variable than the annual precipitation itself. If this be so it follows of course that when the annual total goes below average there must be a nearly fixed proportion of the decrease occurring in each month. This is decidedly not the case in the Canadian West. Compared with the summer precipitation that which falls in the winter months is quite small as may be seen on Plate III. And the precipitation in a summer month may vary from nothing to about 10 inches. For example the percentage of the corresponding year's precipitation which fell in each June between 1884 and 1917 at Medicine Hat is given in the following table.

MEDICINE HAT.  
June precipitation as percentage of yearly total.

Year	%	Year	%	Year	%	Year	%	Year	%
1917	16	1909	27	1901	19	1893	15	1885	41
1915	23	1908	10	1900	10	1892	7	1884	15
1914	29	1907	25	1899	12	1891	33		
1914	16	1906	21	1898	9	1890	39		
1913	27	1905	24	1897	24	1889	3		
1912	11	1904	21	1896	9	1888	24		
1911	22	1903	0	1895	16	1887	58		
1910	4	1902	21	1894	25	1886	24		
MEANS (8 years)	18		22		17		25		
(16 years)		20				21			

A large number of short records we are adjusting are about eight years in length and therefore the percentages at Medicine Hat have been arranged in four series of eight years each. We see that while the June percentages range all the way from 0 to 58 there is no pronounced grouping near any given magnitude. In fact the chance that any June's percentage will fall in the class between 15 per cent and 35 per cent rather than fall outside that class may be estimated roughly to be only 11.7. Rainfall maps based on a comparative invariability of monthly percentages should therefore be used with caution.

Taking the means in groups of eight years running back from 1917, we have the least mean percentage 17 and the greatest 25, while the 30-year normal is 21, to which the 16-year means closely approximate. The eight-year means, therefore, differ from the normal by 4 per cent at Medicine Hat, or by .54 inch which is 20 per cent of the normal June rainfall (2.64).

QU'APPELLE  
JUNE PRECIPITATION AS PERCENTAGE OF YEARLY TOTAL.

Year	%	Year	%	Year	%	Year	%
1917	20	1909	9	1901	18	1893	21
1916	15	1908	31	1900	7	1892	15
1915	14	1907	33	1899	24	1891	38
1914	17	1906	23	1898	21	1890	18
1913	21	1905	21	1897	38	1889	4
1912	9	1904	12	1896	21	1888	37
1911	16	1903	7	1895	19	1887	29
1910	25	1902	19	1894	11	1886	3
Means							
(8 years)	18		19		20		21
(16 years)	18.5					20.5	

Medicine Hat is representative of the southwestern section of the western provinces, a section which has suffered severely from disastrous summer droughts. We now present a similar table of percentages for Qu'Appelle representative of a more favoured region. Not only is the range of percentages at Qu'Appelle (3 to 38) much less than at Medicine Hat (0 to 58), but the percentages are much more closely clustered about their mean value, and the eight-year means differ but little from each other. The computation of long series of percentages where the divisor varies for every station and month was found too laborious to justify the complete investigation of the dependability, at the present time, of monthly normals from short series for all districts, but sufficient work of this kind was done to demonstrate the doubtful character of monthly charts of rainfall distribution based on the observations at present available. It was found that in the Qu'Appelle valley and in the northern regions monthly maps would be fairly accurate, but that in southern and central Alberta and Saskatchewan, at least 15 years of observation would be necessary in all districts to fix the average monthly rainfall of the summer months. The bulk of our observing stations, as mentioned before, have either lately inaugurated observations or ceased to observe after a very short period of activity. It was found, however, that combinations of months in pairs yielded means which were less subject to variation with the length of the period.

We may therefore sum up our investigation of the rainfall data by saying that we have come to the general conclusion that monthly normals of precipitation could not be satisfactorily mapped with the amount of data now available. More and longer records must be accumulated before a satisfactory series of monthly precipitation maps can be formed for a country of such great variation in rainfall as southern Alberta and southern Saskatchewan. It was found that combinations of months could be mapped with fair approximation to the true normal, and therefore maps for April-May, June-July and August-September are given.

No maps are given for the winter months but it is perhaps in order to say that the method of measuring the water-equivalent of snowfall by simply dividing the depth by 10 must introduce uncertainty into the figures for the winter months and therefore into the annual figures.

#### ADJUSTMENT OF TEMPERATURE OBSERVATIONS

The procedure in estimating the normal temperatures for the accompanying maps was as follows.

For all stations the means for each year of the combinations, March-April, May-June, July-August, were computed. Then the difference from normal in every year since 1890 at the standard stations for each of these three groups were plotted on maps, 84 maps in all. On these maps the differences from average were distributed by isovars, so that the difference from normal temperature for any bi-monthly group in any year for any station could be read off the map. All the separate records were then corrected by adding or subtracting the difference

from normal as read from the map. If this procedure had been absolutely justified all the March-April means for any station would have been reduced to the same figure, that is to say to the normal March-April temperature, and similarly for other stations and the other groups. In practice, of course, such a result was never reached. But the estimates of the normal at every station were arranged in a frequency-diagram, and where there was a high frequency of a certain temperature this was chosen as the normal. It had been intended to give only these figures, but the similarity of these means for districts which were known to have very differ-ent daily ranges of temperature, made quite evident the comparative unimportance of monthly mean temperatures. It was therefore decided to determine the average daily highest and average daily lowest temperatures for each month. For this purpose the records were all computed where possible for ten-year periods, 1885-1894, 1895-1904, 1905-1914. Maps of variation from ten-year normals were then constructed and all places with normals for only one or only two of the ten-year periods were by these maps reduced to a thirty-year system. This resulted in increasing the number of standard stations or stations whose thirty-year normals were known. There remained a large number of stations with short records which did not fall wholly in either ten-year periods. The method of using these stations was in two parts. The period 1913 to 1917 was found to be common to a large number of them. Their mean maxima and minima were therefore calculated for this period as were also the maxima and minima for the standard or thirty-year stations for the same period. The differences from normal of this period 1913-1917 at the standard and thirty-year stations were then set out on maps, 2 maps for each month, one for the maxima and one for the minima. Lines of difference from normal were then drawn upon the maps. The mean maxima and minima for the period 1913 to 1917 were then entered upon the maps and isotherms drawn through them. The isotherms were then added to the isovars (or differences from normal) the isotherms of the maxima to the isovars of the maxima, and, *mutatis mutandis*, the same for the minima. The first points added were those points where the isotherms intersected the isovars, since these were integral numbers and the addition was easiest there. Where large spaces were left without intersections further additions were made. The known data for the thirty-years stations were then added to these additions and new isotherms were drawn in respect to the temperatures represented by the additions. These new isotherms were, then, the normal maxima, or the normal minima as the case might be.

There were still many stations not utilized, those whose data did not fall completely or at all in the period 1913 to 1917. These data were scattered over so many periods that recourse had to be made to the old method of comparison with the nearest standard station. In most of these cases the data were compared month by month with the data of the standard station and where a very large difference from the standard station was found, a difference so large as to be plainly "abnormal," that month's data was rejected. The additional normals so found were added to the maps previously prepared by the addition of "isos," and any changes in the isos made necessary by this additional data were then made.

On all the maps of normal maxima and minima thus made several points were chosen at random, and for such points the mean temperatures were calculated. These mean temperatures were then compared with the normal mean temperatures which had been determined by the first and discarded "frequency method" and the agreement in all cases was found to be good.

Finally it may be said that in our opinion the temperature maps are very reliable and much more so than the precipitation maps. Had there existed complete thirty-year records for all or a majority of the stations all this tedious work would not have been necessary and nothing but the continuance of observations for a like period will determine the accuracy of the work.

