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Bottineau, N.D.

CLIMATOLOGICAL SUMMARY

CLIMATOGRAPHY OF THE U. S. NO. 20 - 32

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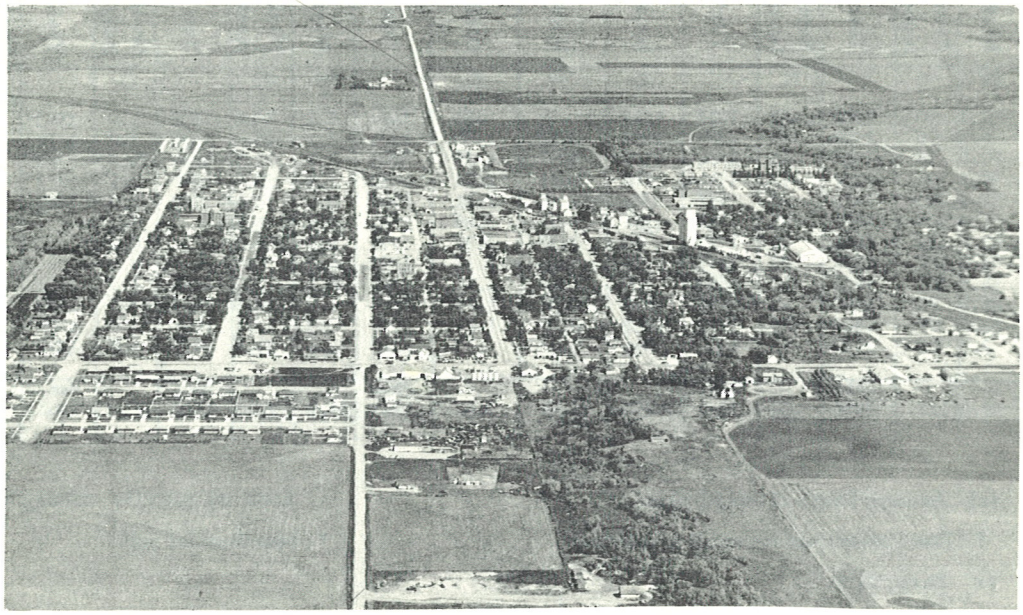
WEATHER BUREAU

BOTTINEAU, NORTH DAKOTA

Latitude 48°50' N **Longitude 100°27' W**

ELEVATION 1640 FEET

Data Compiled From Official U. S. Weather Bureau Records



Aerial View Of The City Of Bottineau, North Dakota

Prepared By Weather Bureau State Climatologist For North Dakota

In Cooperation With First National Bank Of Bottineau, North Dakota

CLIMATE OF BOTTINEAU, NORTH DAKOTA

Bottineau is located in east-central Bottineau County in north-central North Dakota. The Turtle Mountains, a range of wooded hills which rise just north and northeast of Bottineau, have an average elevation above 2000 feet. The highest point is about 2500 feet elevation near the Canadian border north of Bottineau. The Souris River, about 20 miles west, flows northward into Canada and with its tributaries drains all of Bottineau County. Excellent farm land in all parts of the county supports a vigorous and diversified agriculture. Principal cash crops include wheat, barley, and flax. There is a considerable cattle raising industry.

The data in this summary can be considered quite representative of the entire county though there are minor variations due to differences in local topography.

The climate of Bottineau is continental in character. This is enhanced by the presence of the Rocky Mountains far to the west which effectively limits the modifying influence of maritime air masses from the Pacific Ocean. There are no obstacles to air movement from the north or from the south. Consequently, summers tend to be quite warm with occasional hot spells but with very few humid days. Winters are usually quite cold. Cold arctic outbreaks can be expected several times every winter. However, there are compensating periods of mild weather which are very pleasant.

During the warmer part of the year, temperatures of 90 degrees or higher may be expected on about 14 days on the average. This has varied from 42 days in 1936 to only one day in 1927. Temperatures of 90 degrees or higher have occurred as early as April 29, and as late as October 7. The highest temperature ever recorded was 111 degrees on July 12,1936. The coldest ever recorded was 50 degrees below zero on February 3,1893. During the colder part of the year there are normally 67 days with minimum temperatures zero or below. This has varied from 98 days in the season 1950-1951 to only 31 days in the season of 1930-1931. The earliest in the fall that a zero degree or colder temperature has occurred is October 22, and the latest in the spring is April 12. During the 3 coldest months, December, January, and February there are normally 13 days in which maximum temperatures climb above 32 degrees. In the winter of 1923-1924 there were 40 days in which the maximum temperature rose above 32 degrees during those 3 months, but in 1935-1936 there were none.

The average annual precipitation is 15.71 inches. More than 50 per cent of this total falls in the months of May, June, and July, and about 80 per cent falls during the crop season, April through September. Total annual precipitation has ranged from 27.31 inches in 1944 to 8.45 inches in 1934. June is usually the wettest month of the year. The greatest amount recorded in any single month was 12.03 inches recorded in June, 1944. Summertime precipitation is usually in the form of thunderstorms which can be expected on about 30 days each year. An inch or more of rain can be expected on 2 or 3 days each year. The likelihood of receiving 1.00 inch or more in any given 7-day period is greatest the latter part of June when the chance is about once in 3 years. The probability of any given 7-day period being dry,trace or less,is greatest, apparently in late October and early November when the chance is nearly once in 2 years. Rainfall intensities of about 1.00 inch in one hour, 1.50 inches in 6 hours, and 1.90 inches in 24 hours can be expected about once in 2 years. About 26 inches of snow falls on the average each year. Seasonal snowfall has ranged from about 50 inches in 1959-1960 to about 7 inches in 1914-1915. In December, 1912, nearly 24 inches of snow fell for the greatest monthly amount. Measureable snowfall can be expected about 1 year in 10 in September,once in 2 years in October, 2 years in 3 in April,and about 1 year in 6 in May. The ground is usually covered with snow from early in December to the latter part of March.

Based upon a summary of wind at Minot,the prevailing wind direction is northwest in all months,but in the summer months winds from a southerly direction blow nearly as often. The average speed throughout the year is about 12 miles per hour. April is the windiest month with March and May close behind. The strongest winds usually blow from the northwest.

Sunshine and humidity data are not available for the Bottineau area but an average of Devils Lake and Williston data should be a close approximation. Sunshine during the year averages a little over 60 per cent of the possible amount ranging from about 75 per cent in July to 45 to 50 per cent in November and December. The average sky cover during the year is six-tenths. About 230 days each year would be classified clear or partly cloudy. Relative humidity averages nearly 80 per cent the year around during early morning hours. In summer,the relative humidity will fall to less than 50 per cent during most afternoons, while in the winter it will average about 70 per cent during the afternoon.

Alfred A. Skrede
State Climatologist
U. S. Weather Bureau
Bismarck, North Dakota

MEANS AND EXTREMES FOR PERIOD

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet: Mean	Maximum monthly	Year	Greatest daily	Year	Mean number of days: Precip. .10 inch or more	Temperatures: Max. 90° and above	Max. 32° and below	Min. 32° and below	Min. 0° and below	Month
(a)	58	58	58	72		72		30	58	71		58	58		71		58	58	58	58	58	
J	12.8	-8.7	2.1	50	1944	-47	1916	1919	0.42	.41	1911	5.1	10.8	1916	5.0	1953+	1	0	28	31	21	J
F	17.6	-4.2	6.7	60	1932	-50	1893	1621	0.32	.70	1904	3.7	13.0	1936	7.0	1904	1	0	24	28	17	F
M	31.7	10.0	20.9	75	1946+	-35	1962+	1389	0.57	1.35	1945	4.5	21.5	1944	11.0	1944	2	0	16	30	8	M
A	51.3	27.0	39.2	91	1952	-11	1944+	774	0.95	1.31	1953	1.8	12.7	1950	6.5	1929	3	*	2	22	*	A
M	65.3	38.9	52.1	110	1925	10	1918	384	2.05	2.41	1960	0.4	13.0	1950	7.0	1950	5	1	*	8	0	M
J	74.2	49.2	61.7	108	1936	25	1917	159	3.37	3.45	1923	0.0	0.0		0.0		6	2	0	*	0	J
J	81.1	54.4	67.8	111	1936	30	1912	50	2.38	3.38	1955	0.0	0.0		0.0		5	5	0	*	0	J
A	79.6	51.6	65.6	106	1893	20	1895	56	2.48	3.12	1951	0.0	0.0		0.0		5	5	0	*	0	A
S	68.4	41.4	54.9	102	1931	11	1893	300	1.40	1.95	1894	0.1	2.0	1951+	2.0	1934	4	1	0	5	0	S
O	55.8	29.8	42.8	91	1920	-4	1925	670	0.88	2.25	1898	1.5	19.3	1959	10.5	1959	2	*	1	19	*	O
N	34.4	13.9	24.2	67	1949+	-28	1897	1242	0.46	1.17	1906	4.0	10.5	1956	7.0	1956	2	0	13	29	5	N
D	19.3	-0.7	9.3	63	1939	-44	1934	1686	0.43	.73	1912	4.6	23.8	1912	5.0	1912	1	0	25	31	16	D
Year	49.3	25.2	37.3	111	July 1936	-50	Feb. 1893	10250	15.71	3.45	June 1923	25.7	23.8	Dec. 1912	11.0	Mar. 1944	37	14	109	203	67	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

MONTHLY AND SEASONAL SNOWFALL

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
1905-1906	0	T	6.5	T	8.8	2.5	1.5	0.3	T	19.6
1906-1907	0	0	9.7	12.2	10.5	0.5	10.0	T	T	42.9
1907-1908	T	T	T	0.5	1.8	4.6	3.0	2.0	T	11.9
1908-1909	T	T	4.5	4.6	6.1	10.8	11.9	8.3	T	46.2
1909-1910	0	1.0	3.6	17.5	4.0	1.3	1.9	3.4	0	32.7
1910-1911	0	T	7.1	4.9	10.3	3.1	2.3	4.3	T	32.0
1911-1912	0	0.8	2.7	2.3	5.9	4.1	2.9	0	0	18.7
1912-1913	0	0	2.5	23.8	3.0	1.8	5.8	T	0	37.9
1913-1914	T	1.0	1.5	0.6	5.7	1.5	2.7	0.5	0	13.5
1914-1915	0	0	3.4	1.2	0.9	1.8	T	0	T	7.3
1915-1916	0.2	3.0	4.6	5.9	10.8	2.4	4.6	1.0	0	32.5
1916-1917	0	1.0	3.0	3.6	3.9	5.1	1.0	2.0	0	19.6
1917-1918	0	3.0	2.0	4.1	2.8	1.0	0	T	0	12.9
1918-1919	0	0	5.1	7.4	2.8	3.6	4.2	T	0	23.1
1919-1920	0	5.0	4.0	3.2	9.0	3.2	9.1	0	0	33.5
1920-1921	T	0	2.6	4.3	1.0	3.9	2.8	6.0	0	20.6
1921-1922	0	0	3.8	2.0	2.2	3.1	5.3	4.5	0	20.9
1922-1923	0	1.2	3.2	5.8	3.3	5.0	1.6	2.6	0	22.7
1923-1924	0	0	T	1.7	2.2	0.7	2.1	0	0	6.7
1924-1925	0	0	3.1	5.3	1.8	4.2	5.6	0	0	20.0
1925-1926	T	2.2	T	T	3.8	4.0	1.8	1.1	0	12.9
1926-1927	1.0	1.0	7.1	5.0	2.3	1.4	1.0	0.1	0	18.9
1927-1928	0	1.2	7.0	1.9	2.0	T	6.2	1.2	0	19.5
1928-1929	0	0.4	T	2.3	9.1	2.3	3.1	T	0	17.2
1929-1930	0	5.0	6.4	4.5	1.1	3.6	1.2	T	2.0	23.8
1930-1931	0	T	10.0	2.0	1.0	1.0	2.5	T	T	16.5
1931-1932	0	T	0.3	0.1	3.8	2.0	6.3	0.5	2.0	15.0
1932-1933	0	12.0	2.2	2.5	5.0	3.0	3.0	5.0	0	32.7
1933-1934	0	1.4	5.7	11.6	3.0	1.2	2.0	2.0	0	26.9
1934-1935	2.0	0	1.5	6.1	7.2	T	6.9	2.0	1.0	26.7
1935-1936	0	0.1	9.0	5.5	6.5	13.0	4.0	0.7	0	38.8
1936-1937	0	2.0	2.0	9.0	8.0	4.0	2.0	0.6	0	27.6
1937-1938	0	T	2.0	4.0	6.9	8.6	0.2	0.3	0	22.0
1938-1939	0	T	5.0	5.2	5.0	6.0	3.3	1.0	0	25.5
1939-1940	T	T	T	0.6	3.0	10.2	6.8	2.5	1.0	24.1
1940-1941	0	0	3.8	2.6	5.9	2.3	5.4	2.7	0	22.7
1941-1942	0	3.0	2.5	1.5	0.8	1.6	17.0	0.5	0	26.9
1942-1943	0.2	0	1.0	7.0	6.5	3.0	11.1	0	0.2	29.0
1943-1944	0	0	1.5	0.3	3.7	5.2	21.5	2.1	T	34.3
1944-1945	T	0	2.8	0.7	3.2	1.2	1.0	2.0	0	10.9
1945-1946	0.5	T	4.8	3.9	4.1	7.4	1.2	0	0.5	22.4
1946-1947	T	7.8	2.7	2.5	9.2	9.6	4.3	0.5	0	36.6
1947-1948	0	0.8	9.7	10.0	7.4	7.5	3.7	4.5	0	43.6
1948-1949	0	0	8.0	13.5	9.8	2.2	4.7	0	T	38.2
1949-1950	0	1.0	4.7	5.0	7.7	2.8	1.0	12.7	13.0	47.9
1950-1951	0	1.0	5.1	11.5	3.7	5.9	7.4	2.7	0	37.3
1951-1952	2.0	2.5	2.0	2.3	5.3	0.7	1.4	T	0	16.2
1952-1953	0	1.0	0.4	0.7	8.1	2.4	10.0	6.1	0.8	29.5
1953-1954	0	0.1	3.3	6.5	9.2	0.6	2.4	1.8	0.1	24.0
1954-1955	T	5.1	0.7	0.4	8.6	2.5	13.1	1.0	0.1	31.5
1955-1956	T	1.4	9.3	3.4	4.6	2.2	5.7	1.0	2.8	30.4
1956-1957	T	T	10.5	2.8	2.2	2.3	3.4	1.6	0	22.8
1957-1958	0	0.4	1.7	0.8	3.3	2.3	2.6	T	0	11.1
1958-1959	0	0	9.0	4.2	3.2	4.9	0.7	1.4	T	[illegible]
1959-1960	0	19.3	10.2	2.4	6.9	1.1	5.8	4.0	0	[illegible]
1960-1961	0	0	3.6	4.3	5.2	9.2	0.8	4.0	T	27.1
1961-1962	0	0	1.5	5.8	8.7	8.0	3.3	0.5	T	27.8
1962-1963	0	1.7	2.0	6.1	1.5	3.3	3.0	2.0	T	19.6

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1906	10.4	5.2	17.6	46.8	49.4	61.8	66.8	66.3	61.8	44.8	24.7	5.7	38.6
1907	-8.4	8.0	19.9	29.4	41.1	60.3	63.8	61.4	49.3	43.6	26.5	17.2	34.3
1908	12.2	10.8	14.2	39.8	49.9	59.0	65.8	59.0	57.1	40.0	27.2	7.9	36.9
1909	-1.4	4.8	18.6	30.0	50.2	61.1	65.3	66.6	57.7	39.9	24.2	4.0	35.1
1910	5.0	-0.6	37.0	45.8	48.6	66.5	68.0	61.4	52.4	44.0	18.0	6.4	37.7
1911	-8.2	2.0	24.2	40.1	52.6	65.8	62.6	60.5	51.4	41.0	12.2	11.9	34.7
1912	-9.8	8.8	12.7	42.8	52.8	62.3	64.0	61.7	49.4	41.9	28.0	12.0	35.6
1913	-6.0	-0.2	9.8	44.8	49.9	65.5	64.0	67.4	55.1	36.0	30.4	18.2	36.2
1914	8.8	-6.1	21.8	37.6	54.0	60.8	73.4	64.0	56.8	48.2	25.8	0.4	37.1
1915	0.5	15.4	24.4	48.2	52.2	55.1	61.8	66.2	52.4	43.2	23.1	9.0	37.6
1916	-12.6	-0.4	14.2	36.6	49.8	57.3	71.7	64.0	53.8	36.6	23.8	-1.5	32.8
1917	-4.8	-4.7	19.8	35.4	51.7	59.0	70.0	64.4	56.1	31.4	34.6	-5.2	34.0
1918	-4.8	4.9	33.0	40.8	48.0	61.2	64.0	63.4	52.4	43.8	26.4	13.7	37.2
1919	13.8	4.0	12.8	41.5	56.7	67.6	69.7	66.4	55.2	30.8	11.0	2.4	36.0
1920	-3.0	10.8	16.3	30.0	53.2	61.6	68.0	68.6	57.6	49.8	26.2	10.9	37.5
1921	9.8	14.3	22.6	39.5	49.1	65.6	71.6	65.6	54.0	47.0	18.0	14.6	39.3
1922	4.9	-3.0	24.0	41.4	55.8	60.2	61.0	67.8	54.6	40.2	27.9	0.8	36.3
1923	-0.2	-4.1	9.1	32.2	51.5	66.0	68.8	59.7	59.0	43.5	33.4	18.5	36.4
1924	-0.8	17.8	24.7	36.6	45.2	57.7	65.3	61.4	54.6	50.2	22.0	-2.5	36.0
1925	4.8	10.9	23.8	46.8	55.6	62.1	65.8	65.2	56.8	32.6	26.1	15.0	38.8
1926	13.6	18.0	23.9	39.8	56.2	59.0	68.8	63.5	50.0	39.4	19.5	5.4	38.1
1927	4.7	8.0	28.8	39.4	46.2	64.5	65.8	63.6	56.6	43.0	16.8	-6.0	36.0
1928	7.7	15.0	25.4	33.5	56.5	57.1	64.4	62.1	51.4	41.7	29.2	17.6	38.5
1929	-8.4	-1.2	28.8	37.7	46.1	59.4	67.4	66.3	48.9	46.0	21.4	6.6	34.9
1930	-5.9	15.4	22.9	44.2	48.4	61.6	69.4	68.6	52.8	38.8	27.2	13.5	38.1
1931	16.2	25.2	24.2	40.9	51.1	65.8	68.8	64.4	56.4	45.6	29.2	19.6	42.3
1932	8.0	9.2	15.9	40.2	54.6	66.4	66.6	66.7	53.3	35.0	20.7	7.0	37.0
1933	7.1	3.9	24.0	36.0	54.2	67.7	71.4	69.2	58.2	38.4	25.7	3.0	38.2
1934	11.0	15.0	25.0	42.7	62.8	63.0	71.9	66.9	51.5	48.4	32.3	10.6	41.8
1935	-2.0	17.8	27.1	38.4	50.0	60.4	74.2	64.8	56.0	43.1	12.8	9.2	37.6
1936	-9.2	-16.6	22.4	33.4	63.0	64.2	80.0	68.6	58.6	39.1	24.1	8.4	36.3
1937	-10.4	5.6	22.6	39.2	55.9	63.0	70.2	69.8	57.1	41.2	21.6	4.7	36.7
1938	6.4	5.3	32.0	39.4	51.7	62.4	68.4	70.0	61.4	50.3	21.6	14.0	40.2
1939	9.2	-4.9	20.0	39.8	59.2	57.8	71.8	68.4	57.9	38.8	32.4	24.1	39.5
1940	1.5	12.8	19.6	35.0	53.6	61.6	69.3	66.2	63.0	48.8	18.6	14.2	38.7
1941	5.8	5.8	17.3	42.1	55.8	63.7	69.2	66.0	52.4	42.0	26.6	18.5	38.8
1942	13.7	10.1	27.4	41.5	49.9	58.8	65.9	64.5	54.1	45.2	22.0	4.4	38.1
1943	-7.4	9.5	12.0	45.8	51.2	62.6	71.8	69.6	55.4	48.8	26.6	18.7	38.7
1944	19.0	9.9	13.8	41.6	59.2	63.6	66.2	62.6	54.9	47.2	24.8	10.7	39.3
1945	9.0	12.3	34.4	34.2	44.6	56.9	65.9	64.6	51.4	44.9	18.2	4.0	36.4
1946	3.4	5.2	30.3	47.0	50.9	62.5	68.6	63.2	55.4	36.5	20.2	7.4	38.0
1947	8.2	1.0	18.6	38.8	48.5	59.0	70.0	69.4	53.8	50.6	20.8	10.2	37.4
1948	5.6	3.8	15.6	36.6	55.5	63.3	67.7	67.8	62.9	44.9	24.9	5.3	37.8
1949	0.9	2.0	16.2	43.1	54.5	60.3		69.8	54.8	40.9	34.2	4.4	
1950	-14.4	4.5	16.1	31.9		58.4	64.7	62.5	56.6	43.6	16.5	5.1	
1951	-2.0	3.4	6.0	36.1	54.9	57.0	67.5	62.1	49.9	39.9	17.4	2.8	32.9
1952	-3.4	15.4	16.8	47.7	53.8	61.6	64.3	65.4	57.5	40.3	27.3	13.7	38.4
1953	7.3	13.0	19.2	34.3	50.4	60.3	65.3	68.9	55.0	50.0	31.6	14.9	39.2
1954	-8.0	23.2	19.7	34.6	47.5	59.0	67.0	63.1	52.8	41.1	32.0	20.9	37.8
1955	4.4	2.6	9.0	45.0	54.7	61.3	68.6	67.8	53.8	45.4	12.0	0.3	35.4
1956	2.8	1.9	16.5	33.5	51.6	66.9	64.6	64.9	51.6	45.3	23.3	10.6	36.1
1957	-4.1	5.1	22.9	37.9	54.5	59.1	72.9	65.5	53.3	42.7	25.6	15.2	37.5
1958	12.0	6.7	24.7	42.4	57.0	58.4	64.1	67.5	55.6	44.2	25.0	5.6	38.6
1959	-2.4	0.8	28.6	38.8	49.4	64.0	66.9	67.7	53.2	35.0	16.8	19.2	36.5
1960	2.1	8.2	12.1	37.8	52.7	60.5	70.1	67.4	57.2	43.8	24.6	10.3	37.2
1961	5.9	12.3	26.0	35.2	51.9	68.4	68.9	71.8	51.6	42.6	24.6	1.2	38.4
1962	0.7	1.7	17.4	38.9	50.1	62.6	63.6	67.1	53.4	46.3	30.9	12.4	37.1
1963	-3.3	7.0	27.0	40.8	49.2	63.2	70.1	66.7	59.0	54.5	27.8	5.0	38.9

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1906	.88	.25	.41	.69	4.08	4.84	1.88	1.81	1.47	.96	2.14	1.22	20.63
1907	1.05	.05	1.12	.29	.16	1.90	2.72	2.40	1.08	.27	.04	.05	11.13
1908	.18	.46	.34	1.30	2.27	7.15	2.22	3.10	.58	.62	.47	.46	19.15
1909	.61	1.08	2.57	.88	4.44	1.66	4.57	1.38	.53	.43	.47	1.75	20.37
1910	.40	.13	.72	1.34	1.70	1.94	2.23	.77	1.82	.51	.69	.49	12.74
1911	1.03	.31	.23	.55	2.28	2.49	3.10	4.78	2.70	2.48	.27	.23	20.45
1912	.59	.40	.34	1.36	3.60	.87	2.08	2.14	2.60	1.54	.42	3.13	19.07
1913	.30	.18	.78	.32	1.09	1.82	1.55	3.11	1.02	.76	.15	.06	11.14
1914	.57	.15	.32	1.34	2.35	2.58	1.79	1.63	.95	.68	.51	.12	12.99
1915	.09	.18	.03	1.64	2.41	2.93	.90	.47	2.17	.62	.69	.59	12.72
1916	1.08	.24	.46	.93	1.07	3.05	2.36	4.75	1.13	1.08	.24	.36	16.75
1917	.39	.51	.10	1.43	.02	1.91	1.87	.95	.44	1.15	.14	.41	9.32
1918	.28	.10	.03	.75	1.93	2.13	1.57	3.90	.35	.55	.62	.47	12.68
1919	.28	.36	.42	.74	1.61	1.30	.71	3.15	.96	.84	.40	.32	11.09
1920	.90	.32	.91	.78	.73	3.74	1.98	4.83	.96	.27	.26	.43	16.11
1921	.10	.39	.28	1.63	3.02	2.74	1.09	3.16	4.70	.69	.38	.20	18.38
1922	.22	.31	.53	.99	4.21	3.20	1.23	1.83	2.00	.42	1.39	.58	16.91
1923	.33	.50	.16	.85	1.32	5.83	3.44	4.98	1.05	.56	.27	.17	19.46
1924	.18	.07	.23	.50	.26	2.74	2.52	1.81	1.85	2.47	.48	.42	13.53
1925	.18	.42	.56	1.37	1.26	4.21	2.10	1.01	1.50	1.01	.18	.01	13.81
1926	.30	.40	.39	.50	1.34	3.94	1.15	1.19	2.78	1.60	.67	.36	14.62
1927	.23	.12	.30	1.38	5.24	1.73	4.37	3.41	.68	2.14	.70	.19	20.49
1928	.17	T	.63	.30	1.23	7.66	5.26	2.19	.25	.10	T	.23	18.02
1929	.61	.23	.31	1.38	2.66	1.66	1.17	.95	1.54	1.28	.64	.45	12.88
1930	.11	.36	.12	.58	2.10	4.22	1.22	.80	1.27	1.45	1.06	.17	13.46
1931	.10	.08	.31	.04	.28	1.51	2.07	2.69	2.49	.52	.03	.01	10.13
1932	.38	.13	.63	.38	.66	5.91	3.15	1.13	.38	3.51	.22	.24	16.72
1933	.33	.28	.26	2.08	2.30	1.61	1.60	1.63	1.07	.45	.77	1.16	13.54
1934	.35	.12	.29	.40	.23	2.22	.58	1.87	.99	.54	.25	.61	8.45
1935	.72	.02	1.15	1.09	3.10	2.45	5.25	2.76	1.33	.08	.90	.55	19.40
1936	.57	.81	.42	.09	.73	1.76	.75	.98	2.21	.34	.13	.82	9.61
1937	.60	.37	.17	1.78	2.01	5.49	3.85	3.44	2.06	.94	.33	.31	21.35
1938	.55	.79	1.04	.28	2.02	2.21	4.39	2.57	.04	.52	.56	.26	15.83
1939	.35	.38	.22	.98	.93	3.15	1.23	1.90	.58	.33	.09	.06	10.20
1940	.18	.96	.75	.81	2.61	3.48	3.58	3.43	.51	1.24	.41	.25	18.21
1941	.59	.23	.54	1.79	4.44	3.15	1.93	3.07	5.35	1.16	.57	.19	23.01
1942	.08	.16	2.49	1.03	1.50	1.64	1.79	4.18	.38	.06	.13	.66	14.10
1943	.61	.25	.92	1.38	2.13	3.14	3.74	3.77	.75	.25	.19	.09	17.22
1944	.25	.52	1.85	.61	4.51	12.03	2.02	3.53	1.60	.04	.28	.07	27.31
1945	.32	.12	2.15	.91	1.29	2.97	2.22	2.19	.96	.75	.51	.31	14.70
1946	.28	.67	.89	.14	.59	2.72	2.19	.97	1.03	1.81	.22	.18	11.69
1947	.68	.71	.34	1.16	1.06	6.83	1.66	5.59	1.17	.36	.55	.61	20.72
1948	.48	.51	.25	2.38	1.54	1.95	6.31	1.71	T	1.06	.71	1.46	18.36
1949	.68	.23	.55	.45	4.03	3.47	2.45	.64	.57	2.27	.75	.26	16.35
1950	.59	.23	.06	.96	2.93	4.71	2.99	1.66	1.48	.42	.37	.80	17.20
1951	.32	.55	.64	.86	.82	2.35	1.42	6.98	2.14	.97	.12	.16	17.33
1952	.40	.04	.13	T	.43	3.24	2.04	2.15	.54	.16	.22	.06	9.41
1953	.52	.36	.95	1.77	4.89	2.54	1.27	.17	1.04	.46	.31	.59	14.87
1954	.66	.06	.23	1.45	2.19	10.44	.81	2.86	3.51	.80	.24	.04	23.29
1955	.86	.25	1.33	1.07	1.98	3.99	4.55	2.32	2.33	.50	.91	.28	20.37
1956	.31	.19	.49	.08	1.87	3.96	1.98	1.87	.46	.27	1.20	.28	12.96
1957	.22	.25	.34	1.16	1.19	3.28	1.21	1.48	.44	1.69	.25	.09	11.60
1958	.35	.29	.26	.10	.01	1.18	4.02	.66	.70	.43	.71	.17	8.88
1959	.16	.43	.17	.20	2.32	3.86	2.16	6.55	3.22	2.76	.73	.14	22.70
1960	.38	.14	.31	1.03	3.56	.98	1.53	3.28	.16	.07	.17	.30	11.91
1961	.25	.59	.04	1.07	1.18	.85	1.15	.51	3.77	T	.07	.13	9.61
1962	.30	.29	.35	.61	3.55	3.52	3.66	3.62	.15	1.51	.49	.33	18.38
1963	.05	.19	.29	2.52	3.55	4.62	3.49	1.08	1.38	.45	.08	.36	18.06

PROBABILITY OF FREEZE OCCURRENCE IN SPRING

Dates on which chance of last occurrence of indicated temperature (or lower) decreases to

Temp. (°F)	90%	75%	50%	25%	10%
32	May 9	May 16	May 23	May 30	Jun. 6
28	May 1	May 8	May 15	May 22	May 29
24	Apr. 17	Apr. 25	May 3	May 11	May 19
20	Apr. 8	Apr. 16	Apr. 24	May 3	May 10
16	Mar. 30	Apr. 7	Apr. 16	Apr. 25	May 3

PROBABILITY OF FREEZE OCCURRENCE IN FALL

Dates on which chance of first occurrence of indicated temperature (or lower) increases to

Temp. (°F)	90%	75%	50%	25%	10%
32	Sept. 3	Sept. 9	Sept. 15	Sept. 21	Sept. 27
28	Sept. 12	Sept. 18	Sept. 25	Oct. 2	Oct. 8
24	Sept. 15	Sept. 23	Oct. 1	Oct. 9	Oct. 17
20	Sept. 27	Oct. 5	Oct. 14	Oct. 23	Oct. 31
16	Oct. 4	Oct. 12	Oct. 21	Oct. 30	Nov. 7

Maximum Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1906	40	38	57	83	95	82	93	101	101	83	53	34	101
1907	19	38	50	55	72	84	87	96	80	79	55	44	96
1908	42	40	46	80	80	88	92	88	92	75	62	37	92
1909	39	32	38	60	82	91	86	96	87	85	60	30	96
1910	34	35	71	86	84	103	102	93	88	85	56	34	103
1911	24	34	54	84	86	99	92	89	78	78	50	41	99
1912	28	38	53	74	83	100	93	89	82	78	50	39	100
1913	32	34	48	82	94	95	99	97	91	82	61	49	99
1914	48	40	46	70	84	89	102	99	90	87	60	36	102
1915	37	35	54	87	82	80	88	94	92	74	64	32	94
1916	23	47	44	71	82	78	99	96	93	69	64	44	99
1917	38	36	50	59	91	97	104	98	91	74	62	35	104
1918	36	48	75	75	93	97	100	98	82	75	52	41	100
1919	42	38	39	73	98	99	103	98	85	80	40	39	103
1920	30	31	47	57	81	89	92	101	90	91	57	39	101
1921	31	41	56	75	80	95	102	98	85	77	58	40	102
1922	33	30	46	75	86	94	89	94	84	81	45	30	94
1923	35	35	32	71	91	95	91	89	91	76	64	49	91
1924	49	49	45	64	82	89	91	91	86	78	53	40	91
1925	40	46	64	79	110	89	98	93	95	55	55	52	110
1926	48	46	63	86	94	94	104	93	85	65	48	35	104
1927	39	37	58	70	76	85	89	87	90	79	51	35	90
1928	38	40	72	77	96	80	85	91	86	72	53	40	96
1929	27	38	70	69	87	89	103	101	97	78	48	37	103
1930	27	46	47	76	90	83	104	96	89	72	63	38	104
1931	41	48	49	84	91	107	108	94	102	82	67	42	108
1932	42	60	54	70	94	88	97	90	91	82	48	42	97
1933	34	39	61	71	88	102	109	97	88	74	51	42	109
1934	38	46	54	81	106	88	102	102	87	87	62	39	106
1935	33	42	68	72	79	99	102	93	84	78	39	32	102
1936	24	27	45	73	93	108	111	100	101	86	58	44	111
1937	28	32	47	67	91	94	99	100	88	78	55	34	100
1938	35	38	60	75	80	91	94	96	94	84	42	42	96
1939	43	40	67	82	92	83	99	97	92	72	64	63	99
1940	39	38	45	68	89	86	95	95	92	73	45	40	95
1941	39	35	46	78	93	92	96	96	86	70	57	50	96
1942	45	38	59	80	80	80	90	98	90	82	58	30	98
1943	35	43	66	79	87	89	93	95	88	86	54	45	95
1944	50	37	45	70	94	85	91	83	77	77	54	39	94
1945	37	49	69	69	78	93	93	95	95	84	54	41	95
1946	34	36	75	79	85	87	100	95	93	80	60	40	100
1947	39	38	42	87	78	80	96	98	97	80	58	38	98
1948	37	31	49	73	93	91	94	94	95	76	45	39	95
1949	35	36	41	85	87	92	91	104	89	83	67	40	104
1950	10	32	44	63	80	86	91	89	92	77	60	37	92
1951	34	34	42	73	89	88	98	89	78	76	49	46	98
1952	35	37	48	91	88	89	92	97	90	79	62	37	97
1953	39	40	49	73	84	89	90	93	94	87	63	38	
1954	34	41	48	72	84	88	92	85	92	74	65	47	92
1955	31	37	50	77	86	97	93	95	90	80	56	35	95
1956	35	32	46	67	89	96	86	91	86	80	50	40	96
1957	31	40	55	81	83	81	101	95	82	88	57	43	101
1958	40	55	56	82	88	91	96	103	89	81	61	39	103
1959	37	34	61	68	87	96	96	97	87	69	51	40	97
1960	37	39	44	66	87	87	102	95	96	83	60	37	102
1961	43	44	53	72	87	100	96	99	95	80	62	39	100
1962	40	38	55	84	76	89	84	94	84	74	55	47	94
1963	40	52	74	77	87	88	96	94	89	90	57	40	96

Minimum Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1906	-19	-25	-22	10	21	38	37	36	29	17	-8	-29	-29
1907	-38	-35	-5	11	15	33	41	32	20	8	-7	-18	-38
1908	-24	-25	-23	-5	20	34	39	30	25	12	-5	-27	-27
1909	-41	-30	-16	12	15	40	44	36	26	10	-15	-25	-41
1910	-28	-33	5	15	20	27	41	28	24	9	-14	-28	-33
1911	-38	-24	-8	5	16	33	39	32	30	8	-18	-25	-38
1912	-45	-24	-21	18	23	33	30	43	19	18	7	-26	-45
1913	-41	-37	-31	21	11	35	41	42	27	7	5	-14	-41
1914	-32	-36	-10	7	23	40	41	34	28	15	-24	-34	-36
1915	-44	-13	-8	13	28	26	35	30	28	16	-4	-20	-44
1916	-47	-35	-31	6	21	32	44	34	17	9	-11	-38	-47
1917	-38	-42	-30	10	24	25	34	34	25	1	6	-41	-42
1918	-40	-35	-6	9	10	35	40	39	24	5	-1	-34	-40
1919	-36	-31	-27	13	24	32	42	40	23	-3	-22	-38	-38
1920	-41	-33	-28	-6	27	32	44	38	29	15	-10	-30	-41
1921	-31	-28	-10	10	19	36	43	37	31	21	-25	-27	-31
1922	-43	-34	-20	12	30	35	37	40	26	12	6	-34	-43
1923	-26	-37	-32	-5	19	35	39	34	22	9	2	-29	-37
1924	-38	-15	-10	16	19	34	41	35	32	27	-13	-38	-38
1925	-28	-25	-23	20	19	35	41	35	25	-4	-5	-15	-28
1926	-26	-11	-19	-3	20	29	43	40	16	5	-7	-31	-31
1927	-37	-25	2	12	23	41	48	37	23	12	-12	-35	-37
1928	-30	-15	-7	3	27	33	46	31	19	8	1	-29	-30
1929	-37	-42	-11	10	14	32	41	37	23	21	-15	-30	-42
1930	-37	-28	-12	14	22	39	42	42	15	7	-18	-24	-37
1931	-17	-17	-12	9	15	35	42	35	30	17	-6	-13	-17
1932	-32	-29	-27	2	27	42	40	38	22	8	-13	-25	-32
1933	-19	-42	-14	4	28	40	45	43	24	11	0	-34	-42
1934	-27	-25	-5	15	23	34	33	30	23	15	6	-44	-44
1935	-38	-22	-19	0	30	28	51	35	22	7	-16	-25	-38
1936	-36	-49	-15	-9	26	35	49	44	25	-1	-15	-31	-49
1937	-38	-29	1	14	25	31	48	42	27	14	-15	-26	-38
1938	-35	-27	-1	9	23	36	48	43	31	19	-12	-38	-38
1939	-24	-39	-14	2	28	33	47	39	16	1	-3	6	-39
1940	-32	-25	-11	0	27	39	49	42	30	20	23	-32	-32
1941	-24	-33	-21	14	28	38	39	42	22	3	-12	-15	-33
1942	-35	-28	3	14	24	33	41	40	15	-1	-12	-22	-35
1943	-43	-25	-29	15	17	33	45	37	29	22	5	-16	-43
1944	-18	-34	-19	-11	16	35	41	41	29	18	-9	-27	-34
1945	-31	-26	-27	13	14	34	37	39	21	10	-19	-30	-31
1946	-30	-30	-12	18	19	32	38	39	24	11	-22	-31	-34
1947	-32	-35	-21	10	15	26	37	42	17	22	-12	-28	-35
1948	-35	-30	-35	-1	30	41	45	42	32	4	-14	-30	-35
1949	-37	-35	-19	12	24	36	36	35	24	12	-2	-27	-37
1950	-41	-27	-24	5	27	28	41	32	27	19	-17	-36	-41
1951	-41	-32	-25	14	31	35	37	41	22	11	-17	-30	-41
1952	-36	-12	-22	14	26	36	40	39	32	6	-10	-11	-36
1953	-26	-18	-23	4	24	35	43	44	24	18	5	-15	-26
1954	-42	-18	-14	-6	20	34	42	45	27	15	4	-9	-42
1955	-25	-33	-28	24	23	39	40	40	22	11	-14	-32	-33
1956	-26	-31	-21	12	26	41	42	33	24	16	-9	-27	-31
1957	-34	-28	-7	4	28	35	46	38	21	6	-7	-23	-34
1958	-15	-31	-5	8	33	42	34	27	16	-25	-28	-31	
1959	-32	-33	0	14	23	35	42	41	28	14	-16	0	-33
1960	-32	-24	-23	14	22	39	41	41	26	6	-13	-21	-32
1961	-38	-16	-3	5	18	38	45	42	22	15	-3	-28	-38
1962	-37	-39	-35	10	16	30	37	38	29	14	5	-23	-39
1963	-36	-26	-10	18	18	33	42	42	33	18	-8	-27	-36

STATION HISTORY

A cooperative weather reporting station was established at the School of Forestry in 1892 where it has remained to the present time. Instruments include maximum and minimum thermometers exposed in an approved instrument shelter, and a standard 8 inch precipitation gage.

Because of considerable missing data in the early years this summary is based upon the complete record from 1906 through 1963. To find the extremes, however, we have used all available record.

Observers at Bottineau have been:

T. S. Lawrie.....Jan. 1892 to Feb. 1894
J. N. Greiner.....Apr. 1894 to Aug. 1895
J. J. Linton.....May 1896 to May 1897
J. A. Greig.....Aug. 1897 to July 1901
William Stewart.....Jan. 1902 to June 1903
John F. Haskett.....Oct. 1903 to Mar. 1906
Joseph Quamme.....Apr. 1906 to Mar. 1907
A. J. Carlson.....May 1907 to Dec. 1911
H. F. Steinmeier.....Jan. 1912 to May 1920
N. A. Eckberg.....June 1920 to Aug. 1923
E. C. Evenson.....Sept. 1923 to Apr. 1925
J. H. Hoffner.....May 1925 to Aug. 1925
N. A. Eckberg.....Sept. 1925 to Oct. 1, 1925
Thomas M. Street.....Oct. 1925 to May 1927
N. A. Eckberg.....June 1927 to Mar. 1930
Arthur Marchand.....Apr. 1930 to May 1930
No individual listed...May 1930 to Dec. 1935
A. A. McMaster.....Jan. 1936 to Jan. 1949
Raymond E. Olson.....Feb. 1949 to Apr. 1954
Alfred N. Bessesen.....May 1954 to Mar. 1958
Raymond J. Pfau.....Apr. 1958 to Jun. 1959
Duane L. Greene, Walter Pasicznyk, William Backler, and Robert S. Thullen July 1959 to Present