U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

IN COOPERATION WITH ST. AUGUSTINE & ST. JOHNS COUNTY CHAMBER OF COMMERCE

LATITUDE 29° 54' N
LONGITUDE 81° 19' W
ELEV. (GROUND) 15 Ft.

CLIMATOLOGICAL SUMMARY

MEANS AND EXTREMES FOR PERIOD 1925-1954

CLIMATOGRAPHY OF THE U. S.
STATION: ST. AUGUSTINE, FLORIDA
STATION NO. 08-7812-2

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Mean degree days (Base 65°)	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet, Hail: 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)	30	30	30	29		29		4	30	28		30	30		30		28	29	29	29	29	
Jan.	68.8	48.2	58.5	87	1925	19	1940	191	2.27	2.67	1948	0	0		0		5	0	0	2	0	Jan.
Feb.	70.4	49.3	59.9	88	1939	24	1943	159	2.81	3.15	1936	0.1	2.0	1951	2.0	1951	5	0	0	1	0	Feb.
Mar.	74.0	53.0	63.5	91	1935	26	1932	92	3.64	5.51	1953	T	T	1948	T	1948	6	*	0	*	0	Mar.
Apr.	78.8	58.8	68.8	92	1948	35	1940	25	3.39	3.34	1953	T	T	1945+	T	1945+	5	1	0	0	0	Apr.
May	84.7	65.0	74.9	98	1953+	45	1940	0	2.65	2.82	1947	0	0		0		5	4	0	0	0	May
June	88.9	70.5	79.7	103	1944	59	1954+	0	5.58	6.01	1945	T	T	1952+	T	1952+	9	13	0	0	0	June
July	90.2	72.1	81.2	101	1942	65	1954	0	6.71	3.66	1925	0	0		0		10	18	0	0	0	July
Aug.	89.7	72.4	81.1	100	1954+	59	1931	0	5.61	5.11	1943	T	T	1952+	T	1952+	8	15	0	0	0	Aug.
Sept.	87.3	71.5	79.4	99	1944	57	1938	0	7.86	8.94	1949	T	T	1949	T	1949	10	8	0	0	0	Sept.
Oct.	81.1	64.4	72.8	94	1941+	37	1937	20	5.72	9.40	1941	0	0		0		7	1	0	0	0	Oct.
Nov.	73.7	54.6	64.2	88	1925	25	1940	113	2.52	2.40	1954	0	0		0		4	0	0	1	0	Nov.
Dec.	68.6	48.9	58.8	88	1927	23	1937+	214	3.11	3.88	1925	T	T	1928	T	1928	5	0	0	2	0	Dec.
Year	79.7	60.7	70.2	103	1944	19	1940	814	51.87	9.40	1941	0.1	2.0	1951	2.0	1951	79	60	0	6	0	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

\+ Also on earlier dates, months or years.

* Less than one half.

NARRATIVE CLIMATOLOGICAL SUMMARY

St. Augustine, the county seat of St. Johns County, is in the east coast area of the extreme northern portion of the Florida Peninsula. It is located on the west bank of the Matanzas River, between two and three miles from the Atlantic Ocean. The surface of the ground is flat and the soil is sandy on the higher ground. Swamp and marsh lands cover an appreciable area in the vicinity of St. Augustine.

The moderating influence of the waters of the Atlantic on maximum temperatures in summer and minimum temperatures in winter is pronounced along the immediate coast but diminishes noticeably a few miles inland. The mean daily maximum temperature at the beach is about one degree lower in winter and about two and one-half degrees lower in summer than in the city. Mean daily minimum temperatures are quite close together in summer but the beach averages nearly a degree warmer in winter. Temperatures reach 90° or higher at the beach on only a little over half as many days as in the city. Annual precipitation totals are some greater in the city than at the beach but the period of coincident records at the two locations is too short to establish comparative values.

Examination of the weather data available for the St. Augustine area reveals that the highest temperature ever recorded here was 104° in June 1914 and the lowest was 13° in February 1899. One other temperature appears worthy of mention here: 16° in December 1894. Extremes for other months exhibit only minor variations from those of the last thirty years as tabulated above. On the basis of mean temperatures, January 1940 with a mean of 46.6° is the coldest month and July 1827 with a mean of 84.4° is the warmest month in the records. July 1942 is a close second for warmth with a mean of 84.2°. The average dates of the first freezing temperature in the fall and the last in the spring are December 18th and February 5th respectively.

The four month period from the middle of June to the middle of October constitutes the rainy season and accounts for fifty percent of the annual precipitation. The major portion of the rainy season precipitation is due to the frequent afternoon and early evening thunderstorms which in addition to supplying moisture also reduce the summer daytime temperatures to comfortable levels very quickly. Tropical storms that occasionally pass in the vicinity of St. Augustine bring some of the heaviest rains. The record rainfall for one day of 9.40 inches in October 1941 was associated with a tropical storm; however, the 8.94 inches in September 1949 as well as 9.30 inches in one day in February 1920 were due to causes other than tropical storms. The greatest amount of precipitation recorded in a calendar month at the St. Augustine station was 23.90 inches in September 1871. The 20th century contender as a wet month is February 1920 with 21.50 inches. Two calendar months, January 1902 and February 1911, brought no rain to St. Augustine. The annual precipitation has ranged from 31.59 inches in 1911 to 79.51 inches in 1953.

Tropical storms occasionally bring hazardous conditions to this area and the chances of hurricane force winds in any given year are estimated at about one in forty. The usual paths of hurricanes in this area are such that most Atlantic storms will either cross the coast line well south of St. Augustine or move northward some distance offshore. Storms from the Gulf of Mexico may move through this area, but do so only after moving a hundred miles or more over land which would usually cause a material reduction in the intensity of a storm. Thunderstorms occasionally develop to severe proportions and include some of the destructive elements such as hail, excessive rain, or strong winds. Tornadoes have caused property damage in St. Johns County on three occasions during the period 1916-1954 inclusive.

Snow occurs infrequently in the St. Augustine area. The Army Meteorological Register indicates that there was snow on two days in February 1831 and the next appearance of snow in the records is 0.7 of an inch on December 30, 1917. The night of February 2-3, 1951 brought St. Augustine's heaviest snow with an accumulation of two inches in the city and one inch at the beach station. Hail appears in the records on fourteen days in the last thirty years.

Observational records of humidity and wind are not available for St. Augustine but records at Daytona Beach, similarly located with respect to the coast line about 50 miles to the south, are closely representative of conditions at St. Augustine. These records indicate an early morning average relative humidity of 89 to 93 percent, and an early afternoon average of 58 to 70 percent - the lower values being applicable to March through May and the higher values to July through September. Prevailing wind directions are northerly in winter and southerly in summer with a high frequency of easterly components that produce a seabreeze on most warm days. Wind velocities generally range from twelve to twenty mph during the day and usually drop below ten mph at night.

R. L. Anderson
State Climatologist
Weather Bureau Office
Jacksonville, Florida

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	63.1	63.4	64.8	69.2	70.6	78.8	80.4	80.4	82.4	75.5	65.0	57.9	71.0
1926	59.2	62.2	59.8	65.0	73.6	78.3	81.2	81.2	79.2	72.8	62.9	62.3	69.8
1927	57.6	65.6	64.2	71.5	76.2	80.8	81.4	81.0	79.2	72.8	68.0	58.4	71.4
1928	54.2	59.4	66.0	67.2	71.5	78.3	81.0	80.7	77.8	74.4	62.9	56.8	69.2
1929	59.8	60.9	67.3	71.4	75.1	77.8	79.5	80.0	78.5	70.6	67.2	55.8	70.3
1930	58.4	60.2	58.5	69.8	74.4	77.6	82.8	80.2	80.6	70.6	63.4	53.0	70.8
1931	52.9	54.9	57.4	64.8	71.9	78.0	81.8	79.4	79.5	73.8	66.4	67.5	69.0
1932	63.6	66.9	58.8	67.2	73.2	78.2	81.8	79.8	77.4	72.2	61.0	61.7	70.2
1933	59.4	61.8	61.6	67.0	75.5	76.7	78.6	79.6	81.2	74.0	62.2	62.8	70.0
1934	59.8	57.2	60.7	69.0	74.6	79.7	81.6	80.8	79.4	75.0	65.8	58.1	70.1
1935	58.4	58.0	68.2	71.2	76.4	80.0	80.4	81.6	78.6	74.8	65.7	51.1	70.4
1936	56.2	54.6	64.6	70.6	76.6	79.4	82.3	82.2	81.2	75.7	63.2	60.4	70.6
1937	67.8	60.0	61.0	68.4	74.6	81.0	81.2	80.6	78.7	71.2	62.8	55.5	70.2
1938	56.8	62.6	68.6	69.8	76.0	78.0	80.2	81.4	78.7	70.6	67.6	57.2	70.6
1939	60.0	65.8	67.4	69.9	75.0	81.0	81.6	80.0	80.4	74.5	62.2	57.6	71.3
1940	46.6	55.4	61.4	66.8	71.2	79.3	80.4	81.0	77.0	69.4	63.6	61.6	67.8
1941	55.5	52.3	57.2	69.1	72.8	78.8	80.8	82.5	79.8	77.4	64.8	61.0	69.3
1942	54.0	52.2	60.4	67.0	76.4	81.2	84.2	82.2	79.7	74.0	66.4	61.0	69.9
1943	59.7	57.4	64.2	68.6	76.6	81.5	82.1	81.6	78.5	69.0	61.9	57.4	69.9
1944	54.8	63.9	66.3	70.0	75.7	82.2	79.5	80.2	80.2	70.1	62.8	52.9	69.9
1945	55.8	62.4	69.4	72.6	74.2	80.4	80.8	81.4	80.8	72.4	63.8	55.4	70.8
1946	59.8	59.6	65.4	69.9	75.1	78.2	80.8	79.9	77.9	72.5	69.8	61.6	70.9
1947	64.6	51.8	58.4	71.4	75.2	78.6	79.0	80.9	78.2	72.6	63.7	58.6	69.4
1948	51.8	58.2	65.8	71.5	77.0	80.6	80.8	79.8	79.2	69.4	69.8	63.3	70.6
1949	61.6	65.3	62.1	69.7	75.8	79.6	81.7	81.3	79.3	75.9	59.1	61.8	71.1
1950	66.5	63.1	64.3	64.8	76.4	82.0	80.0	81.1	79.0	74.6	60.5	54.6	70.6
1951	58.1	57.9	65.3	67.6	75.5	80.2	82.2	83.3	80.8	74.5	62.9	63.1	70.9
1952	60.5	59.2	64.7	67.2	76.1	83.3	82.3	81.3	79.0	71.5	63.3	56.9	70.5
1953	58.8	61.6	67.6	69.0	78.4	80.7	82.0	81.0	78.8	70.8	64.1	60.3	71.1
1954	59.6	61.3	63.1	72.0	72.7	80.4	81.5	83.2	81.1	71.4	61.3	54.9	70.2

STATION HISTORY

Records of temperature data in the vicinity of St. Augustine begin with October 1824. Observations were made by Army personnel and the station appears to have been interchangeably referred to as Fort Marion or St. Augustine until 1876. There were several breaks in the record but the following periods were covered: October 1824-December 1834; July 1836-December 1839; October 1840-June 1846; February 1851-February 1852; May 1856-December 1859; January 1864-May 1866 (partially); November 1870; August 1871-November 1871; and May 1874. Records of rainfall begin with January 1844. Details such as the exact location of the station and exposure of the instruments are not known.

From June 1876 through December 1899 the station was known as St. Francis Barracks with the Post Surgeon as the observer.

The station was designated as St. Augustine in January 1900 and no changes in name have occurred since then. Observers from January 1900 through April 1916 were E. P. Mickler, H. J. Usina, J. R. Palmer, G. I. Pollock, E. F. Joyce, and A. L. Marsh in that order. From May 1916 through October 1918 the station was located about 1/4 mile west of the Post Office and J. E. Crutchfield was the observer. W. F. Brown served as observer from November 1918 through May 1930 with the station located on a lawn four blocks south of the Post Office.

From September 1930 to September 1936 the station was over partly sodded ground one mile north of the Post Office, Latitude 29° 55' N, Longitude 81° 19' W. Mrs. L. M. Hopkins served as observer here until August 1933 and was followed by R. R. Hourigan who served until September 1936.

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	4.51	1.01	1.71	1.06	6.59	2.85	10.16	4.70	4.91	7.20	3.18	9.89	57.77
1926	3.23	1.77	3.71	4.10	1.39	5.93	13.26	3.06	8.00	2.10	3.30	1.50	51.35
1927	0.50	3.79	1.76	2.40	T	5.56	5.19	4.34	3.40	3.30	1.87	2.30	34.41
1928	1.08	0.68	3.45	8.36	4.20	5.00	8.50	4.55	7.24	4.08	1.87	1.40	50.41
1929	3.65	1.79	1.93	3.81	3.67	6.35	7.88	5.58	8.93	2.55	0.52	2.41	49.07
1930	2.79	1.98	9.50	1.06	3.57	13.75	4.15	3.00	5.95	1.44	3.37	8.04	58.60
1931	3.40	1.61	5.29	5.51	3.98	1.98	2.42	4.55	1.97	1.17	0.71	6.08	38.67
1932	0.27	1.18	4.07	0.98	3.81	13.21	3.14	6.51	5.44	8.08	6.95	0.37	54.01
1933	2.24	3.61	1.92	6.40	2.04	4.90	7.68	6.04	6.83	7.19	3.04	0.54	52.43
1934	1.56	5.01	3.52	6.55	7.09	5.59	7.61	6.57	1.87	6.73	0.98	1.32	54.40
1935	3.35	1.50	0.41	2.49	2.24	3.97	8.88	2.79	11.30	2.98	0.12	1.47	41.50
1936	2.78	10.07	3.95	1.00	1.76	5.27	3.28	3.11	2.29	8.03	1.38	3.32	46.24
1937	2.46	4.25	2.53	4.13	1.92	1.47	7.47	4.80	7.23	4.92	4.43	1.61	47.22
1938	2.26	2.18	1.26	3.42	3.22	5.11	6.49	3.76	8.49	7.67	2.25	0.75	46.86
1939	1.36	2.55	1.13	4.21	3.65	6.54	2.75	6.16	6.16	2.53	2.04	2.25	41.33
1940	2.37	3.47	2.30	3.41	1.02	7.66	6.85	5.56	7.80	0.09	0.47	7.24	48.24
1941	3.82	3.30	3.24	1.28	1.05	8.98	10.72	6.99	5.83	16.72	4.98	4.93	71.84
1942	1.47	4.18	6.59	0.56	0.91	9.79	2.86	5.16	5.80	0.72	0.71	4.44	43.19
1943	1.60	0.23	3.11	1.69	4.01	4.09	7.00	10.11	7.90	6.52	0.84	1.73	48.83
1944	4.13	1.55	9.70	5.32	0.45	4.69	10.15	5.41	6.49	8.83	1.31	0.39	58.42
1945	3.34	0.20	0.25	6.83	0.58	9.82	8.22	7.57	9.93	3.51	1.74	9.47	61.46
1946	2.28	1.84	3.55	1.10	4.66	4.20	7.83	8.07	6.17	6.15	6.03	0.18	52.06
1947	1.63	5.81	5.80	5.15	4.54	10.12	5.12	4.60	8.05	8.51	4.68	1.85	65.86
1948	5.85	2.14	8.99	2.31	0.95	5.74	7.44	7.16	12.77	6.72	1.45	3.38	64.90
1949	1.09	5.44	0.96	4.87	3.27	2.74	4.83	11.01	20.89	4.26	1.99	1.29	62.64
1950	0.11	0.70	3.88	2.10	1.91	4.30	8.57	1.92	7.67	8.16	2.20	3.54	45.06
1951	0.97	2.18	2.30	0.84	1.45	3.46	6.50	1.46	9.64	9.63	5.95	2.56	46.94
1952	0.78	5.91	3.91	1.46	3.16	0.22	5.07	4.07	12.80	9.62	0.40	1.08	48.48
1953	2.68	2.45	6.41	8.24	0.83	3.05	6.79	19.15	17.40	5.31	2.14	5.46	79.91
1954	0.63	1.99	2.16	1.12	1.56	1.01	4.47	0.40	6.72	6.97	4.64	2.47	34.14

STATION HISTORY-Cont'd.

Arthur L. Marsh was the observer from September 1936 until April 1954 with the station on a lawn near his home, one-half mile west of the Post Office, Latitude 29° 54' N, Longitude 81° 19' W. The elevation of the ground was 10 feet above mean sea level.

In April 1954 the City of St. Augustine was designated as observer and the station moved to its present location on the ground at the City Water Treatment Plant, 1.1 mile west of the Post Office.

ST. AUGUSTINE BEACH

Mrs. T. B. Gillespie furnished climatological records from privately owned standard equipment for the period January 1949 through July 1953. This station was on open ground near the ocean front, 5.5 miles SSE of St. Augustine, ground elevation 10 feet above mean sea level, Latitude 29° 50' N and Longitude 81° 16' W.