U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: ALEXANDRIA ESLER AP, LA **COOP ID: 160104**

Climate Division: LA 5 **NWS Call Sign: ESF** **Elevation: 112 Feet** **Lat: 31˚24N** **Lon: 92˚18W**

Temperature (˚F)

	Mean (1)			Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	57.9	36.6	47.3	81	1975	29	55.1	1989	5	1962	12	37.9	1977	561	0	.0	.0	27.4	.1	9.8	.0
Feb	63.2	39.9	51.6	85	1977	25	57.9	1976	11	1960	14	41.0	1978	383	6	.0	.0	26.5	.2	6.1	.0
Mar	70.6	47.2	58.9	90	1974	29	64.8	1974	20	1968	1	54.0	1971	211	23	.0	@	30.6	.0	1.3	.0
Apr	77.3	53.7	65.5	94+	1987	22	70.7	1981	31+	1962	2	61.2	1983	68	83	.0	.1	30.0	.0	.2	.0
May	84.1	62.0	73.1	99	1998	31	76.8	2000	41+	1963	2	69.1	1971	7	255	.0	3.8	31.0	.0	.0	.0
Jun	90.4	68.5	79.5	101+	1977	6	83.4	1998	49	1966	1	76.7	1974	0	433	.4	18.6	30.0	.0	.0	.0
Jul	92.9	71.1	82.0	103	2000	20	85.4	1998	55	1967	15	79.0	1972	0	527	1.3	25.9	31.0	.0	.0	.0
Aug	92.9	70.2	81.6	109	2000	31	84.9	1999	56+	1963	16	78.9	1973	0	513	1.2	25.3	31.0	.0	.0	.0
Sep	87.9	64.9	76.4	109	2000	1	80.2	1998	38	1967	29	72.6	1974	1	344	.1	9.7	30.0	.0	.0	.0
Oct	79.2	53.3	66.3	94+	1989	2	70.6	1984	29	1993	31	60.0	1976	70	110	.0	1.1	31.0	.0	.1	.0
Nov	68.6	44.6	56.6	89	1965	27	62.8	1985	18	1976	30	49.1	1976	272	20	.0	.0	28.8	.0	2.8	.0
Dec	60.6	38.7	49.7	84	1995	3	59.0	1984	6	1989	24	41.0	2000	484	9	.0	.0	26.0	.2	8.3	.0
Ann	77.1	54.2	65.7	109+	Sep 2000	1	85.4	Jul 1998	5	Jan 1962	12	37.9	Jan 1977	2057	2323	3.0	84.5	353.3	.5	28.6	.0

\+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1960-2001

(3) Derived from 1971-2000 serially complete daily data

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	5.96	5.76	7.54	1994	27	14.00	1990	1.23	2000
Feb	4.45	4.31	5.23	1966	10	9.48	1997	.61	2000
Mar	5.53	5.16	5.57	1977	3	11.54	1980	2.42	1978
Apr	5.14	4.26	6.90	1983	6	14.87	1995	1.01	1987
May	5.40	5.32	4.66	1989	18	12.27	1994	.38	1998
Jun	3.82	3.52	7.32	1984	7	11.96	1989	.87	1971
Jul	4.13	4.14	7.93	1969	23	8.20	1994	.89	2000
Aug	3.45	3.45	5.70	1998	7	6.23	1977	1.18	1999
Sep	3.29	2.82	5.00	1979	21	9.53	1973	.43	1989
Oct	4.53	3.98	5.23	1972	22	15.02	1994	.31	1978
Nov	4.61	4.42	3.88	2001	27	10.02	2000	1.29	1999
Dec	5.83	5.35	6.12	1964	10	13.01	1982	2.05	1980
Ann	56.14	56.87	7.93	Jul 1969	23	15.02	Oct 1994	.31	Oct 1978

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.1	7.3	3.9	2.2
Feb	9.3	6.1	3.0	1.4
Mar	9.8	6.8	3.7	1.8
Apr	8.9	6.0	2.9	1.8
May	9.9	6.3	3.4	1.4
Jun	8.3	5.3	1.7	.8
Jul	10.2	6.7	2.6	1.1
Aug	8.7	5.7	2.5	1.0
Sep	9.4	5.6	2.7	1.3
Oct	4.9	3.5	2.0	1.2
Nov	7.3	4.5	2.4	1.1
Dec	10.9	7.1	3.9	2.0
Ann	108.7	70.9	34.7	17.1

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.68	2.25	3.10	3.85	4.58	5.34	6.18	7.17	8.46	10.49	12.37
Feb	1.14	1.57	2.21	2.78	3.35	3.94	4.60	5.38	6.40	8.01	9.52
Mar	2.19	2.70	3.43	4.03	4.59	5.17	5.79	6.51	7.42	8.82	10.10
Apr	.91	1.36	2.11	2.82	3.53	4.31	5.19	6.27	7.69	10.00	12.19
May	1.23	1.73	2.52	3.23	3.94	4.69	5.54	6.55	7.87	9.98	11.97
Jun	.88	1.23	1.79	2.29	2.80	3.33	3.92	4.63	5.57	7.05	8.45
Jul	1.48	1.87	2.43	2.90	3.35	3.82	4.32	4.90	5.65	6.80	7.86
Aug	1.37	1.69	2.14	2.51	2.87	3.22	3.61	4.06	4.62	5.49	6.28
Sep	.78	1.09	1.57	2.00	2.42	2.88	3.38	3.99	4.78	6.03	7.22
Oct	.60	.97	1.61	2.24	2.91	3.64	4.49	5.53	6.95	9.26	11.49
Nov	1.38	1.82	2.48	3.04	3.59	4.16	4.79	5.52	6.48	7.97	9.35
Dec	2.33	2.87	3.63	4.26	4.86	5.46	6.11	6.87	7.82	9.29	10.62
Ann	40.89	43.87	47.67	50.54	53.09	55.55	58.08	60.87	64.25	69.13	73.35

\+ Also occurred on an earlier date(s)
\# Denotes amounts of a trace
@ Denotes mean number of days greater than 0 but less than .05
****** Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals
(2) Derived from station's available digital record: 1960-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

Snow Fall >= Thresholds

Snow Depth >= Thresholds

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	.5	.0	#	0	2.0	1971	7	2.4	1973	2	1977	31	#	1977	.4	.3	.0	.0	.0	.3	.0	.0	.0
Feb	#	.0	0	0	#	1988	5	#+	1988	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1993	12	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1977	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	0	0	#	1976	28	#+	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	0	0	#	1993	22	#+	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.5	.0	N/A	N/A	2.0	Jan 1971	7	2.4	Jan 1973	2	Jan 1977	31	#+	May 1977	.4	.3	.0	.0	.0	.3	.0	.0	.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values
Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

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Freeze Data

Spring Freeze Dates (Month/Day)

Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	4/12	4/03	3/27	3/22	3/16	3/11	3/05	2/27	2/18
32	3/31	3/22	3/16	3/11	3/06	3/01	2/24	2/18	2/09
28	3/08	2/28	2/22	2/17	2/12	2/08	2/03	1/28	1/20
24	2/27	2/17	2/09	2/03	1/28	1/22	1/15	1/06	12/21
20	2/11	1/31	1/23	1/15	1/05	0/00	0/00	0/00	0/00
16	1/14	12/27	0/00	0/00	0/00	0/00	0/00	0/00	0/00

Fall Freeze Dates (Month/Day)

Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	10/24	10/31	11/04	11/08	11/11	11/15	11/18	11/23	11/29
32	10/31	11/07	11/11	11/16	11/19	11/23	11/27	12/02	12/09
28	11/11	11/21	11/28	12/05	12/10	12/16	12/22	12/30	1/09
24	11/29	12/10	12/17	12/24	12/30	1/05	1/12	1/21	2/07
20	12/15	12/28	1/08	1/18	1/31	0/00	0/00	0/00	0/00
16	1/06	1/25	0/00	0/00	0/00	0/00	0/00	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	276	263	254	246	239	232	224	215	202
32	291	280	271	264	258	251	244	236	224
28	331	318	310	303	297	291	285	277	267
24	>365	>365	360	344	334	325	316	306	293
20	>365	>365	>365	>365	>365	>365	>365	343	327
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

***** Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Derived from 1971-2000 serially complete daily data

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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	561	383	211	68	7	0	0	0	1	70	272	484	2057
60	421	257	108	18	0	0	0	0	0	23	161	345	1333
57	344	192	64	6	0	0	0	0	0	10	111	270	997
55	297	155	42	3	0	0	0	0	0	5	83	227	812
50	201	81	11	0	0	0	0	0	0	1	33	138	465
32	17	1	0	0	0	0	0	0	0	0	0	5	23

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	490	547	835	1005	1272	1423	1550	1536	1333	1063	738	552	12344
55	57	57	164	318	559	733	837	823	643	355	131	61	4738
57	42	38	124	262	497	673	775	761	583	298	99	43	4195
60	26	19	75	184	404	583	682	668	493	218	60	24	3436
65	0	6	23	83	255	433	527	513	344	110	20	9	2323
70	0	0	4	24	129	284	372	358	204	40	4	0	1419

Growing Degree Units (2)

Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
40	300	390	602	786	1049	1201	1328	1309	1108	837	526	350	300	690	1292	2078	3127	4328	5656	6965	8073	8910	9436	9786
45	177	261	449	636	894	1051	1173	1154	958	682	384	227	177	438	887	1523	2417	3468	4641	5795	6753	7435	7819	8046
50	95	150	303	487	739	901	1018	999	808	528	255	134	95	245	548	1035	1774	2675	3693	4692	5500	6028	6283	6417
55	48	78	169	346	584	751	863	844	658	379	148	74	48	126	295	641	1225	1976	2839	3683	4341	4720	4868	4942
60	24	33	82	209	430	601	708	689	508	239	75	37	24	57	139	348	778	1379	2087	2776	3284	3523	3598	3635
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	180	241	368	515	723	833	904	893	766	552	322	214	180	421	789	1304	2027	2860	3764	4657	5423	5975	6297	6511

(1) Derived from the 1971-2000 Monthly Normals
(2) Derived from 1971-2000 serially complete daily data
Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

Complete documentation available from:
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Notes

a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.

b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.

c. Only observed validated values were used to select the extreme daily values.

d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.

e. Degree Days were derived using the same techniques as the 1971-2000 normals.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set .
Documentation of the serially complete data set is available from the link below:

g. Snowfall and snow depth statistics were derived from the Snow Climatology.
Documentation for the Snow Climatology project is available from the link under references.

Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were are for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html
Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,
www1.ncdc.noaa.gov/pub/data/special/ serialcomplete_jam_0900.pdf