

Climatography of the United States

No. 20

1971-2000

Station: LUKACHUKAI, AZ

COOP ID: 025129

Climate Division: AZ 2

NWS Call Sign:

Elevation: 6,520 Feet Lat: 36° 25N

Lon: 109° 14W

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	40.3	17.4	28.9	75	1972	25	37.2	1986	-20	1963	12	21.1	1979	1121	0	.0	.0	4.4	5.8	30.2	1.8
Feb	44.8	22.4	33.6	69	1967	28	41.6	1995	-20	1989	6	27.0	1974	881	0	.0	.0	9.8	2.3	24.8	.6
Mar	51.9	28.5	40.2	78	1967	24	46.5	1989	-2	1971	2	33.9	1973	768	0	.0	.0	19.0	.5	22.0	@
Apr	59.8	34.4	47.1	83	2000	28	55.2	1989	3	1975	2	39.2	1975	539	1	.0	.0	25.0	.0	11.9	.0
May	70.3	42.6	56.5	91	1984	24	62.6	1996	15+	1969	8	50.7	1975	283	18	.0	.1	30.4	.0	2.7	.0
Jun	82.0	51.9	67.0	98+	1968	15	71.2	1994	30	1970	11	61.5	1975	57	115	@	4.2	30.0	.0	.2	.0
Jul	86.8	58.1	72.5	100	1985	8	75.0	1989	34+	1999	2	69.3	1992	2	232	@	9.8	31.0	.0	.0	.0
Aug	84.1	57.0	70.6	98	1965	12	73.7	1994	30	1999	28	67.4	1976	6	178	.0	4.2	31.0	.0	.1	.0
Sep	76.6	49.7	63.2	92	1971	14	66.0	1998	15	1971	19	58.6	1971	105	50	.0	.3	30.0	.0	.4	.0
Oct	65.0	38.7	51.9	85	2001	4	57.7	1988	12	1968	5	44.9	1984	413	4	.0	.0	28.6	.1	6.5	.0
Nov	50.3	27.7	39.0	76+	1967	20	47.5	1999	-8	1976	28	33.4	2000	779	0	.0	.0	16.0	1.2	21.4	.1
Dec	41.1	19.3	30.2	65	1955	26	37.5	1980	-25	1968	22	23.6	1978	1079	0	.0	.0	5.9	4.9	29.3	.6
Ann	62.8	37.3	50.1	100	Jul 1985	8	75.0	Jul 1989	-25	Dec 1968	22	21.1	Jan 1979	6033	598	.0	18.6	261.1	14.8	149.5	3.1

+ 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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1951-2001

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

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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: LUKACHUKAI, AZ

COOP ID: 025129

Climate Division: AZ 2

NWS Call Sign:

Elevation: 6,520 Feet Lat: 36°25N

Lon: 109°14W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.92	.73	2.02	1973	5	3.43	1973	.00+	2000	1.5	1.4	.5	.1	.00	.00	.00	.00	.31	.56	.85	1.19	1.65	2.41	3.14
Feb	.41	.31	1.20	1989	5	1.20	1989	.00+	1999	1.1	.9	.2	@	.00	.00	.00	.00	.20	.33	.45	.58	.75	1.01	1.24
Mar	.56	.28	2.00	1981	3	2.34	1981	.00+	2000	2.3	1.4	.1	.1	.00	.00	.00	.04	.14	.27	.43	.65	.97	1.53	2.10
Apr	.37	.20	1.52	1970	1	3.53	1988	.00+	2000	1.7	1.2	.2	@	.00	.00	.00	.00	.07	.17	.30	.45	.66	1.02	1.38
May	.46	.00	1.43	1992	21	2.40	1976	.00+	2000	1.1	.9	.3	.1	.00	.00	.00	.00	.00	.00	.09	.34	.75	1.52	2.33
Jun	.29	.00	.82	1988	27	1.77	1988	.00+	2000	.9	.8	.3	.0	.00	.00	.00	.00	.00	.00	.00	.30	.57	.98	1.36
Jul	1.40	1.52	1.66	1969	19	5.03	1983	.00+	2000	4.0	3.5	.9	.2	.00	.00	.33	.61	.87	1.14	1.44	1.80	2.28	3.03	3.76
Aug	1.40	1.21	1.60	1955	4	4.96	1984	.00+	2000	4.1	3.5	1.2	.2	.00	.00	.38	.62	.86	1.12	1.42	1.78	2.24	3.02	3.76
Sep	1.04	.94	1.60	1976	27	3.52	1990	.00+	2000	2.9	2.4	.8	.1	.00	.00	.00	.27	.53	.78	1.05	1.38	1.80	2.52	3.17
Oct	1.01	.72	1.60	1969	4	4.77	1972	.00+	1999	3.1	2.3	.8	.2	.00	.00	.00	.20	.40	.63	.91	1.26	1.75	2.59	3.41
Nov	.72	.58	1.36	1978	12	2.90	1978	.00+	2000	2.6	1.8	.5	.1	.00	.00	.00	.07	.24	.43	.64	.91	1.27	1.89	2.49
Dec	.84	.60	1.40	1991	11	6.14	1972	.00+	2000	2.9	1.8	.4	@	.00	.00	.00	.13	.32	.52	.76	1.06	1.47	2.18	2.86
Ann	9.42	9.38	2.02	Jan 1973	5	6.14	Dec 1972	.00+	Dec 2000	28.2	21.9	6.2	1.1	4.12	4.96	6.13	7.09	7.99	8.89	9.86	10.98	12.38	14.51	16.44

+ 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: 1951-2001

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

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

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: LUKACHUKAI, AZ

COOP ID: 025129

Climate Division: AZ 2

NWS Call Sign:

Elevation: 6,520 Feet

Lat: 36°25N

Lon: 109°14W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	1.7	.0	#	0	7.5	1971	3	12.0	1971	8	1990	20	1	1990	.2	.2	.2	.1	.0	.0	.0	.0	.0
Feb	.9	.0	1	0	3.0	1971	22	5.0	1971	14	1989	5	12	1988	.3	.3	.1	.0	.0	.0	.0	.0	.0
Mar	.7	.0	#	0	4.0	1971	2	4.5	1971	6	1990	12	#+	1998	.3	.1	.1	.0	.0	.1	.1	.0	.0
Apr	.0	.0	#	0	.0	0	0	.0	0	#	1999	4	#	1999	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.1	1973	6	.1	1973	#	1973	6	#	1973	.1	.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	#	1986	26	#	1986	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.1	.0	0	0	1.0	1971	30	1.0	1971	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	#	0	1.5	1971	21	2.9	1971	2	1971	21	#+	1999	.3	.1	.0	.0	.0	.1	.0	.0	.0
Dec	.1	.0	#	0	.5	1999	3	.5	1999	12	1990	21	2	1990	.1	.0	.0	.0	.0	.0	.0	.0	.0
Ann	3.7	.0	N/A	N/A	7.5	Jan 1971	3	12.0	Jan 1971	14	Feb 1989	5	12	Feb 1988	1.4	.8	.4	.1	.0	.2	.1	.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

Complete documentation available from:

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No. 20 1971-2000

Station: LUKACHUKAI, AZ

COOP ID: 025129

Climate Division: AZ 2

NWS Call Sign:

Elevation: 6,520 Feet

Lat: 36° 25N

Lon: 109° 14W

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	6/16	6/10	6/06	6/02	5/29	5/26	5/22	5/17	5/11
32	6/06	5/30	5/24	5/20	5/15	5/11	5/06	5/01	4/24
28	5/18	5/11	5/06	5/02	4/28	4/24	4/20	4/15	4/09
24	5/04	4/28	4/23	4/19	4/15	4/11	4/07	4/02	3/27
20	4/28	4/19	4/13	4/07	4/02	3/28	3/23	3/16	3/08
16	4/17	4/04	3/27	3/19	3/12	3/05	2/25	2/17	2/04
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	9/12	9/18	9/23	9/27	9/30	10/04	10/08	10/12	10/19
32	9/18	9/25	10/01	10/06	10/10	10/14	10/19	10/25	11/01
28	10/03	10/09	10/13	10/17	10/21	10/24	10/28	11/02	11/08
24	10/11	10/17	10/22	10/26	10/30	11/02	11/06	11/11	11/17
20	10/16	10/22	10/27	10/31	11/03	11/07	11/11	11/15	11/22
16	10/23	11/01	11/06	11/12	11/16	11/21	11/26	12/02	12/11
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	151	141	134	129	123	118	112	105	96
32	181	170	161	154	147	140	133	124	113
28	202	193	186	180	175	169	164	157	147
24	227	217	209	203	197	191	185	177	167
20	248	236	228	221	214	208	200	192	180
16	289	275	265	257	249	241	232	222	208

* 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

Complete documentation available from:

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of the United States
No. 20
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Station: LUKACHUKAI, AZ

COOP ID: 025129

Climate Division: AZ 2 NWS Call Sign: Elevation: 6,520 Feet Lat: 36°25N Lon: 109°14W

Degree Days to Selected Base Temperatures (°F)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1121	881	768	539	283	57	2	6	105	413	779	1079	6033
60	966	741	614	398	167	17	0	0	39	275	629	924	4770
57	873	657	524	317	113	7	0	0	17	203	541	831	4083
55	811	601	465	268	84	3	0	0	9	162	482	769	3654
50	656	461	325	164	33	0	0	0	1	81	342	614	2677
32	190	79	29	6	0	0	0	0	0	0	32	143	479

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	93	122	284	458	758	1048	1253	1195	934	615	243	87	7090
55	0	0	7	30	129	362	540	482	253	63	3	0	1869
57	0	0	3	19	96	305	478	420	202	43	1	0	1567
60	0	0	0	10	57	225	385	327	133	21	0	0	1158
65	0	0	0	1	18	115	232	178	50	4	0	0	598
70	0	0	0	0	3	42	97	63	10	0	0	0	215

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	9	38	108	260	521	823	1012	944	703	388	102	11	9	47	155	415	936	1759	2771	3715	4418	4806	4908	4919
45	0	11	45	151	375	673	857	789	555	253	39	1	0	11	56	207	582	1255	2112	2901	3456	3709	3748	3749
50	0	0	14	69	242	523	702	634	406	141	12	0	0	0	14	83	325	848	1550	2184	2590	2731	2743	2743
55	0	0	0	19	126	375	547	479	265	56	0	0	0	0	0	19	145	520	1067	1546	1811	1867	1867	1867
60	0	0	0	0	48	240	392	324	139	15	0	0	0	0	0	0	48	288	680	1004	1143	1158	1158	1158
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	8	37	85	184	335	530	664	618	442	249	69	13	8	45	130	314	649	1179	1843	2461	2903	3152	3221	3234

(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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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