The Oklahoma Climatological Survey was established with its own budget and offices in the spring of 1980. The mission of the Survey is to provide a climatological archiving and information service to the State of Oklahoma. Although as many as 160 stations may appear in any one Summary, it may not be possible to list every station report received at the Survey as we plan to have the summaries in the mail before the middle of each month. If you would like information about a station that does appear, please feel free to contact the Climate Survey. If you would like to know more about the services we offer or our plans for the future, please let us hear from you. You can help us by contributing to our newspaper clipping file. If you see an article in your local newspaper dealing with some impact of climate on your community, please clip it and send it to us along with the name of the newspaper and the date the article appeared.

OKLAHOMA CLIMATE SUMMARY MAY 1985

In sharp contrast to the cool wet spring weather of earlier months, May 1985 was warm and dry across most of Oklahoma. This early summer weather was punctuated by occasional heavy thunderstorms and dangerously high temperatures and humidity. Monthly moisture departures ranged from more than 5 inches below normal to more than 1 inch above normal May precipitation. Mean May temperatures ranged from 1 to 3 degrees above normal. The National Weather Service released one heat stress warning during May. A heat stress alert is issued when temperature and humidity combine to create potentially hazardous weather conditions (see special article on "heat").

Central Oklahoma was hot and dry with Oklahoma City tying one daily maximum temperature record and setting a new record the next day. A temperature of 104 was recorded at Will Rogers Airport on May 30, easily surpassing the old record for that date, 94, set in 1934. May 1985 in Oklahoma City ranked 2nd driest and 10th warmest in the last 37 years.

The month got off to a damp beginning as the remains of a storm system which entered the State at the end of April lingered into May. A map of rainfall totals for the period April 28 to May 3, 1985 is presented in Figure 1. An impressive 9.15 inches of precipition was reported at Kansas, in Northeastern Oklahoma for the 24-hour period ending at 7 a.m., May 1. This followed a 2 inch report for the previous 24-hour period.

Part of an extensive storm system generated more severe weather in Oklahoma on Monday, May 6. A tornado caused minor damage in the town of Tanzier, west of Woodward. Heavy rains and golf-ball size hail accompanied the storm. Later estimates of agricultural damage resulting from the wind and hail topped $500,000. Wheat in a one half-mile wide by 15-mile long swath was destroyed. Agricultural officials estimated a loss of $120/acre of damaged wheat.

Two persons were injured and six mobile homes damaged by two tornadoes sited near Harrah in Central Oklahoma on May 12. A third tornado touched down in southern Logan County near 1-35. Other funnel clouds were sighted near Moore, Hardesty, Edmond and Pawnee County. Wind speeds as high as 70 mph and soft-ball size hail were reported in Central Oklahoma. A second wave of storms moved across Central Oklahoma on Monday, May 13, with wind gust of 60 to 80 mph reported in Mustang and Edmond. A tornado was confirmed on the 13th, just east of the Lincoln-Oklahoma County line. Damage from the tornado was also reported just east of the Oklahoma County line. Another small tornado was reported at Yanush, near Clayton in Southeastern Oklahoma.

Locally heavy thunderstorms on May 20 resulted in flooding and power outages in the Lawton and Altus areas. Damage reported in the Nowata area was attributed to the high winds and hail of these Monday afternoon storms. Funnel cloud sitings were made in the Healdton-Wilson area.

The next group of severe thunderstorms moved across the State on Sunday, May 26. Heavy thunderstorms crossed North-Central Oklahoma which produced baseball-size hail, heavy rains and high winds. Marble-size hail "completely covered the ground" in parts of Blackwell and hail ranging from baseball to golfball size was reported in the Covington and Fairmont areas. Hail in chunks as large as grapefruits was reported in Edmond causing extensive roof and glass damage. Wheat yield losses attributed to the same storm were estimated at 35 percent.

The month ended with a heat-wave that set new daily temperature records across the State. High humidities during much of the last week in May contributed to making this the most hazardous summer-time weather this year. Fortunately, humidities dropped rapidly on May 30, the day when the majority of record high temperatures were recorded.

Selected May 1985 maximum temperature records (period of record = 1948-1984).

Station Name	Old Record	Year	New Record	Day
Billings	102	1967	104	29
Enid	101	1967	104	30
Helena	101	1967	105	30
Perry	99	1958	103	31
Hammon	105	1966	106	30
Okeene	103	1953	105	30
Weatherford	101	1967	108	31
Chickasha	102	1967	107	30
El Reno	98	1955	105	30
Oklahoma City*	94	1934	104	30
Kingfisher	103	1953	105	30
Carnegie	104	1953	108	30
Chattanooga	105	1966	107	30
Hobart	103	1966	107	30
Waurika	103	1963	105	30

* Special period of record = 1925-1984.

Figure 1: Dominant Precipitation Pattern - April 28 - May 3, 1985 (in inches).

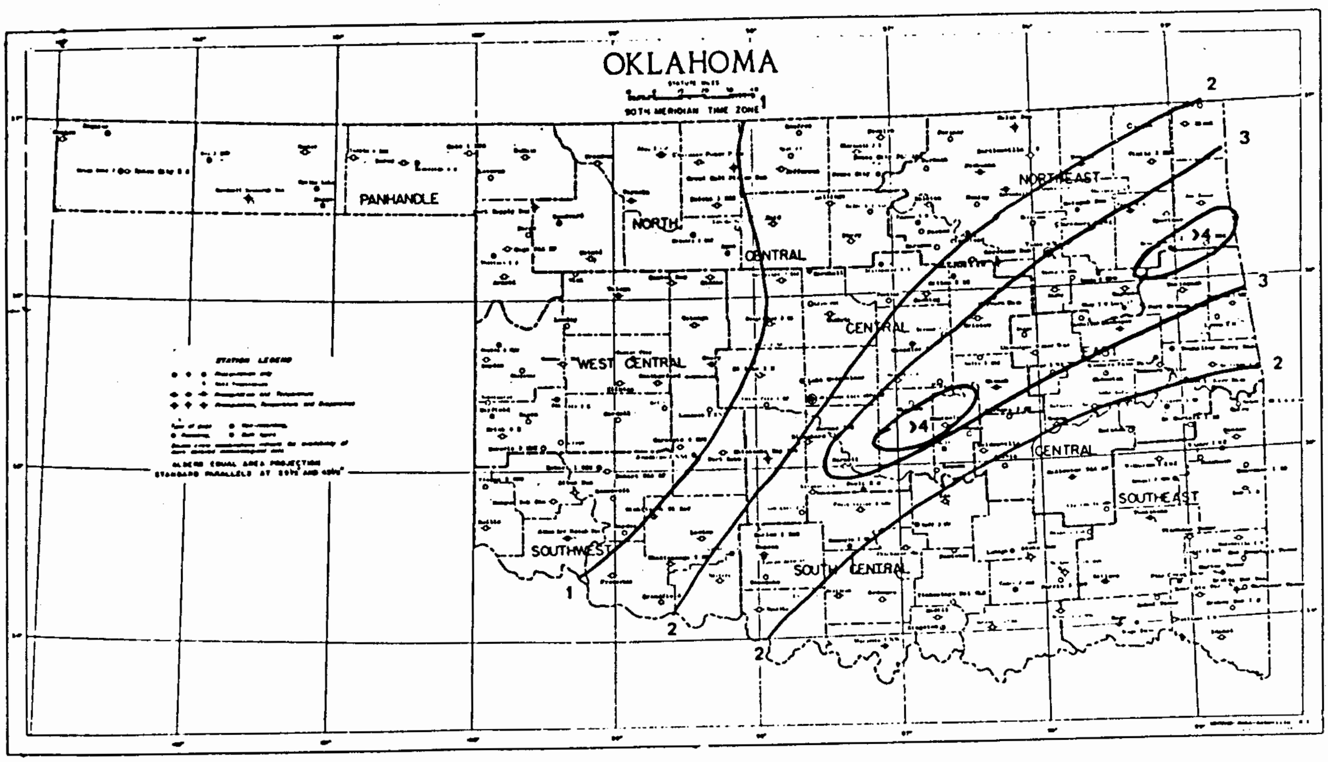
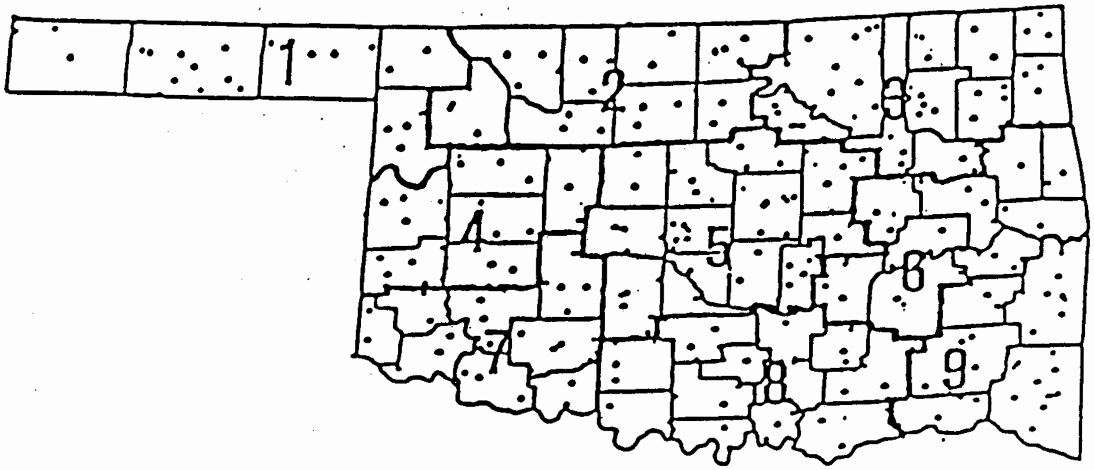


TABLE OF 1984/1985 MAY COMPARISONS

Station	May Temperatures (F) 1984	1985	May Precipitation (in.) 1984	1985
Goodwell	62.5	65.0	1.23	3.956
Lahoma	64.6	68.0	0.52	1.421
Mutual	64.2	67.7	1.07	1.260
Tulsa	67.9	70.6	11.94	4.752
Elk City	68.9	69.9	0.67	2.580
Oklahoma City	68.8	70.1	1.97	1.303
McAlester	69.5	69.9	3.26	3.342
Altus Irr. Sta.	72.7	73.2	0.31	1.923
Durant	71.3	71.3	4.36	3.101
Ada	69.5	70.8	1.99	2.171
Tuskahoma	69.4	70.0	5.34	3.680

MAY EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Kenton	1	36	15
	Zoe	9	36	2
Maximum temperature (F)	Mangum rs.	7	109	30
Maximum 24-hour precipitation	Kansas	3	9.15"	1



EXPLANATION OF TABLES

Two kinds of tables appear in this summary. The first is a set of tables containing all reporting stations grouped by climate division. The figure above provides the general station distribution and the locations of the climate divisions. Each station table contains the following:

- station name:
- station identification number: These are usually assigned by the National Climatic Data Center.
- climate division: See the figure above.
- mean monthly temperature:
- number of temperature observations: These are the actual number of temperature reports recorded at the station during the current month. Missing observations may result in artificially high or low mean monthly temperatures.
- deviation from normal: The deviation of the observed mean monthly temperature from the monthly station normal. A positive value indicates the month was warmer than normal. A negative value indicates the month was cooler than normal. Normal monthly temperatures may be calculated by subtracting the deviation from the observed temperature.
- maximum daily maximum: The maximum daily maximum temperature observed during the current month and year and the day which it occurred.
- minimum daily minimum: The minimum daily minimum temperature observed during the current month and year and the day which it occurred.
- heating degree days: HDD are calculated each day of the month for which there is a temperature report and summed. They are a qualitative measure of how much heat was required to maintain an indoor temperature of 65 degrees. Missing observations may result in a artificially high or low value. For February 1984 HDD would be calculated as:

$$\sum_{i=1}^{29} (65 - (TMAX_i + TMIN_i)/2)$$

deviation from normal heating degree days: A positive value indicates higher than normal heating requirements for the month as a whole. A negative value indicates lower than normal heating requirements for the month as a whole. Normal HDD may be calculated by subtracting the deviation from observed HDD.

cooling degree days: CDD are calculated each day of the month for which there is a temperature report and summed. They are a proxy measure of how much cooling was required to maintain an indoor temperature of 65 degree. Missing observations may result in an artificially high or low value. For June, CDD would be calculted as:

$$\sum_{i=1}^{30} ((TMAX_i + TMIN_i)/2 - 65)$$

deviation from normal cooling degree days: A positive value indicates higher than normal cooling requirements for the month as a whole. A negative value indicates lower than normal cooling requirements for the month as a whole. Normal cooling degree days may be found by subtracting the deviation from the observed cooling degree days.

total precipitation: Often incorrectly referred to as mean precipitation this value is the sum of all precipitation reported during the month at a station. If snow occurred, it is to be melted and its water equivalent recorded.

number of precipitation observations: The number of days a rain or no-rain observation was reported. Missing observations frequently result in artificially low total precipitation values.

deviation from normal precipitation: A positive value indicates more rain than normal was recieved. A negative valued indicates less than was expected rainfall was received. Normal rainfall may be calculated by subtracting the deviation from monthly total.

maximum 24-hour report and day: The maximum amount of precipitation recorded during the station's 24-hour observation period for the current month and year and the day on which it was recorded.

The second set of tables contain similar information but are the average or extreme over all the stations reporting in each climate division.

EXPLANATION OF MAPS

To give a statewide perspective, a series of maps is produced each month from the information contained in the station tables. Each map is calculated using between 5Ø and 2ØØ observations. Only station with complete monthly records are used. Each observation is put into one of three categories and assigned a plus (+), minus(-), or a dot (.). The minus is the lowest numeric catory, the dot is the middle and the plus the highest numeric category. If a map location has no report, a value is estimated. Each map is accompanied by its own legend. The categories will vary from month to month throughout the year. The categories for the deviations from normal maps will always remain constant. This is to facilitate comparisons between months and across years.

MAY 1985 SUMMARY FOR NORTHWEST DIVISION (CD1)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ARNETT	332	1	68.5	30	2.2	100.	30	48.	15	21.5	-65.5	126.5	-1.5	2.031	31	-2.11	1.70	7
BEAVER	593	1	67.7	30	1.4	100.	30	43.	15	37.5	-56.5	117.5	-16.5	.990	31	-2.27	.50	20
BOISE CITY	908	1	65.7	31	2.5	98.	29	40.	16	67.0	-63.0	90.0	16.0	.680	31	-1.75	.22	4
BUFFALO	1243	1	69.5	31	1.0	103.	30	42.	15	19.5	-43.5	157.5	-13.5	3.990	31	-.40	2.30	6
FARGO	3070	1	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.190	31	-2.77	.98	7
GAGE	3407	1	68.1	31	1.6	101.	30	43.	15	34.0	-53.0	131.5	-2.5	1.604	31	-2.06	1.59	7
GATE	3489	1	68.6	30	999.0	100.	29	44.	13	20.5	9999.0	127.0	9999.0	2.480	31	99.99	1.99	6
GOODWELL RES. STA.	3628	1	65.0	30	.3	98.	29	38.	15	77.0	-42.0	77.5	-31.5	3.956	31	1.09	2.95	22
GUYMON	3835	1	67.0	31	999.0	102.	29	37.	28	52.0	9999.0	115.5	9999.0	.212	31	99.99	.12	7
HOOKER	4298	1	66.7	31	1.3	100.	30	43.	14	52.0	-45.0	103.5	-5.5	1.650	31	-1.78	1.33	20
KENTON	4766	1	64.3	30	.8	93.	29	36.	15	89.0	-27.0	68.5	-.5	.980	31	-1.51	.25	21
LAVERNE	5045	1	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.632	31	-.76	2.11	7
REGNIER	7534	1	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.190	31	-.73	.53	5
TURPIN	9017	1	66.5	30	999.0	102.	29	40.	15	54.0	9999.0	100.0	9999.0	.670	31	99.99	.32	20

MAY 1985 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ALVA	194	2	70.0	31	999.0	101.	30	46.	15	12.0	9999.0	168.0	9999.0	4.790	31	99.99	4.14	7
BILLINGS	755	2	68.7	30	999.0	104.	29	46.	16	14.0	9999.0	124.5	9999.0	1.490	31	-3.11	.68	14
BLACKWELL	818	2	68.4	30	999.0	100.	30	43.	16	28.0	9999.0	129.0	9999.0	1.834	31	99.99	.51	27
BRAMAN	1075	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.901	31	99.99	1.59	7
CEDARDALE	1620	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.001	31	99.99	.00	14
CHEROKEE POWER PLAN	1724	2	71.6	31	2.9	105.	30	44.	15	6.5	-38.5	211.5	51.5	1.341	31	-2.51	.86	7
ENID	2912	2	70.7	31	1.7	104.	30	48.	15	6.5	-33.5	183.0	19.0	2.810	31	-2.20	1.04	14
FORT SUPPLY DAM	3304	2	68.2	30	.7	100.	30	46.	14	25.5	-43.5	121.0	-26.0	3.600	31	-.11	3.31	7
FREEDOM	3358	2	71.2	31	999.0	103.	30	42.	15	8.0	9999.0	200.5	9999.0	1.213	31	99.99	.98	7
GREAT SALT PLAINS D	3740	2	69.8	30	999.0	104.	30	49.	3	10.5	9999.0	155.0	9999.0	1.030	28	-2.55	.63	7
HARDY	3909	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.533	31	99.99	.85	13
HELENA	4019	2	69.2	30	999.0	105.	30	46.	23	14.5	9999.0	139.0	9999.0	.873	31	-3.47	.74	7
JEFFERSON	4573	2	70.2	31	1.5	104.	30	45.	15	12.5	-34.5	174.5	12.5	1.750	31	-2.17	1.26	13
LAHOMA AGRIC	4950	2	68.0	27	999.0	106.	30	40.	15	16.5	9999.0	97.0	9999.0	1.421	29	99.99	1.21	7
LAMONT	5013	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.300	31	99.99	.92	14
MEDFORD	5768	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.521	31	99.99	.70	13
MORRISON	6065	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.820	31	99.99	.81	14
MUTUAL	6139	2	67.7	30	.7	104.	30	43.	22	40.5	-38.5	123.0	-22.0	1.260	31	-3.06	1.09	7
NEWKIRK	6278	2	69.7	31	1.5	96.	30	47.	3	13.0	-38.0	159.0	8.0	1.961	31	-2.76	.66	28
ORIENTA	6751	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.980	31	99.99	1.98	7
PERRY	7012	2	71.7	31	2.4	103.	31	47.	3	5.5	-32.5	213.5	41.5	3.531	31	-1.75	1.74	21
PONCA CITY	7201	2	70.4	31	2.7	100.	30	47.	3	15.0	-50.0	183.5	35.5	3.053	31	-1.44	1.33	1
RED ROCK	7505	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.280	31	-2.35	.90	14
RENFROW	7556	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.750	31	-2.08	1.21	7
WAYNOKA	9404	2	70.5	30	1.4	104.	30	42.	15	11.0	-37.0	176.0	1.0	.402	31	-4.04	.40	7
WOODWARD	9760	2	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.441	31	-1.63	2.34	7

NOTE: 999.0, 999.0, 99.99 indicate missing records

Trace = .001

MAY 1985 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
AVANT	418	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.860	31	99.99	.92	1
BARNSDALL	535	3	70.2	31	999.0	95.	30	45.	15	14.5	9999.0	175.5	9999.0	3.801	31	-1.47	.88	29
BARTLESVILLE	548	3	69.9	31	1.2	96.	30	46.	18	17.0	-19.0	168.0	18.0	4.291	31	-.38	1.60	21
BIXBY	782	3	69.0	30	.4	95.	25	45.	15	20.5	-22.5	140.5	-14.5	3.901	31	-.75	1.02	29
CHELSEA	1717	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.110	31	99.99	.53	1
CLAREMORE	1828	3	67.8	30	-.1	93.	30	44.	15	27.0	-36.0	111.5	-40.5	3.072	31	-1.60	1.04	27
BURBANK	1256	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.331	31	99.99	1.65	21
CLEVELAND	1902	3	71.1	20	999.0	96.	30	48.	15	3.5	9999.0	125.0	9999.0	1.330	28	99.99	.48	12
FORAKER	3250	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.632	31	-1.19	1.56	21
HOLLOW	4258	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.351	31	-.51	1.03	14
HOMINY	4289	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.920	31	-.72	1.39	27
HULAH DAM	4393	3	67.1	30	-.2	94.	30	42.	3	43.5	-21.5	105.5	-30.5	5.690	27	1.38	1.03	21
JAY TOWER	4567	3	68.2	31	999.0	90.	30	46.	15	23.0	9999.0	123.5	9999.0	6.210	31	99.99	2.50	1
KANSAS	4672	3	66.8	31	999.0	87.	30	46.	15	33.0	9999.0	90.0	9999.0	9.251	31	99.99	3.20	22
KEYSTONE DAM	4812	3	69.2	30	999.0	97.	30	45.	3	17.5	9999.0	142.0	9999.0	3.380	31	99.99	1.26	27
LENNAPAH	5118	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	5.652	31	99.99	1.29	1
MANNFORD 6 NW	5522	3	70.7	30	999.0	96.	30	47.	15	9.5	9999.0	181.0	9999.0	4.400	31	99.99	.94	27
MIAMI	5855	3	66.6	30	-1.3	90.	30	42.	2	40.0	-18.0	88.0	-60.0	3.011	31	-2.02	.67	29
RALSTON	7390	3	69.1	31	999.0	95.	30	45.	15	15.5	9999.0	142.5	9999.0	4.312	31	-.41	1.25	29
NOWATA	7485	3	70.2	25	999.0	91.	26	48.	2	7.5	9999.0	138.5	9999.0	2.720	27	99.99	.68	27
ONETA	6713	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.833	31	99.99	1.15	29
PAWHUSKA	6937	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.010	31	99.99	1.18	27
PAWNEE	6940	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.710	31	-.13	2.00	13
PRYOR	7309	3	66.9	29	-1.2	89.	30	45.	15	32.0	-23.0	86.5	-64.5	3.054	31	-1.83	.80	29
QUAPAW	7358	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.791	31	-1.39	1.35	8
RAMONA 4N	7394	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.750	31	99.99	1.21	7
SKIATOOK	8258	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.180	31	-1.49	1.00	27
SPAVINAW	8380	3	68.6	31	999.0	89.	31	45.	3	20.0	9999.0	132.5	9999.0	5.313	31	.25	1.78	1
SPAVINAW LAKE AG	8382	3	68.2	31	999.0	88.	31	45.	4	20.5	9999.0	119.5	9999.0	5.363	31	99.99	1.78	1
TULSA	8992	3	70.6	31	1.5	96.	30	49.	3	9.5	-30.5	182.5	15.5	4.752	31	-.39	1.19	13
UPPER SPAVINAW	9101	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	6.222	31	99.99	1.34	1
VINITA	9203	3	68.3	29	.7	90.	30	45.	3	23.0	-39.0	120.0	-23.0	4.840	30	-.51	2.01	14
WAGONER	9247	3	69.4	31	.2	90.	30	49.	3	12.5	-17.5	148.5	-12.5	5.880	31	1.05	1.61	13
WANN	9298	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.801	31	99.99	.90	21
WYNONA	9792	3	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.304	31	99.99	.85	26

NOTE: 999.0, 999.0, 99.99 indicate missing records.
Trace = .001

MAY 1985 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
CANTON DAM	1445	4	69.7	30	1.2	104.	30	47.	15	15.0	-35.0	156.5	-2.5	.950	29	-4.00	.78	7
CHEYENNE	1738	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.481	31	99.99	.45	7
CLINTON	1909	4	72.2	31	3.2	106.	30	43.	15	6.0	-35.0	228.0	63.0	2.390	31	-2.61	.72	21
COLONY	2039	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.940	31	99.99	.43	7
CORDELL	2125	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.850	31	-3.83	.70	7
ELK CITY	2849	4	69.9	31	999.0	101.	30	44.	15	14.0	9999.0	165.0	9999.0	2.580	31	-2.35	1.26	14
ERICK	2944	4	70.5	31	2.0	106.	29	43.	15	8.0	-38.0	178.0	24.0	1.221	31	-3.19	.58	21
GEARY	3497	4	69.9	31	1.0	103.	30	46.	14	10.5	-29.5	161.0	1.0	.760	31	-4.04	.51	7
HAMMON	3871	4	69.5	30	1.2	106.	30	43.	5	14.5	-48.5	149.0	-16.0	.770	31	-3.79	.70	7
LEEDEY	5090	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.631	31	-4.15	.53	7
MORAVIA	6035	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.730	31	-2.02	1.80	14
OKEENE	6629	4	71.2	31	1.7	105.	30	46.	15	4.0	-32.0	196.5	20.5	.830	31	-4.16	.83	7
RETROP	7565	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.740	31	99.99	.53	7
REYDON	7579	4	69.6	24	999.0	102.	29	40.	15	16.5	9999.0	126.5	9999.0	.582	26	-3.71	.53	7
SAYRE	7952	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.220	31	-3.19	1.04	7
SWEETWATER	8652	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.840	31	99.99	.82	7
TALOGA	8700	4	69.4	31	1.5	103.	30	44.	23	22.5	-33.5	158.0	12.0	.901	31	-4.23	.62	7
THOMAS	8815	4	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.360	31	99.99	.90	7
WATONGA	9364	4	70.8	31	999.0	103.	30	48.	15	12.0	9999.0	191.5	9999.0	.830	31	-4.15	.46	7
WEATHERFORD	9422	4	71.2	31	1.9	108.	31	45.	14	6.0	-27.0	197.5	30.5	1.004	31	-3.72	.62	7

NOTE: 9999.0, 999.0, 99.99 indicate missing records.
Trace = .001

MAY 1935 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
AMBER	200	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.590	31	99.99	.93	7
ARCADIA	288	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.931	31	99.99	1.02	27
TINKER AFB	325	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.383	31	99.99	2.01	13
BLANCHARD	830	5	71.6	31	999.0	101.	30	48.	14	3.0	9999.0	208.5	9999.0	2.212	31	99.99	1.44	13
BRISTOW	1144	5	70.3	31	1.2	98.	30	45.	15	13.0	-19.0	178.5	19.5	2.831	31	-2.90	1.93	27
CHICKASHA	1750	5	72.3	31	2.1	107.	30	49.	15	3.5	-20.5	229.5	43.5	1.250	31	-3.87	.61	6
COX CITY	2196	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.730	31	99.99	.65	19
CRESCENT	2242	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.801	31	99.99	.88	27
CUSHING	2318	5	69.2	30	.7	97.	30	50.	14	13.0	-36.0	137.5	-20.5	2.860	31	-2.49	.73	22
EL RENO	2818	5	69.7	31	1.0	105.	30	45.	22	12.5	-24.5	157.0	5.0	1.350	31	-3.82	.59	14
GUTHRIE	3821	5	72.3	29	3.0	104.	30	48.	14	3.0	-31.0	215.0	48.0	2.671	29	-2.75	1.06	27
HENNESSEY	4055	5	69.0	31	-.2	104.	30	48.	15	17.0	-24.0	141.0	-31.0	3.781	31	-1.54	2.15	14
INGALLS	4489	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.822	31	99.99	2.00	13
KINGFISHER	4861	5	70.6	31	1.2	105.	30	46.	14	10.5	-24.5	184.5	13.5	1.040	31	-3.90	.54	7
U. JOHNS CR.(KINGFI	4864	5	70.7	30	999.0	105.	29	47.	14	9.0	9999.0	179.5	9999.0	1.040	31	99.99	.54	7
KONOWA	4915	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.451	31	-3.65	.92	21
MARSHALL	5589	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.440	30	-2.81	1.22	14
MEEKER	5779	5	72.4	31	3.4	96.	30	49.	14	2.0	-33.0	231.5	72.5	6.080	31	.44	4.07	12
MULHALL	6110	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.981	31	99.99	.85	27
NORMAN	6386	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.541	31	-4.35	.85	13
OILTON	6616	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.780	31	99.99	1.85	27
OKEMAH	6638	5	70.7	31	1.6	97.	30	50.	15	5.5	-21.5	181.5	27.5	3.460	31	-1.56	1.50	27
OKLAHOMA CITY	6661	5	70.1	31	1.7	104.	30	49.	14	14.0	-27.0	172.5	25.5	1.303	31	-4.20	.82	13
PERKINS	7003	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.970	31	-2.23	.62	1
PIEDMONT	7068	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.711	31	99.99	.35	7
PURCELL	7327	5	70.6	31	1.1	102.	30	47.	15	6.0	-29.0	179.0	4.0	1.722	31	-4.30	.56	7
PRAGUE	7264	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.630	31	-2.63	.73	27
SEMINOLE	8042	5	72.2	31	1.8	100.	31	48.	15	1.5	-21.5	225.0	34.0	2.480	31	-2.87	.68	27
SHAWNEE	8110	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.861	31	-4.15	.65	27
STELLA	8479	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.040	31	99.99	1.94	13
STILLWATER	8501	5	69.0	30	.6	101.	30	46.	15	23.0	-25.0	143.5	-10.5	1.702	31	-3.38	.46	13
STROUD	8563	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.182	31	99.99	1.04	27
TECUMSEH	8751	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.643	21	99.99	.67	21
TROUSDALE	8960	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.410	31	99.99	.49	21
UNION CITY	9086	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.691	31	-5.21	.51	7
WELTY	9479	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.251	31	99.99	1.20	27
WEWOKA	9575	5	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.390	31	-2.94	.80	27

NOTE: 9999.0, 999.0, 99.99 indicate missing records.
Trace = .001

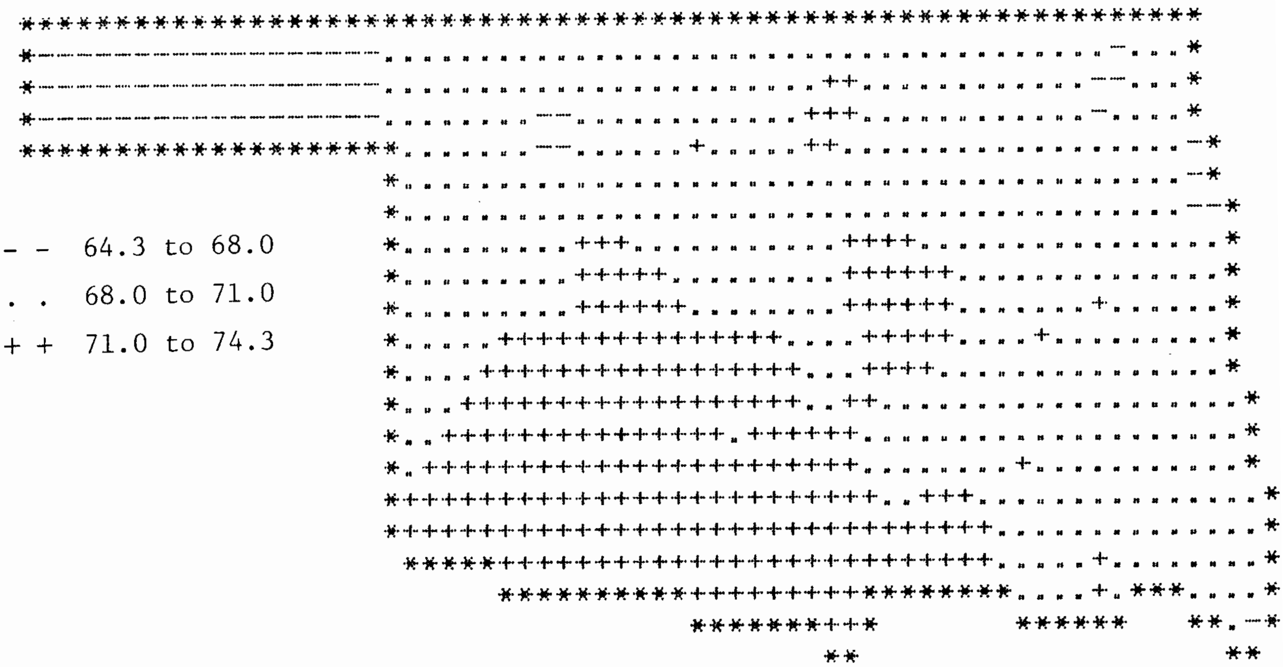
MAY 1985 SUMMARY FOR SOUTHWEST DIVISION (CD7)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ALTUS IRR. STA.	179	7	73.2	31	1.6	106.	30	47.	15	0.0	-18.0	253.0	31.0	1.923	31	-2.73	.75	20
ALTUS DAM	184	7	72.2	30	999.0	104.	30	49.	14	4.5	9999.0	222.0	9999.0	.390	31	-4.39	.27	21
ALTUS AFB	477	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.975	31	99.99	1.42	21
CARNEGIE	1504	7	72.1	31	2.1	108.	30	40.	14	5.5	-18.5	226.5	47.5	2.080	31	-3.04	1.58	7
CHATANOOGA	1706	7	72.3	31	1.5	107.	30	44.	31	4.0	-14.0	230.5	32.5	.710	31	-4.05	.56	20
DUNCAN	2668	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.510	31	99.99	1.40	21
FLETCHER	3191	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.810	31	99.99	.81	22
FREDERICK	3353	7	74.3	30	2.0	106.	29	48.	14	1.5	-13.5	280.0	39.0	1.660	31	-3.08	1.40	20
GRANDFIELD	3709	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.000	31	-3.94	.97	20
HOBART FAA	4204	7	71.9	30	2.8	107.	30	44.	22	9.5	-29.5	217.0	51.0	.640	30	-4.34	.50	7
HOLLIS	4249	7	70.9	28	-.9	105.	30	43.	15	2.0	-17.0	168.5	-61.5	1.050	31	-3.02	.42	19
LAWTON	5063	7	71.3	27	999.0	104.	30	48.	13	2.5	9999.0	173.0	9999.0	4.042	30	-1.65	3.50	21
LOCO	5247	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.611	31	99.99	.99	21
FORT SILL	5068	7	999.0	9	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.922	30	99.99	2.60	21
LOOKEBA	5329	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.661	31	99.99	.30	7
MANGUM RES. STA.	5509	7	73.7	31	2.7	109.	30	46.	15	0.0	-24.0	270.0	60.0	.780	31	-3.94	.60	20
ROOSEVELT	7727	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.250	31	-5.00	.21	21
SEDAN	8016	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.504	31	99.99	.50	7
SNYDER	8299	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.543	31	-4.46	.23	21
WICHITA MT. WL. REF	9629	7	71.8	30	2.6	104.	30	44.	15	3.0	-27.0	207.0	47.0	.650	31	-4.59	.30	7
VICI	9172	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.480	31	99.99	1.10	7
VINSON	9212	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.650	31	-1.99	1.79	21
WALTERS	9278	7	73.2	31	1.7	106.	30	48.	15	2.0	-15.0	257.5	38.5	1.260	31	-4.05	.38	20
WILLOW	9668	7	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.380	31	99.99	.19	7

MAY 1985 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

NAME	ID	DIV	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	70.8	31	1.1	98.	30	50.	4	4.0	-19.0	184.0	16.0	2.171	31	-3.46	1.39	27
ALLEN	147	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.170	31	99.99	.55	13
ARDMORE	292	8	71.9	31	-.5	98.	30	51.	14	2.5	-4.5	217.0	-19.0	2.530	31	-2.11	1.10	21
ATOKA DAM	394	8	71.0	30	999.0	95.	30	50.	15	3.5	9999.0	183.5	9999.0	4.030	31	99.99	1.28	21
BOKCHITO	917	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.341	31	99.99	1.84	14
CANEY	1437	8	70.6	30	999.0	91.	29	52.	3	1.0	9999.0	167.5	9999.0	2.150	31	99.99	.88	14
CENTRAHOMA	1648	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.080	31	99.99	1.50	26
CHICKASAW NRA	1745	8	70.2	30	999.0	99.	30	46.	3	19.5	9999.0	175.0	9999.0	2.450	31	99.99	1.19	21
COLEMAN	2011	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	.680	31	99.99	.43	8
COMANCHE	2054	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.800	31	99.99	1.62	21
DAISY 4ENE	2354	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.260	31	-2.04	1.71	27
DUNCAN	2660	8	72.5	30	1.6	103.	30	49.	14	2.5	-14.5	227.5	27.5	2.120	28	-3.50	.84	21
DURANT USDA	2678	8	71.3	30	999.0	96.	30	50.	15	0.0	9999.0	189.5	9999.0	3.101	31	-1.90	1.24	14
ELMORE CITY	2872	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	1.522	31	99.99	1.30	20
FARRIS	3083	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.744	31	99.99	1.31	14
GRADY	3688	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.110	31	99.99	.65	21
HEALDTON	4001	8	70.3	26	999.0	100.	30	46.	15	4.5	9999.0	142.0	9999.0	3.380	26	-1.47	2.55	21
HENNEPIN	4052	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.860	31	99.99	2.96	20
KINGSTON	4865	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	2.060	31	-2.98	1.30	21
LEHICH	5108	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.671	31	99.99	1.40	14
MADILL	5468	8	71.8	31	.9	99.	30	50.	14	2.0	-11.0	211.5	15.5	4.190	31	-.91	2.10	21
MARIETTA	5563	8	72.0	31	1.2	101.	30	53.	16	.5	-14.5	218.5	23.5	6.203	31	1.65	2.70	21
MARLOW	5581	8	70.7	31	999.0	100.	30	46.	14	11.0	9999.0	187.5	9999.0	1.591	31	-4.42	.53	21
PAULS VALLEY	6926	8	71.3	31	.2	99.	30	50.	14	5.5	-12.5	202.0	-5.0	2.642	31	-2.82	1.27	20
PONTOTOC	7214	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	3.040	31	-2.69	.90	13
TISHOMINGO	8884	8	70.2	19	999.0	95.	30	49.	16	4.0	9999.0	102.0	9999.0	3.620	31	-1.26	1.23	21
TUSSY	9032	8	999.0	0	999.0	999.	0	999.	0	999.0	9999.0	999.0	9999.0	4.012	31	99.99	1.60	21
WAURIKA	9395	8	72.9	31	1.0	105.	30	49.	15	0.0	-13.0	244.0	17.0	1.800	31	-3.05	1.18	20

Note: 9999.0, 999.0, 99.99 indicate missing records. Trace = .001

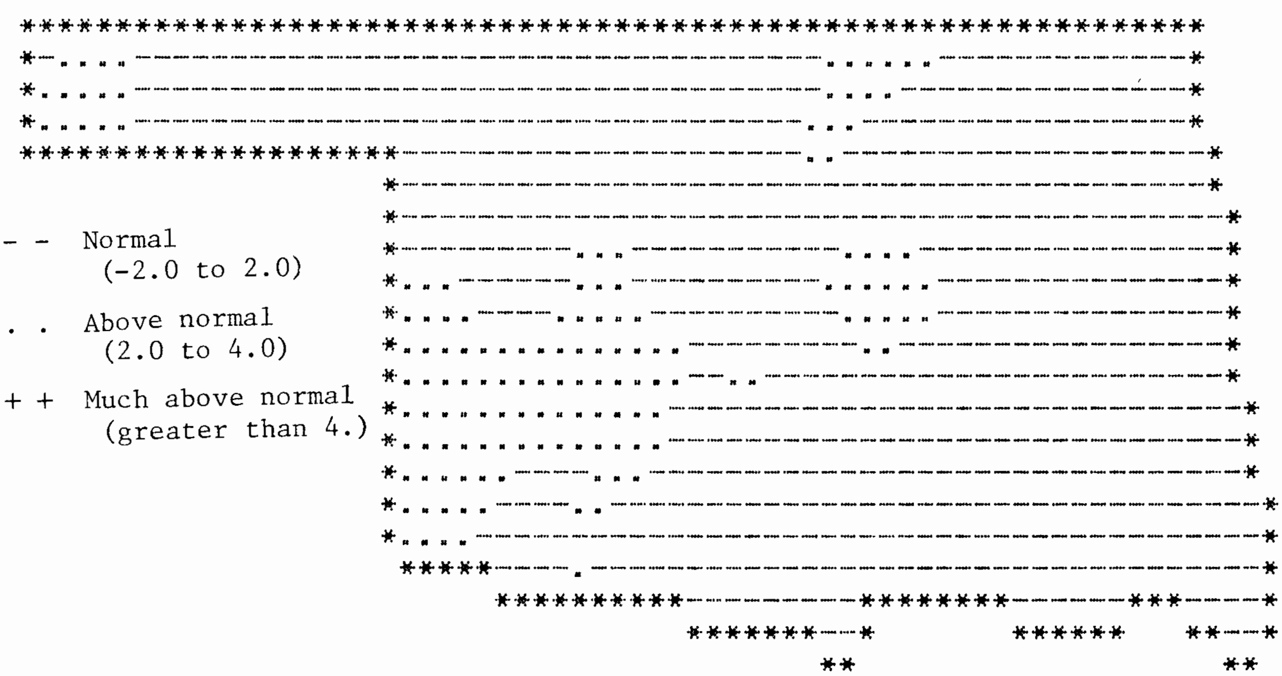


- - - 64.3 to 68.0

. . . 68.0 to 71.0

+ + + 71.0 to 74.3

MAY 1985 AVERAGE MONTHLY TEMPERATURE
(DEGREES F)

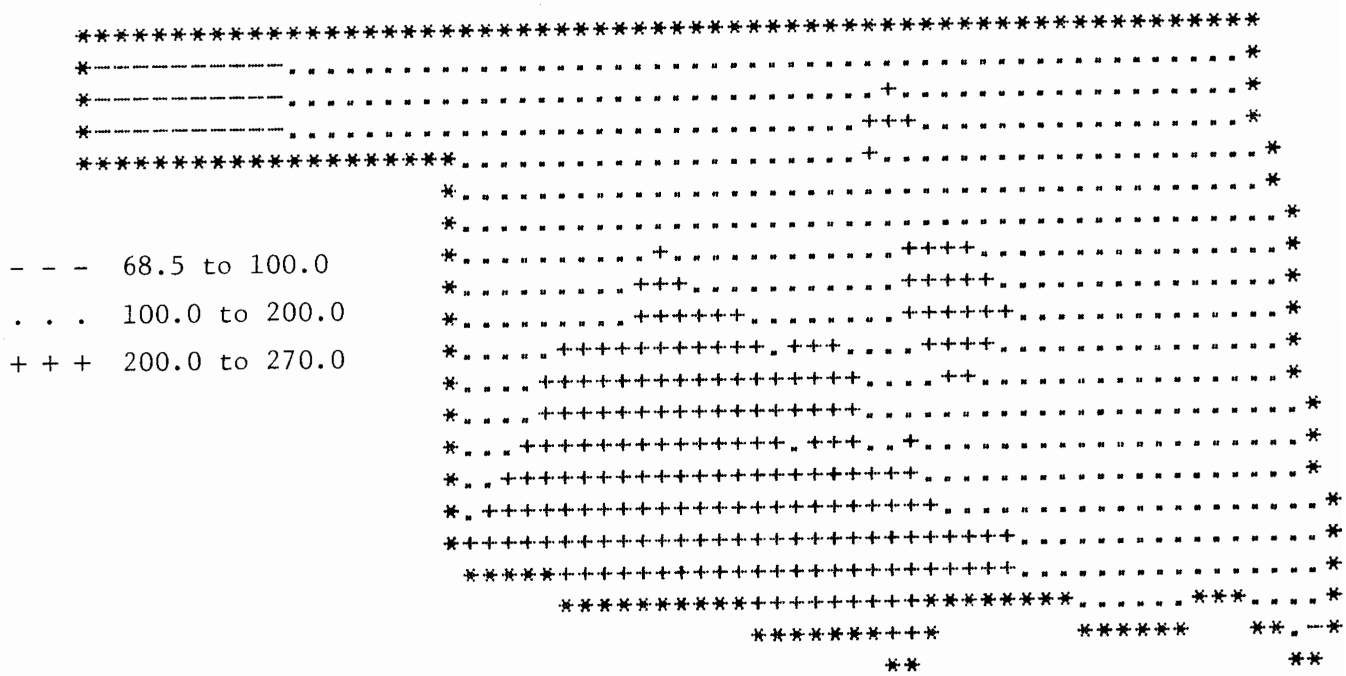


- - - Normal
(-2.0 to 2.0)

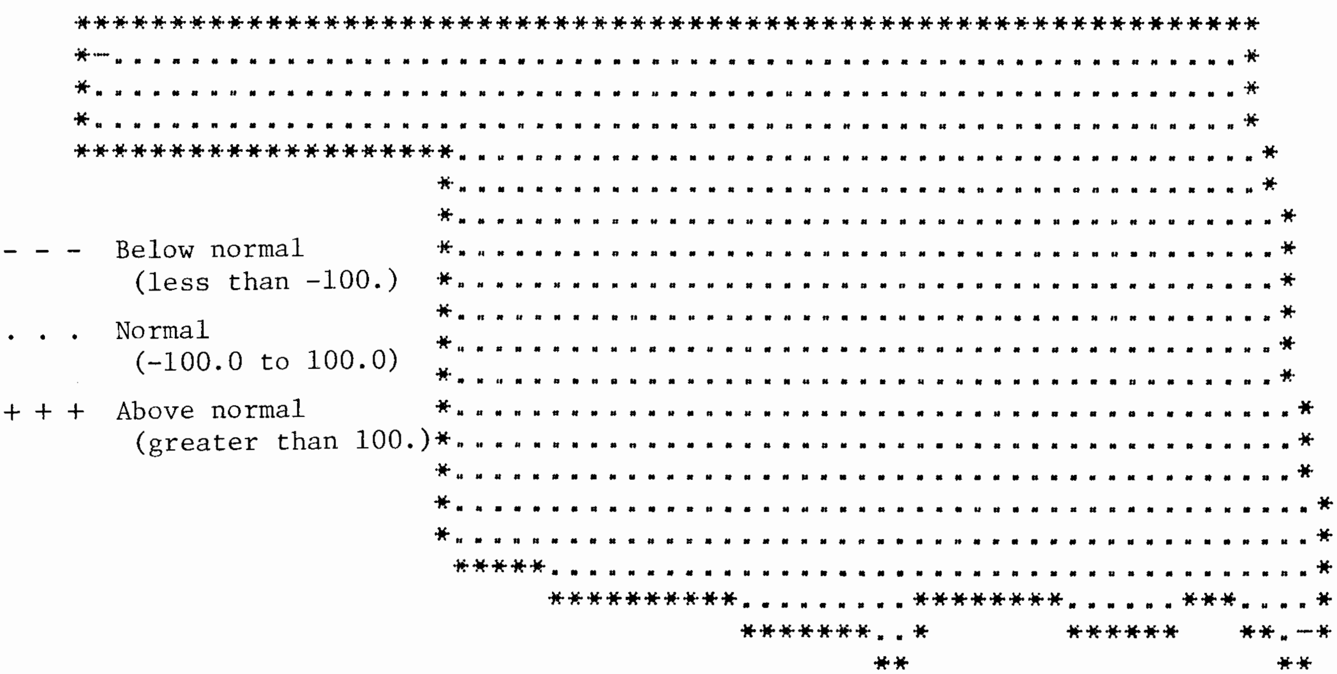
. . . Above normal
(2.0 to 4.0)

+ + + Much above normal
(greater than 4.)

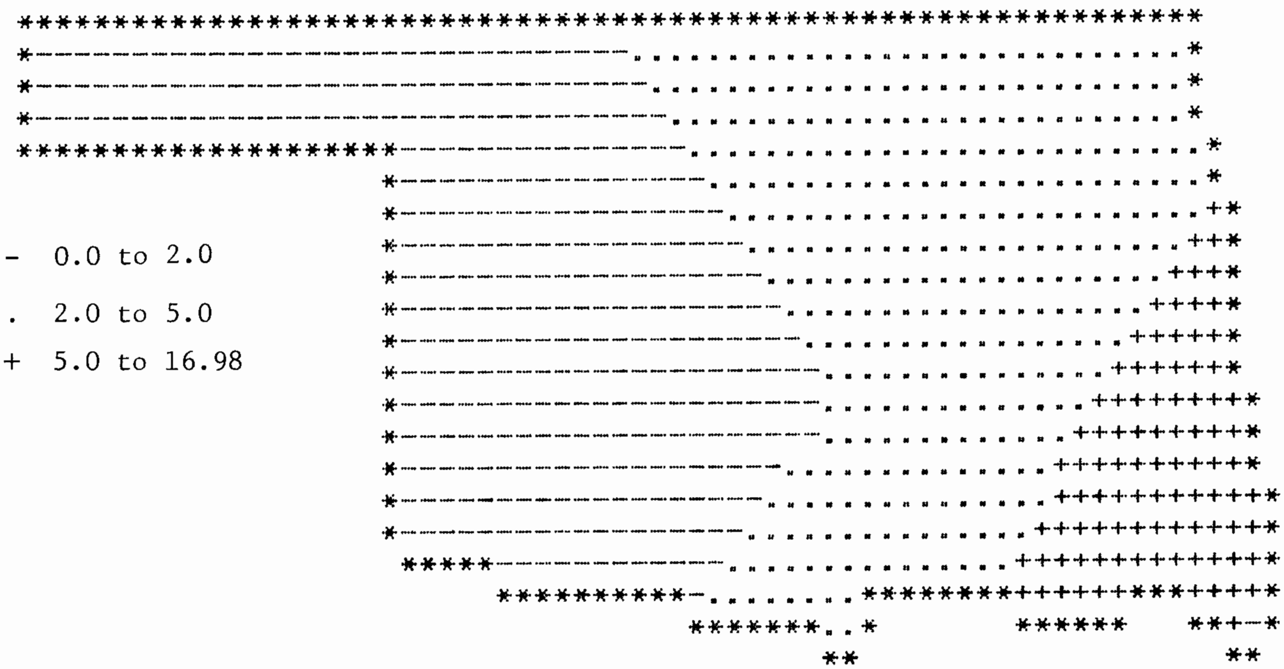
MAY 1985 DEVIATION FROM NORMAL TEMPERATURE



MAY 1985 TOTAL COOLING DEGREE DAYS



MAY 1985 DEVIATION FROM NORMAL COOLING DEGREE DAYS

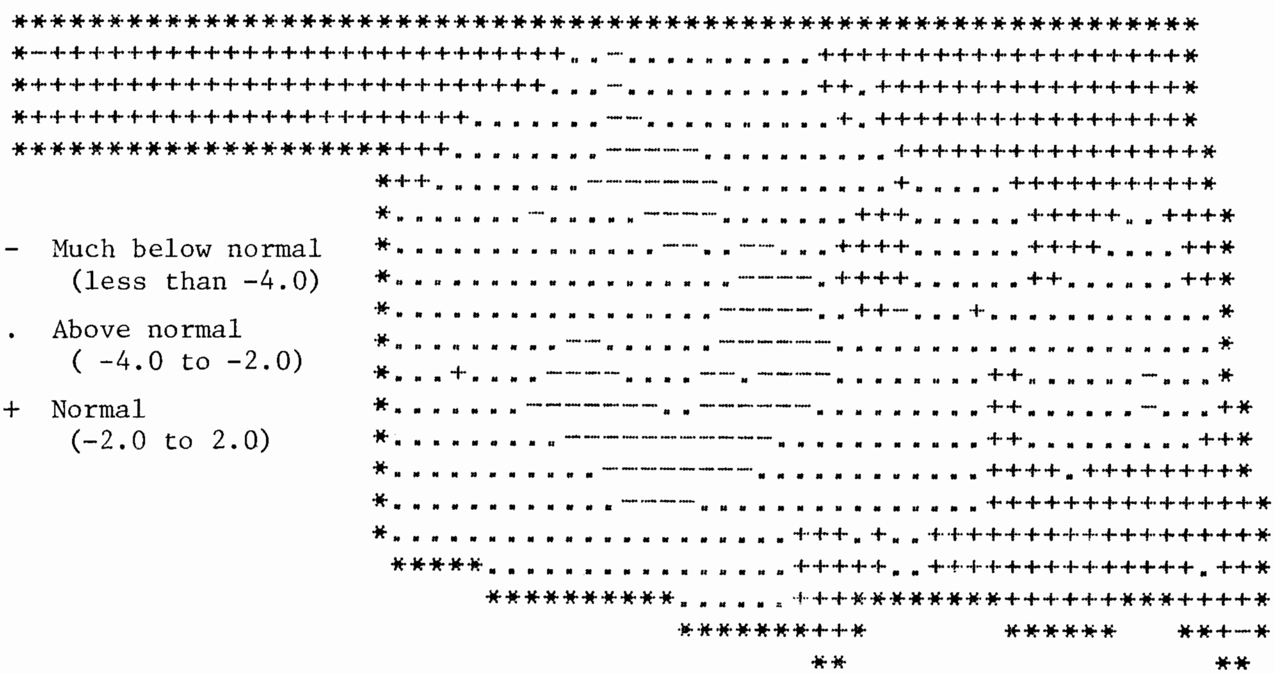


- - - 0.0 to 2.0

. . . 2.0 to 5.0

+ + + 5.0 to 16.98

MAY 1985 TOTAL PRECIPITATION
(INCHES)



- - - Much below normal (less than -4.0)

. . . Above normal (-4.0 to -2.0)

+ + + Normal (-2.0 to 2.0)

MAY 1985 DEVIATION FROM NORMAL PRECIPITATION

AN UNUSUAL JANUARY TRONADO, JANUARY 25, 1967

During the past 35 years there have been nearly 2000 official tornadic events recorded for Oklahoma by the National Severe Storms Forecast Center in Kansas City, KS. Of this number, fewer than one percent occurred during January. All of these sitings were recorded on only seven different storm days. By far the most active of these seven storm days were January 22, 1957 and January 25-26, 1967. The narrative which follows is a first-hand account of one of the many storm events recorded on January 25, 1967.

Submitted By

Edith Thiessen
Collinsville, OK

At 10:00 p.m., January 25, 1967, I was listening to the newscast and a discussion of whether the storm that had hit Clinton earlier in the evening was a straight wind or a tornado. When the local weatherman said that a nice wind was blowing from the south and I heard the wind changing, and what sounded like a jet going overhead, as they frequently do, I could see nothing from the west window and by the time I returned to the living room the house seemed to be bouncing up and down. As I held the front door and the storm door open I heard the sound of breaking glass and the lights went out. In a few seconds the main storm seemed to be over and it started to rain and hail. Only a small quantity of hail fell and the rain didn't amount to much.

I lit candles and then paced up and down. There wasn't anything else to do with no means of communication.

The children who lived up the road didn't come down so I decided to drive the half-mile there. I got the car out on the road only to find that fallen highline poles had it blocked. When I tried going north, a maze of tangled wire was in the way. A tin bin was gone and some cattle were out. So I put the car back into the garage and listened to the car radio.

After an hour or so a Highway Patrolman came to see if I was alright. Kenneth, our son-in-law, said that the big hay barn at his place was down with part of it on the truck, and that the roof had blown off the garage with the ceiling falling on their car.

Was the storm a tornado? There was no doubt in our minds. A pickup in a neighbor's yard was moved from the back yard to the front, and their cow was upside down in a ditch, still alive. A large cedar tree across the road was twisted off near the ground, lifted over a highline wire and deposited upside down on a garage roof. In our barnyard, an 18" board, 1" X 2" with a blunt end was forced through a trailer tire, lodging there as it bent the rim.

It took several days to assess the full damage of the storm. In addition to the barns, a tile henhouse was crumbled, two brooder houses were blown away. We were fortunate that none of the three houses were damaged enough to let dirt in. The breaking glass that I had heard was only a storm window. A neighbor's house had one window pane blown out and several rooms were filled with debris.

Our farming operation was stopped very briefly for the REC crew had electricity back in service in 12 hours so milking and milk cooling could resume. Quite a lot of fencing had to be repaired. We had seven buildings totally destroyed and six were damaged.

We are quite conscious of the vulnerability of our location, Highway 20 on the Tulsa-Rogers County line, as "a tornado alley". Two storms had been sighted in our area years earlier, and two have done light damage at this location since 1967.

Official records classify the event Mrs. Thiessen describes as "damaging winds", which resulted in extensive damage within a twelve mile square northeast of Tulsa. Mrs. Thiessen's area, east of the intersection of US 75/169, reportedly sustained the most serious damage. The accompanying map contains the approximate paths of confirmed tornadoes on 25 January. The Northeastern Oklahoma tornadic activity reportedly began at 10:20 p.m. and lasted until 11:15 p.m. This particular tornado passed through four counties (Rogers, Mayes, Craig and Ottawa). Path segments ranged between 15 miles in length to the final segment, 2 miles long. The event was classified an F-2 (Fujita Scale) which indicates that wind speeds were estimated between 113 and 157 mph and considerable damage resulted. The total path was 65 miles long and 18 to 55 yards wide. The entire wind, hail, tornado and funnel event in Northeastern Oklahoma occurred between 10:00 p.m. and 11:15 p.m. There were no deaths, 11 injuries and an estimated $50,000 to $500,000 in crop and property damages.

X location of Collinsville
1 tornado reported at 6:40 pm. January 25, 1967
2 tornado reported at 10:20 pm. January 25, 1967
3 tornado reported at 11:03 pm., January 25, 1967
4 tornado reported at 4:10 am , January 26, 1967

HOT WEATHER AND ITS EFFECTS ON THE BODY

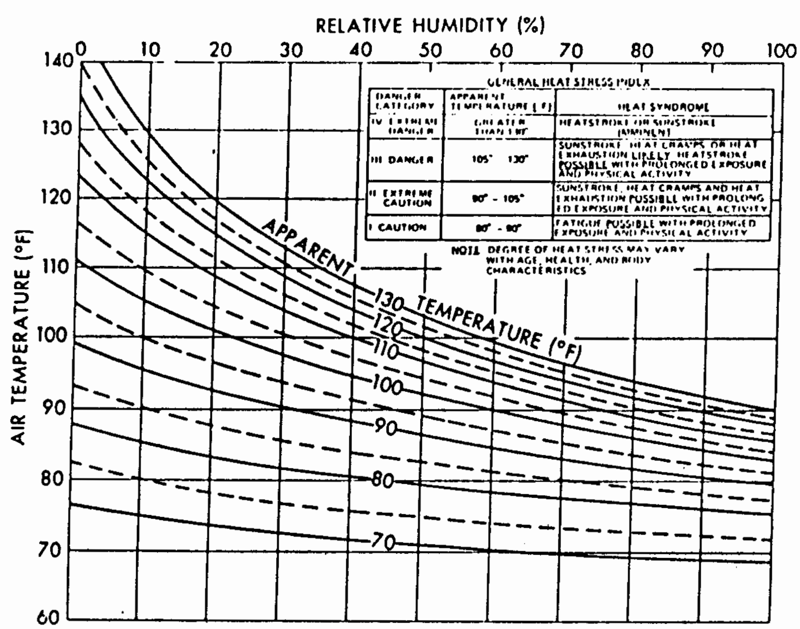
By

Robert Sladewski

Summer-time weather has again arrived in Oklahoma, and with it comes the dangers of heat illnesses. The first few weeks of the hot weather are especially dangerous since people are still quite vulnerable to the heat. Mr. Kern of the University of Oklahoma Adult Fitness Center warns that the human body needs a couple of weeks to acclimate to the hot conditions. For this reason, many additional cases of heat related illnesses can be expected during heat waves which occur early in the summer.

The impact of the heat on the body is greatest when high temperatures occur with high humidities. The high humidity inhibits the evaporation of perspiration from the body. Since evaporation is a cooling mechanism, reducing evaporation decreases the body's ability to keep cool. Hence, the body perspires even more in an attempt to cool. This may result in dehydration, muscle cramps, and eventually heat exhaustion or even heat stroke.

It is best to limit outdoor physical activity during periods of hot, humid weather. The figure below will help you determine the severity of the heat and the potential heat syndromes that you may suffer given the temperature and humidity and extended exposure. If you do have to remain outside during these periods, remember to drink plenty of water to replenish your body fluids.



Relationship of Air Temperature and Relative Humidity to Apparent Temperature, (after Steadman, 1979). This graph can be used for various combinations of Temperature and Relative Humidity. For areas with Low Relative Humidities, the Apparent Temperature tends to be lower than the Air Temperature.

Heat Wave Safety Rules

(FROM U.S. DEPARTMENT OF COMMERCE, 1969)

1. **Slow down.** Your body can't do its best in high temperatures and humidities, and might do its worst.

2. **Heed your body's early warnings that heat syndrome is on the way.** Reduce your level of activity immediately and get to a cooler environment.

3. **Dress for summer.** Lightweight, light-colored clothing reflects heat and sunlight, and helps your thermoregulatory system maintain normal body temperature.

4. **Put less fuel on your inner fires.** Foods (like proteins) that increase metabolic heat production also increase water loss.

5. **Don't dry out.** Heat wave weather can wring you out before you know it. Drink plenty of water while the hot spell lasts.

6. **Stay salty.** Unless you're on a salt-restricted diet, take an occasional salt tablet or some salt solution when you've worked up a sweat.

7. **Avoid thermal shock.** Acclimatize yourself gradually to warmer weather. Treat yourself extra gently for those first critical two or three hot days.

8. **Vary your thermal environment.** Physical stress increases with exposure time in heat wave weather. Try to get out of the heat for at least a few hours each day. If you can't do this at home, drop in on a cool store, restaurant, or theater—anything to keep your exposure time down.

9. **Don't get too much sun.** Sunburn makes the job of heat dissipation that much more difficult.

10. **Know these heat syndrome symptoms and first aid:**

Heat Syndrome	Caused by	Symptoms	First Aid
Heat asthenia (or calasthenia)	Excessively hot, humid environment.	Easy fatigue, headache, mental and physical inefficiency, poor appetite, insomnia, heavy sweating, high pulse rate, shallow breathing, and sometimes circulatory stress in the ill.	Respite from high heat and humidity, plenty of fluids, and, if sweating is heavy (and no dietary restrictions prevent it) a salt tablet and rest.
Heat cramps	Strenuous activity under conditions of high heat and humidity, when evaporative cooling is impaired, stimulating excessive sweating and loss of salts from blood and tissue, causing cramps.	Painful spasms of voluntary muscles, contraction in flexor muscles in fingers, then larger muscles in legs and abdominal wall. Pupils dilate with each spasm, there may be heavy sweating, skin becomes cold and clammy. Unlike severe abdominal disease symptoms, heat cramps are intermittent.	Usually respond better to firm pressure on cramping muscles than to vigorous kneading. Application of warm wet towels also gives relief. Three or four doses of salt solution (½ teaspoon dissolved in 4 fl. oz. water) administered at 15-minute intervals. Large quantities of water without salt may precipitate the disease.
Heat exhaustion	Prolonged hot spell, excessive exposure, physical exertion cause thermoregulatory breakdown involving loss of vasomotor (blood-vessel diameter) control and circulatory shock.	Profuse sweating, weakness, vertigo, and sometimes heat cramps; symptoms similar to calasthenia may herald by several days. Skin is cold and pale, clammy with sweat; pulse is thready and blood pressure is low. Body temperature is normal or sub-normal. Vomiting may occur. Unconsciousness is rare.	Move to cooler environment immediately. Provide bed rest, salt solution (see above); victims, sometimes nauseated at first, can usually take fluids after a period of rest. Seek medical help for severe heat exhaustion.
Heat stroke (or sunstroke, heat collapse, thermic fever, heat hyperexia)	Failure of thermoregulatory and cardiovascular systems brought about when intensive sweating under conditions of high heat and humidity restrict heat-dissipation by sweating, which finally ceases. Advanced age and hot, humid, windless environment are factors.	Weakness, vertigo, nausea, headache, heat cramps, mild heat exhaustion, excessive sweating. Sweating stops just before heat stroke. Then temperature rises sharply, often to 106° or more, pulse is bounding and full, blood pressure elevated. Delirium or coma is common. Armpit and groin areas are dry (they are wet in heat exhaustion). Skin is flushed and pink at first; however, in later stages, it appears ashen or purplish.	Heat stroke is a very serious emergency. Medical care is urgently needed. Move the victim into cooler, indoor environment, remove his clothing, put him to bed. Primary objective is to reduce body temperature, preferably by iced bath (or by sponging the body with alcohol or lukewarm water) until a tolerable level (about 103° or a pulse rate below 110 per minute) is reached. Caution is necessary here.
HEAT STROKE IS A SEVERE MEDICAL EMERGENCY. SUMMON A PHYSICIAN OR GET THE PATIENT TO A HOSPITAL IMMEDIATELY. DELAY CAN BE FATAL.			
Sunburn	Overexposure to ultraviolet radiation.	Redness and pain caused by dilation of small blood vessels in skin. In more severe cases, tissue injury brings swelling of skin, blisters, and often fever and headache. Because it impairs thermoregulatory efficiency, sunburn may be accompanied by other heat syndrome disorders.	Prevent severe sunburn by limiting the time of initial exposure, depending on comfort and conditions. Treat mild sunburn with cold cream or certain oils or greases (e.g., salad oil, shortening). Wash hands before applying. Do not apply butter or oleomargarine. Dressing should be used if blistering appears, injured area should not be exposed to sunlight until healed. Medical care is needed for extensive or severe cases.

JULY 1985
CLIMATE CALENDAR

The data on this calendar are for Oklahoma City. Normal values are calculated for the period 1950-1979. Extremes are found for the period of record (1924-present).

Day	Normal max	Normal min	Normal pcpn	Normal HDD	Normal CDD	Actual	Highest Max	Lowest Max	Lowest Min	Highest Min	Greatest pcpn
1	90.6	69.5	.264	0	15		102-1980	69-1951	57-1951	78-1931	3.35-1940
2	92.6	70.4	.059	0	17		105-1948	81-1948	61-1945	78-1980	1.61-1972
3	92.9	71.0	.078	0	17		103-1980	80-1941	62-1968	78-1933	2.97-1947
4	91.4	69.2	.093	0	16		102-1934	76-1972	59-1940	80-1933	.95-1960
5	91.4	68.8	.139	0	15		102-1966	77-1958	57-1942	80-1933	3.21-1979
6	92.1	69.5	.070	0	16		102-1953	73-1958	55-1972	72-1984	1.84-1929
7	93.0	69.9	.081	0	17		105-1970	76-1960	57-1952	77-1963	1.39-1953
8	93.1	70.3	.047	0	17		105-1964	82-1958	57-1958	78-1931	1.32-1959
9	93.1	70.4	.045	0	17		106-1964	81-1961	61-1952	80-1933	1.88-1926
10	93.2	69.9	.066	0	17		104-1933	76-1953	58-1961	80-1933	1.90-1945
11	93.4	70.4	.031	0	17		107-1933	76-1953	58-1931	81-1933	.83-1940
12	92.6	70.1	.091	0	17		107-1954	64-1953	56-1953	82-1933	1.80-1926
13	93.2	69.8	.161	0	17		106-1954	73-1953	56-1975	81-1934	2.10-1963
14	92.9	69.6	.077	0	17		107-1954	80-1926	58-1926	80-1934	.71-1961
15	92.1	70.4	.096	0	16		108-1936	80-1952	59-1967	82-1936	1.70-1938
16	93.2	70.5	.056	0	17		106-1980	74-1967	64-1926	79-1939	.61-1953
17	93.2	70.3	.171	0	17		106-1980	80-1950	63-1967	79-1943	1.71-1959
18	93.2	71.5	.029	0	18		108-1936	72-1967	64-1931	81-1936	.70-1931
19	92.9	71.3	.078	0	17		109-1936	74-1953	63-1931	82-1936	.81-1953
20	93.0	70.3	.073	0	17		107-1936	77-1944	60-1970	77-1930	1.15-1973
21	92.7	70.1	.181	0	17		107-1939	78-1970	54-1970	80-1981	1.64-1950
22	92.9	70.7	.124	0	17		107-1974	79-1960	57-1970	79-1981	1.00-1960
23	92.7	70.2	.217	0	17		104-1943	77-1947	55-1970	79-1943	3.02-1960
24	93.2	71.2	.107	0	17		106-1943	73-1947	61-1927	78-1934	2.92-1975
25	93.9	71.5	.092	0	18		106-1977	78-1926	66-1927	83-1934	1.48-1950
26	93.4	71.7	.091	0	18		106-1978	75-1959	64-1933	78-1930	.88-1978
27	93.9	71.1	.137	0	18		105-1946	75-1959	65-1933	78-1931	1.88-1977
28	92.3	70.8	.204	0	17		104-1930	75-1981	61-1931	80-1946	5.75-1981
29	92.9	70.4	.205	0	17		108-1980	82-1927	57-1931	79-1966	2.02-1975
30	93.1	70.7	.046	0	17		107-1980	79-1933	57-1971	77-1936	.71-1936
31	92.6	70.4	.069	0	17		107-1980	83-1933	53-1971	79-1943	1.07-1978