

U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
IN COOPERATION WITH SOUTHERN OKLAHOMA DEVELOPMENT ASSOCIATION  
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 34

LATITUDE: 34° 31' N  
LONGITUDE: 96° 13' W  
ELEV. (GROUND): 610 feet

CLIMATOLOGICAL SUMMARY

STATION: Coalgate, Oklahoma

MEANS AND EXTREMES FOR PERIOD 1941 - 1970

Month	Temperature (°F)									** Mean degree days	Precipitation Totals (Inches)						Mean number of days					Month		
	Means			Extremes			Mean	Greatest daily	Year		Snow, Sleet			Precip. .10 inch or more	Temperatures		0° and above	32° and below	32° and below	0° and below				
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest					Year	Mean	Maximum monthly		Year	Greatest daily					Year		Max.	Min.
	(a)	(a)	(a)	(a)	(a)	(a)					(a)	(a)	(a)		(a)	(a)					(a)		(a)	(a)
Jan.	52.5	28.9	40.6	85	1943	-5	1940	754	1.75	1968	1.5	9.0	1944	4	1966+	4	0	2	20	17	17	*	Jan.	
Feb.	57.5	34.1	45.8	86	1962	0	1951	546	2.61	1966	0.7	4.5	1968	2	1968+	4	0	1	13	13	8	*	Feb.	
Mar.	65.1	39.9	53.3	90	1956+	5	1943	402	3.28	1959	0.3	2.8	1942	1	1958	5	*	*	8	0	0	0	Mar.	
Apr.	76.0	51.9	63.7	95	1948	22	1945	116	5.11	1967	T	T	1951+	0		7	1	0	1	0	0	0	Apr.	
May	82.7	60.5	71.6	97	1951	35	1962+	15	5.47	1943	0	0		0		8	3	0	0	0	0	0	0	May
June	89.7	67.5	78.7	102	1956+	47	1966	1	4.20	1945	0	0		0		5	17	0	0	0	0	0	0	June
July	95.3	71.1	83.3	110	1939	53	1952	0	3.23	1953	0	0		0		4	27	0	0	0	0	0	0	July
Aug.	95.8	69.8	82.9	111	1956	0	1956	0	2.66	1969	0	0		0		5	27	0	0	0	0	0	0	Aug.
Sep.	88.5	62.3	75.8	112	1951	34	1942	4	4.50	1955	0	0		0		6	14	0	0	0	0	0	0	Sep.
Oct.	78.9	51.4	65.6	102	1938	20	1948	102	3.79	1970	0	0		0		4	3	0	1	0	0	0	0	Oct.
Nov.	65.5	39.5	52.2	95	1937	12	1950	389	2.19	1961	T	T	1951	T	1951	3	0	0	9	0	0	0	0	Nov.
Dec.	55.8	31.7	44.3	84	1955+	3	1965	638	2.36	1959	0.5	4.0	1967+	2	1958	4	0	1	18	0	0	0	0	Dec.
Year	75.3	50.7	63.0	112	Sept. 1951	-5	Jan. 1940	2967	41.15	9.54	July 1953	3.0	9.0	Jan. 1944	4	Jan. 1966+	60	92	4	70	*	*	Year	

19

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

T Trace, an amount too small to measure.

\* Less than one half.

\*\* Base 65°F

THE CLIMATE OF COALGATE AND COAL COUNTY

Coalgate, the County Seat of Coal County, is located in south-central Oklahoma 115 miles southeast of Oklahoma City and 130 miles north-northeast of Dallas. Principal highways serving the Coal County area are U.S. Highway 75 and State Highway 3. The southern portion of the County consists of rolling prairie land and strip pits while the northern part is hilly timberland. There are two main creeks through the County, Clear Boggy and Muddy Boggy. Nearby areas for recreation and relaxation include the Atoka Reservoir about 10 miles southeast of Coalgate, Lake Texoma approximately 50 miles southwest and Eufaula Reservoir about 50 miles northeast. The town of Coalgate is also completing a lake 2 miles north of town, which in addition to supplying the water needs for an estimated 8,000 people, will also serve as a fine recreation site. Adding to the pleasure of the outdoorsman, the Soil Conservation Service has built over 100 lakes in the County ranging from 8 acres to 300 acres in size. These nearby recreation sites provide an abundance of fishing, boating, water skiing, camping, and hunting. Duck and deer are very popular in the Coal County area.

The climate of Coal County is moist subhumid which means that the precipitation received in a normal year is in excess of that needed for plant growth. The average annual precipitation at Coalgate is slightly over 41 inches, approximately 70 percent of which falls during the warm season from April through October. The rainfall reaches a maximum in May, decreases during the summer months and reaches a secondary maximum in September. Much of the rainfall results from thunderstorms which occur on 50 days of a normal year.

The average daily maximum temperature during the three summer months is 94 degrees and the average daily minimum temperature is 69 degrees. There are 8 days from June through September of a normal year when the daily maximum temperature is 100 degrees or higher. Refrigerated-type air conditioning is recommended for maximum indoor comfort and for traveling during the summer season. The highest temperature of record at Coalgate is 112 degrees on September 2, 1951.

The winters are composed of frequent mild temperatures and infrequent cold temperatures. The average daily minimum temperature is 32 degrees or less 45 percent of the time from November through March, but there are only 4 days during a normal winter season when freezing temperatures last throughout the day. A temperature of zero or below occurs on an average of once every 4 years. The lowest temperature of record at Coalgate is -5 degrees on January 8, 1940.

The average yearly snowfall in Coal County is about 3 inches, one-half of which normally falls in January. Measurable snowfall occurs on an average of 4 days each year and the snowfall totals 1 inch or more on three of these days. The greatest seasonal snowfall at Coalgate is 9.5 inches in 1943-1944.

The prevailing yearly wind direction in Coal County is south-southeast, but northerly wind occurs with about the same frequency as does southerly wind from November through February. The average monthly wind speed varies from 8 m.p.h. from July through October to 12 m.p.h. in March and April. Gusty winds occur with thunderstorms and with migrating low pressure systems moving from west to east during the winter and spring.

The average monthly relative humidity at 6 a.m. is about 80 percent, and at 6 p.m. it varies from 45 percent in March to 60 percent in December. During an average year, 140 clear days, 95 partly cloudy days and 130 cloudy days provide the Coal County area with nearly 70 percent of this year's total possible sunshine.

Normally there are 325 days each year when VFR flight weather exists at 6 a.m. and 345 days at 6 p.m. The best months for flying are July and August while the worst flying weather is in January and February.

Severe storms have occurred in all months of the year in Coal County, but occur more frequently during the spring months. Since 1875, only 12 known tornadoes have struck in the County.

The growing season (freeze-free period) in Coal County averages 211 days in length. At Coalgate the average date of the last spring freeze is April 2 and the average date of the first fall freeze is October 30. Freezing temperatures have occurred as late as April 20 and as early as October 7. The following table shows the probability (in percent) of a temperature of 32°, 28° and 20° occurring after the given spring date and before the given fall date:

Temperature	10%	25%	50%	75%	90%
Last Spring Freeze					
32° and below	Apr. 18	Apr. 10	Apr. 2	Mar. 25	Mar. 17
28° and below	Apr. 7	Mar. 28	Mar. 18	Mar. 8	Feb. 26
20° and below	Mar. 15	Mar. 3	Feb. 18	Feb. 4	Jan. 24
First Fall Freeze					
32° and below	Oct. 17	Oct. 24	Oct. 30	Nov. 6	Nov. 13
28° and below	Oct. 25	Nov. 1	Nov. 10	Nov. 18	Nov. 25
20° and below	Nov. 10	Nov. 23	Dec. 8	Jan. 2	

- The probability of a 20°-freeze occurring each year is less than this percent.

Billy R. Curry  
Climatologist for Oklahoma  
National Weather Service  
809 Post Office & Courthouse Building  
Oklahoma City, Oklahoma 73102  
December 10, 1971

TOTAL PRECIPITATION (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1941	1.82	3.48	0.23	8.60	3.08	3.53	3.59	5.61	1.72	14.82	1.66	1.69	49.83
1942	1.57	1.33	4.57	4.99	6.15	9.03	0.87	1.99	4.25	2.48	2.45	2.66	47.52
1943	0.30	0.80	3.06	2.65	6.15	5.72	1.13	0.00	3.24	1.24	1.26	4.27	29.82
1944	2.61	5.19	4.69	2.73	6.09	3.36	0.98	3.04	0.77	5.30	2.45	3.04	40.25
1945	1.30	9.00	10.74	5.13	4.00	12.48	5.64	4.14	6.20	2.10	1.60	0.80	63.13
1946	2.95	3.35	2.50	3.90	5.60	3.10	0.70	--	--	--	--	--	--
1947	--	0.41	--	5.98	8.15	3.45	3.11	2.92	2.57	1.11	2.67	3.00	--
1948	1.57	4.03	1.17	0.57	8.72	5.43	3.57	0.99	1.31	1.22	0.12	1.25	30.45
1949	4.60	2.86	3.04	2.29	8.47	6.74	3.31	1.36	6.03	5.55	T	3.16	47.41
1950	2.85	3.04	T	4.67	7.44	4.51	9.32	8.53	4.10	0.07	0.18	T	44.71
1951	1.08	3.83	1.60	3.44	2.38	8.93	3.18	1.28	3.83	3.38	3.09	0.29	36.31
1952	--	--	--	--	3.62	2.30	1.20	2.14	0.12	0.25	5.17	1.85	--
1953	0.59	1.51	6.20	9.52	3.46	2.30	3.99	2.14	2.71	4.16	2.11	1.59	50.28
1954	2.44	0.80	0.45	7.38	8.27	2.60	0.18	0.95	0.92	4.68	0.43	4.10	33.20
1955	2.06	2.78	4.21	2.31	5.68	1.13	0.91	4.59	8.05	0.45	0.28	0.66	33.11
1956	1.19	3.79	1.06	3.08	6.00	3.19	1.53	0.08	0.37	3.54	3.97	2.85	30.56
1957	1.62	3.40	6.02	11.59	8.90	5.77	2.20	2.89	11.71	1.80	5.39	1.93	63.22
1958	1.89	0.74	3.78	3.65	4.08	3.88	4.31	4.33	5.34	0.54	4.17	0.85	38.76
1959	0.31	1.09	5.84	3.43	4.40	4.23	6.05	1.02	3.54	7.85	0.57	3.62	41.95
1960	2.67	2.29	1.38	2.63	8.11	1.75	7.39	2.87	2.49	4.70	0.09	5.10	42.07
1961	0.31	1.68	4.28	2.14	4.01	2.35	4.52	2.35	5.34	5.82	4.92	3.27	40.99
1962	1.59	1.60	2.33	3.47	2.67	5.26	2.63	0.30	8.27	3.99	3.69	1.34	37.14
1963	0.26	0.09	2.74	4.76	0.69	2.62	4.24	1.76	2.82	0.18	1.69	2.08	23.93
1964	0.87	2.16	4.42	4.78	5.34	2.60	1.20	4.49	0.10	0.21	5.26	0.84	42.27
1965	1.46	2.44	1.54	1.05	7.97	0.82	1.15	2.49	3.74	1.23	1.41	1.90	27.20
1966	1.80	6.54	3.48	5.89	1.03	1.21	2.20	5.40	3.72	1.42	1.10	2.30	36.09
1967	0.51	0.14	1.88	3.75	7.54	3.85	2.02	1.66	10.91	6.53	1.50	2.74	55.03
1968	5.74	1.52	6.83	4.08	7.50	4.42	3.09	1.18	5.51	2.59	4.76	3.38	50.60
1969	2.52	3.42	3.24	5.20	6.49	2.06	1.19	5.75	3.42	8.74	0.46	3.88	46.37
1970	0.55	2.40	3.21	3.04	3.30	7.40	0.90	0.40	7.30	13.41	0.97	0.97	43.85

AVERAGE TEMPERATURE (F°)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1937	37.5	45.0	50.0	64.4	73.0	80.0	83.0	84.2	76.3	63.8	50.4	43.3	62.6
1938	46.2	51.3	62.0	68.3	71.0	79.0	83.4	84.8	77.4	69.7	50.6	45.8	65.3
1939	47.6	43.4	59.0	62.2	69.4	80.0	86.2	83.2	83.6	69.0	51.7	49.3	65.7
1940	30.6	44.6	58.4	62.2	69.9	77.8	81.6	81.0	75.0	68.7	50.2	46.4	62.2
1941	45.6	44.3	50.2	65.0	74.6	--	--	--	79.0	68.4	52.6	47.5	--
1942	39.4	45.1	54.0	64.8	69.8	79.9	82.4	82.6	73.4	64.7	57.5	45.8	63.3
1943	42.7	50.2	49.8	68.0	73.0	81.0	84.9	87.8	75.5	63.8	52.0	41.1	64.2
1944	43.0	49.2	53.4	69.9	70.3	82.1	84.0	85.2	74.6	65.5	56.2	39.8	63.9
1945	42.6	45.0	59.1	63.8	73.3	77.9	80.7	80.5	74.2	63.6	--	--	--
1946	--	50.6	57.8	--	69.2	76.4	86.6	83.8	--	--	--	--	--
1947	--	--	--	--	--	--	--	84.8	78.5	71.8	47.4	43.2	--
1948	34.4	41.6	46.3	67.1	69.6	78.2	81.4	80.4	75.0	59.9	49.6	44.0	60.7
1949	35.7	43.0	51.2	60.9	73.2	78.8	83.2	79.7	70.9	63.2	53.8	44.0	61.5
1950	43.1	50.8	53.4	63.3	71.4	78.8	78.8	79.6	72.9	69.4	52.3	41.0	62.9
1951	41.8	43.2	55.8	62.4	71.5	78.2	83.3	87.6	78.0	68.2	47.6	45.2	63.6
1952	--	--	--	--	70.7	82.5	84.7	86.5	77.2	61.5	52.1	43.1	--
1953	--	--	--	--	--	--	--	--	--	--	--	--	--
1954	--	--	--	--	--	--	--	--	--	--	--	--	--
1955	43.8	45.3	55.3	67.7	73.7	76.7	85.1	82.5	77.8	66.3	53.4	44.4	64.3
1956	--	--	--	54.5	62.3	74.5	80.3	86.6	86.5	78.9	51.1	47.6	63.1
1957	40.4	51.7	51.6	61.5	70.6	78.0	86.1	82.7	73.3	60.5	51.4	48.9	63.0
1958	42.4	42.1	47.7	61.9	71.7	79.9	82.1	82.2	76.1	64.6	55.3	41.5	62.3
1959	41.1	46.1	54.1	61.9	73.8	78.5	80.6	82.4	76.4	63.6	47.1	48.1	62.8
1960	41.9	40.7	45.2	65.8	69.3	80.0	82.6	82.0	76.8	67.0	55.5	41.3	62.4
1961	40.2	48.7	57.1	61.6	69.7	74.7	79.2	78.7	74.0	64.2	51.2	41.9	61.8
1962	36.0	50.3	50.8	59.8	74.2	75.9	81.3	82.8	73.9	67.7	52.6	44.4	62.5
1963	34.6	43.7	57.3	66.5	71.9	80.3	83.5	82.6	--	70.7	55.1	35.8	--
1964	42.0	41.1	52.0	65.7	71.0	77.7	84.6	83.3	74.8	60.9	--	43.2	--
1965	44.5	42.9	43.5	66.2	71.4	77.7	84.3	82.2	76.6	63.3	--	49.8	--
1966	36.4	43.3	55.1	62.0	68.5	77.1	85.0	78.5	71.2	61.1	56.8	--	--

STATION HISTORY

The weather station at Coalgate was established in August, 1902 at latitude 34° 32' N and longitude 96° 13' W and closed in August 1905. The station was reopened in October 1936. The observing equipment has always been located within 1.7 miles of the post office at ground elevations varying from 610 feet to 620 feet m.s.l. The observing equipment has consisted of an 8-inch nonrecording precipitation gage, plus a maximum and a minimum thermometer installed approximately 5 feet above the ground in a louvered shelter to permit free air circulation. In January 1967 temperature observations were discontinued at Coalgate. The daily precipitation is published monthly in the U.S. Department of Commerce publication Climatological Data - Oklahoma.