

1999

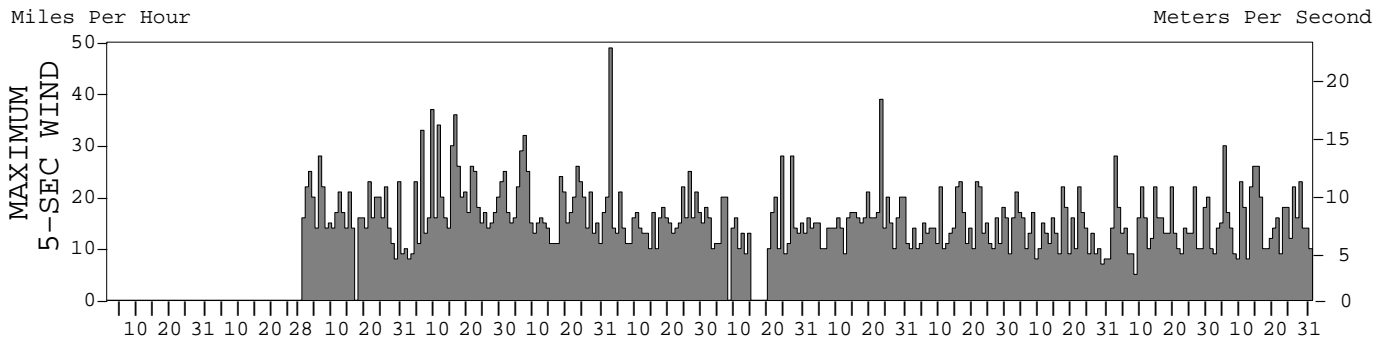
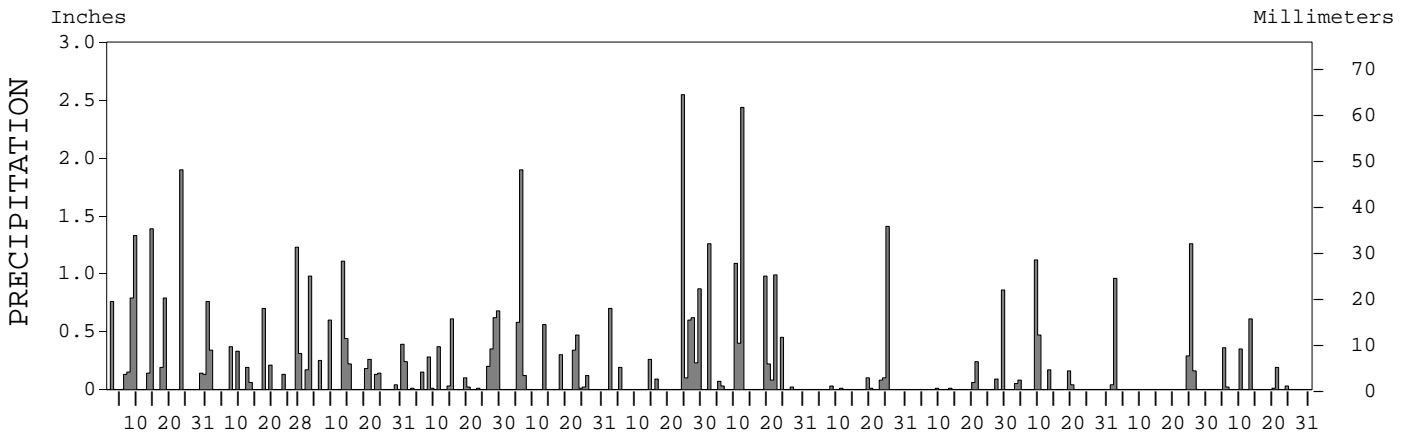
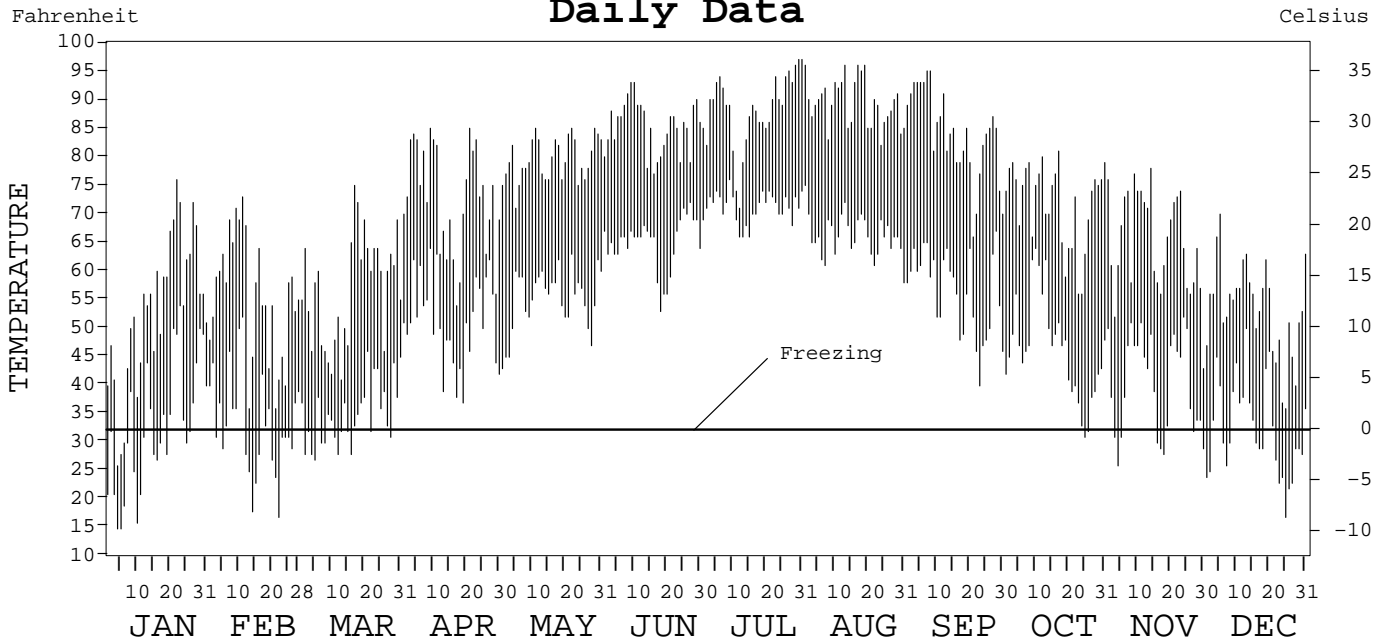
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



OAK RIDGE,
TENNESSEE (OQT)

ISSN -

Daily Data



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Thomas R. Karl

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METEOROLOGICAL DATA FOR 1999

OAK RIDGE, TN (OQT)

LATITUDE: 36° 01' 22" N LONGITUDE: 84° 14' 00" W ELEVATION (FT): GRND: 910 BARO: 910 TIME ZONE: EASTERN (UTC + 5) WBAN: 53868

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	53.0	55.4	56.8	72.7	79.5	85.3	88.2	89.5	84.0	71.8	65.2	53.4	71.2
	HIGHEST DAILY MAXIMUM	76	73	75	85	85	93	97	96	95	81	78	70	97
	DATE OF OCCURRENCE	22	11	17	21+	29+	10+	31+	19+	08+	17	14+	05	JUL 31+
	MEAN DAILY MINIMUM	32.8	33.3	34.8	51.2	55.1	64.8	71.1	66.2	56.3	46.3	40.2	32.3	48.7
	LOWEST DAILY MINIMUM	15	17	27	37	43	53	66	58	40	31	26	17	15
	DATE OF OCCURRENCE	05+	22	05	19	01	18	15+	31	23	25	04	25	JAN 05+
	AVERAGE DRY BULB	42.9	44.4	45.8	62.0	67.3	75.1	79.7	77.9	70.2	59.1	52.7	42.9	60.0
	MEAN WET BULB				55.2					62.1	54.2			
	MEAN DEW POINT				49.2					57.1	50.8			
	NUMBER OF DAYS WITH:													
MAXIMUM ≥ 90°	0	0	0	0	0	4	14	16	8	0	0	0	42	
MAXIMUM ≤ 32°	3	0	0	0	0	0	0	0	0	0	0	0	3	
MINIMUM ≤ 32°	17	14	13	0	0	0	0	0	0	2	8	17	71	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	675	571	585	132	15	0	0	0	28	191	358	678	3233
	COOLING DEGREE DAYS	0	0	0	49	94	310	464	405	190	15	0	0	1527
RH	MEAN (PERCENT)			64	68	70	76	82	72	70	80	76	69	
	HOUR 01 LST			74	77	90	89	94	91	89	95	87	75	
	HOUR 07 LST			81	85	91	92	94	93	93	96	92	84	
	HOUR 13 LST			53	56	48	59	69	50	47	59	57	52	
	HOUR 19 LST			51	55	54	64	73	58	58	76	68	63	
S	PERCENT POSSIBLE SUNSHINE													
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG (VISBY ≤ 1/4 MI)			2	2	5	7	10	7	2	8	3	1	
	THUNDERSTORMS			0	0	0	0	0	0	0	0	0	0	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)													
	CEILOMETER (≤ 12,000 FT.)													
	SATELLITE (> 12,000 FT.)													
	MIDNIGHT-MIDNIGHT: (OKTAS)													
	CEILOMETER (≤ 12,000 FT.)													
	SATELLITE (> 12,000 FT.)													
PR	NUMBER OF DAYS WITH:													
	CLEAR													
	PARTLY CLOUDY													
	CLOUDY													
PR	MEAN STATION PRESS. (IN.)				29.03	29.06	29.10		29.03	29.06	29.19	29.22	29.19	
	MEAN SEA-LEVEL PRESS. (IN.)				29.99				29.96	30.00	30.16		30.19	
WINDS	RESULTANT SPEED (MPH)				1.5	0.5	0.5		0.5	0.6	0.5	0.1	0.7	
	RES. DIR. (TENS OF DEGS.)				24	21	20		06	05	06	36	24	
	MEAN SPEED (MPH)	3.4	3.5	4.6	5.0	3.4	3.4	2.5	2.9	2.4	2.3	2.9	3.3	3.3
	PREVAIL. DIR. (TENS OF DEGS.)			05	22	06	22	22	06	07	06	05	22	
	MAXIMUM 2-MINUTE WIND:													
	SPEED (MPH)			21	26	25	21	20	22	17	16	20	21	
	DIR. (TENS OF DEGS.)			29	15	17	19	05	22	01	29	19	22	
	DATE OF OCCURRENCE			06	06	07	26	27+	23	15	22	02	05	
	MAXIMUM 5-SECOND WIND:													
	SPEED (MPH)	34	35	28	37	32	49	28	39	23	22	28	30	49
DIR. (TENS OF DEGS.)	27	27	29	27	18	28	06	21	01	25	16	23	28	
DATE OF OCCURRENCE	18	07	06	09	07	02	27+	23	21+	22+	02	05	JUN 02	
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	8.60	3.87	4.91	3.68	4.42	6.21	8.03	1.74	1.27	2.09	2.71	1.57	49.10
	GREATEST 24-HOUR (IN.)	1.90	1.23	1.11	1.27	2.37	2.61	2.49	1.41	0.86	1.33	1.44	0.61	2.61
	DATE OF OCCURRENCE	23	27	13	28-29	05-06	24-25	11-12	25	29	09-10	24-25	13	JUN 24-25
	NUMBER OF DAYS WITH:													
	PRECIPITATION ≥ 0.01	13	10	13	15	10	10	12	7	6	7	5	7	115
PRECIPITATION ≥ 0.10	13	9	12	10	8	9	8	3	2	4	4	4	86	
PRECIPITATION ≥ 1.00	3	1	1	0	1	1	3	1	0	1	1	0	13	
SNOWFALL	SNOW, ICE PELLETS, HAIL:													
	TOTAL (IN.)	1.1	1.5											
	GREATEST 24-HOUR (IN.)	1.1	1.0											
	DATE OF OCCURRENCE	06	23											
	MAXIMUM SNOW DEPTH (IN.)	1	1											
	DATE OF OCCURRENCE	07+	24											
NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	1	1												

NORMALS, MEANS, AND EXTREMES

OAK RIDGE, TN (OQT)

LATITUDE: 36° 01' 22" N LONGITUDE: 84° 14' 00" W ELEVATION (FT): GRND: 910 BARO: 910 TIME ZONE: EASTERN (UTC + 5) WBAN: 53868

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	44.8	49.8	60.1	69.9	77.4	84.2	86.7	86.0	80.1	69.9	58.4	48.3	68.0
	MEAN DAILY MAXIMUM	36	45.5	50.3	60.6	70.9	77.9	84.7	87.8	86.9	81.1	70.8	58.8	48.8	68.7
	HIGHEST DAILY MAXIMUM	52	76	79	86	92	93	101	105	103	102	90	83	78	105
	YEAR OF OCCURRENCE		1999	1977	1998	1986	1998	1988	1952	1983	1954	1954	1961	1982	JUL 1952
	MEAN OF EXTREME MAXS.	36	64.7	69.4	79.3	86.1	88.0	92.7	95.1	94.1	91.1	82.9	74.3	66.6	82.0
	NORMAL DAILY MINIMUM	30	25.1	27.7	35.7	43.5	52.2	60.5	64.9	64.3	58.0	44.8	36.2	28.7	45.1
	MEAN DAILY MINIMUM	36	26.8	28.7	36.6	44.7	53.3	61.8	66.1	65.2	58.6	45.8	36.7	30.0	46.2
	LOWEST DAILY MINIMUM	52	-17	-13	1	20	30	39	49	50	33	21	0	-7	-17
	YEAR OF OCCURRENCE		1985	1996	1980	1987	1976	1977	1988	1989	1967	1952	1950	1983	JAN 1985
	MEAN OF EXTREME MINS.	36	6.6	9.8	19.7	28.7	38.1	49.4	57.1	55.8	44.4	30.6	21.1	12.5	31.1
	NORMAL DRY BULB	30	35.0	38.8	47.9	56.8	64.9	72.4	75.8	75.2	69.1	57.4	47.3	38.6	56.6
	MEAN DRY BULB	36	36.2	39.5	48.5	57.7	65.6	73.3	77.0	76.0	69.9	58.3	47.6	39.4	57.4
	MEAN WET BULB					55.2					62.1	54.2			
	MEAN DEW POINT					49.2					57.1	50.8			
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.2	0.5	5.5	11.2	8.0	2.3	0.0	0.0	0.0	27.7	
MAXIMUM ≤ 32°	30	3.9	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.0	7.7	
MINIMUM ≤ 32°	30	23.1	19.0	12.3	3.0	0.1	0.0	0.0	0.0	0.0	2.6	10.9	20.2	91.2	
MINIMUM ≤ 0°	30	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	
H/C	NORMAL HEATING DEG. DAYS	30	930	734	530	252	96	0	0	0	32	260	531	818	4183
	NORMAL COOLING DEG. DAYS	30	0	0	0	6	93	226	335	316	155	25	0	0	1156
RH	NORMAL (PERCENT)														
	HOUR 01 LST														
	HOUR 07 LST														
	HOUR 13 LST														
	HOUR 19 LST														
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	15	1.3	1.0	0.9	0.9	1.6	1.6	3.3	4.1	3.5	7.2	5.2	2.0	32.6
	THUNDERSTORMS	17	0.7	1.6	2.4	3.8	6.6	7.2	9.9	8.2	3.1	1.2	1.0	0.8	46.5
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	40	5.4	5.2	5.2	4.7	4.7	4.4	4.6	4.7	4.5	3.9	4.8	5.2	4.8
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	42	7.2	7.6	7.9	9.7	9.2	9.4	8.2	9.3	9.9	13.7	9.2	8.1	109.4	
PARTLY CLOUDY	42	6.6	5.7	7.3	6.9	9.0	10.4	11.5	11.4	8.9	7.0	7.2	6.3	98.2	
CLOUDY	42	17.2	15.0	15.8	13.4	12.8	10.2	11.3	10.2	11.2	10.2	13.6	16.6	157.5	
PR	MEAN STATION PRESSURE (IN)					29.03	29.06	29.10		29.03	29.06	29.19	29.22	29.19	
	MEAN SEA-LEVEL PRES. (IN)					29.99				29.96	30.00	30.16		30.19	
WINDS	MEAN SPEED (MPH)	20	4.5	4.6	5.0	5.4	4.2	3.9	3.5	3.3	3.4	3.2	3.8	4.2	4.1
	PREVAIL. DIR (TENS OF DEGS)	1	00	00	05	22	06	22	22	06	07	06	05	22	06
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)				21	26	25	21	20	22	17	16	20	21	
	DIR. (TENS OF DEGS)				29	15	17	19	05	22	01	29	19	22	
	YEAR OF OCCURRENCE				1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	
	MAXIMUM 5-SECOND:														
SPEED (MPH)				28	37	32	49	28	39	23	22	28	30		
DIR. (TENS OF DEGS)				29	27	18	28	06	21	01	25	16	23		
YEAR OF OCCURRENCE				1999	1999	1999	1999	1999	1999	1999	1999	1999	1999		
PRECIPITATION	NORMAL (IN)	30	4.57	4.34	5.68	4.08	4.68	4.34	5.45	3.70	3.86	3.18	4.59	5.30	53.77
	MAXIMUM MONTHLY (IN)	52	13.27	10.47	12.24	14.03	10.70	11.14	19.27	10.46	9.10	6.95	12.22	12.64	19.27
	YEAR OF OCCURRENCE		1954	1956	1975	1998	1984	1989	1967	1960	1957	1972	1948	1990	JUL 1967
	MINIMUM MONTHLY (IN)	52	0.93	0.84	2.13	0.88	0.80	0.53	1.23	0.54	0.41	T	1.37	0.67	T
	YEAR OF OCCURRENCE		1981	1968	1957	1976	1970	1988	1995	1953	1961	1963	1949	1965	OCT 1963
	MAXIMUM IN 24 HOURS (IN)	52	4.25	3.66	4.74	6.24	4.41	3.70	4.91	7.48	3.76	2.66	5.29	5.12	7.48
	YEAR OF OCCURRENCE		1954	1994	1973	1977	1973	1969	1967	1960	1982	1976	1973	1969	AUG 1960
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	11.9	10.8	12.3	10.8	11.2	10.4	12.2	10.1	8.9	7.9	10.2	11.2	127.9	
PRECIPITATION ≥ 1.00	30	1.3	0.9	1.5	0.9	1.3	1.2	1.4	0.8	1.3	1.0	1.1	1.5	14.2	
SNOWFALL	NORMAL (IN)	30	4.0	3.8	0.8	0.2	0.0	0.0	0.0	0.0	T	0.1	2.2	11.1	
	MAXIMUM MONTHLY (IN)	52	9.6	17.2	21.0	5.9	T	T	T	T	0.0	T	6.5	14.8	21.0
	YEAR OF OCCURRENCE		1966	1979	1960	1987	1993	1998	1993	1990		1993	1950	1963	MAR 1960
	MAXIMUM IN 24 HOURS (IN)	52	8.3	11.3	12.0	5.4	T	T	T	T	0.0	T	6.5	10.8	12.0
	YEAR OF OCCURRENCE		1962	1996	1960	1987	1993	1998	1993	1990		1993	1950	1963	MAR 1960
	MAXIMUM SNOW DEPTH (IN)	34	8	6	3	3	0	0	0	0	0	0	1	10	10
	YEAR OF OCCURRENCE		1995	1969	1980	1987							1966	1963	DEC 1963
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	1.4	1.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.6	

PRECIPITATION (inches) 1999 OAK RIDGE, TN (OQT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	2.96	3.74	4.06	9.24	0.80	5.90	1.55	9.10	2.54	6.07	1.78	4.47	52.21
1971	4.88	4.68	4.61	4.73	7.17	2.25	8.22	2.57	3.32	1.75	2.25	6.90	53.33
1972	7.32	4.83	5.99	2.94	5.81	5.56	5.22	1.77	4.28	6.95	5.02	9.20	64.89
1973	4.21	3.42	11.43	5.66	10.43	6.94	5.54	2.25	3.41	3.36	10.78	8.90	76.33
1974	9.62	4.72	7.22	3.78	7.98	2.00	1.99	4.31	4.18	1.78	5.04	4.96	57.58
1975	5.88	5.91	12.24	2.36	4.02	5.60	2.88	2.67	5.79	5.55	3.42	4.36	60.68
1976	5.47	2.60	6.00	0.88	7.24	4.80	4.03	4.89	4.56	5.91	2.27	4.68	53.33
1977	2.52	1.89	5.42	8.50	1.67	6.68	4.11	4.40	8.67	4.97	9.12	4.82	62.77
1978	5.99	1.13	4.69	3.21	4.50	3.97	4.89	5.75	1.70	0.39	5.54	6.65	48.41
1979	7.60	4.30	5.01	5.25	9.32	3.73	12.92	5.49	3.74	1.93	5.77	2.24	67.30
1980	6.24	1.51	9.20	3.89	3.01	0.85	2.39	2.07	3.31	1.08	4.55	2.02	40.12
1981	0.93	4.69	3.59	4.58	2.65	4.50	2.42	3.11	3.90	4.89	3.20	4.12	42.58
1982	6.70	5.42	6.20	2.79	2.88	2.15	7.01	4.61	5.31	1.95	7.81	7.22	60.05
1983	1.75	4.38	2.57	6.40	6.90	2.53	2.41	1.28	2.07	4.58	5.85	6.95	47.67
1984	2.62	3.92	4.81	4.16	10.70	4.70	8.72	1.87	1.87	6.19	4.37	2.59	56.52
1985	2.88	3.73	2.60	2.23	3.83	5.08	6.43	8.50	1.56	3.08	4.49	2.11	46.52
1986	1.16	5.15	2.70	1.73	2.74	1.45	2.84	2.84	4.70	4.51	3.67	5.34	38.83
1987	4.87	5.64	2.82	2.97	2.02	4.26	3.94	1.92	5.64	0.69	2.11	3.43	40.31
1988	5.44	3.43	3.80	3.42	2.65	0.53	7.60	2.39	5.63	1.97	6.56	5.53	48.95
1989	6.94	5.07	6.03	2.76	6.14	11.14	3.62	3.90	8.86	2.46	6.06	3.03	66.01
1990	5.29	8.01	5.09	2.57	6.59	1.53	5.06	5.09	1.44	4.07	2.40	12.64	59.78
1991	2.97	7.94	7.44	3.84	2.55	7.05	4.06	4.62	2.86	1.76	4.15	10.92	60.16
1992	3.37	3.25	3.79	1.64	2.27	4.00	5.10	3.38	3.11	2.62	5.67	5.79	43.99
1993	3.98	4.13	6.42	3.70	4.29	1.60	1.99	3.25	5.12	2.15	4.09	8.29	49.01
1994	6.12	9.79	9.47	9.81	3.03	7.15	5.53	3.85	2.14	2.56	3.32	2.80	65.57
1995	6.30	3.76	3.85	2.49	6.12	3.02	1.23	2.25	3.90	4.64	7.48	3.67	48.71
1996	7.67	3.60	5.53	3.95	5.08	6.35	12.29	3.35	3.70	1.55	8.18	5.32	66.57
1997	5.76	4.56	6.12	3.99	6.31	5.85	6.37	4.02	3.38	3.39	2.83	3.88	56.46
1998	5.61	4.81	6.01	14.03	3.99	10.13	3.41	1.35	1.37	1.65	2.40	8.47	63.23
1999	8.60	3.87	4.91	3.68	4.42	6.21	8.03	1.74	1.27	2.09	2.71	1.57	49.10
POR= 52 YRS	5.23	4.84	5.70	4.27	4.32	4.34	5.28	3.61	3.59	2.85	4.55	5.54	54.12

WBAN : 53868

AVERAGE TEMPERATURE (°F) 1999 OAK RIDGE, TN (OQT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	29.8	38.0	47.0	60.3	67.7	72.1	76.7	76.5	73.9	61.2	46.9	42.5	57.7
1971	36.8	39.1	44.4	57.6	63.5	75.6	75.0	74.8	72.6	64.0	46.7	47.8	58.2
1972	40.6	37.4	46.5	58.0	63.9	69.8	75.2	75.5	72.1	57.3	47.0	44.2	57.3
1973	37.4	38.2	55.0	55.4	62.0	74.0	76.8	75.3	72.8	62.1	50.9	39.3	58.3
1974	47.1	41.6	53.6	57.7	65.9	67.7	75.4	74.2	65.6	54.1	45.8	39.6	57.4
1975	41.1	43.0	44.6	54.9	68.2	72.0	74.7	76.2	66.0	58.5	48.4	39.4	57.3
1976	32.6	45.7	49.9	56.2	60.5	70.9	73.5	72.3	65.0	52.3	39.7	34.6	54.4
1977	24.8	36.7	50.8	59.2	66.4	72.0	77.3	75.3	70.3	53.6	49.9	36.1	56.0
1978	27.3	31.1	46.1	57.2	64.1	72.5	75.7	75.6	72.8	55.7	51.7	39.7	55.8
1979	31.1	35.3	50.0	57.2	64.4	71.5	73.9	74.9	69.7	56.5	47.9	39.5	56.0
1980	38.8	34.3	44.5	55.4	65.7	72.8	80.6	78.9	73.7	55.4	46.6	38.3	57.1
1981	32.3	39.9	44.1	61.2	62.3	75.4	77.8	74.1	66.8	55.0	46.0	34.3	55.8
1982	31.6	41.2	50.7	52.6	69.3	71.6	77.5	73.8	66.8	57.6	47.4	43.0	56.9
1983	35.4	38.6	47.7	51.2	63.8	71.5	77.9	79.2	69.4	59.4	45.7	34.4	56.2
1984	33.2	41.3	44.9	54.7	60.7	74.0	73.5	75.1	66.5	65.5	43.1	45.8	56.5
1985	28.0	35.3	47.8	57.3	64.2	71.0	74.8	73.1	67.0	61.9	54.5	30.9	55.5
1986	35.2	43.2	48.4	58.3	66.7	75.7	80.3	75.6	72.1	59.9	51.1	37.7	58.7
1987	36.0	40.8	48.3	56.7	71.6	75.0	78.1	78.1	69.7	53.4	50.0	42.8	58.4
1988	32.9	38.5	49.5	58.3	66.5	74.1	77.6	78.7	70.9	51.8	48.2	38.9	57.2
1989	42.3	40.0	52.8	57.9	62.2	73.2	77.1	75.8	70.8	58.8	46.8	30.5	57.4
1990	42.8	47.7	52.8	56.2	64.6	75.0	77.6	77.6	71.8	59.1	50.4	43.1	59.9
1991	40.0	42.6	51.3	62.8	72.2	74.9	79.1	76.8	71.4	60.7	45.5	42.1	60.0
1992	39.3	44.8	47.5	58.5	63.7	71.5	77.4	73.3	70.9	57.4	47.0	38.9	57.5
1993	42.2	38.7	45.6	55.2	67.4	74.7	82.1	78.7	71.7	60.1	46.2	39.6	58.5
1994	31.6	42.5	47.6	59.7	61.7	74.9	76.4	75.0	67.2	59.9	52.2	44.4	57.8
1995	38.2	39.4	52.4	59.8	67.3	74.3	80.2	82.1	70.9	59.6	43.6	37.6	58.8
1996	36.2	38.4	44.9	55.1	70.2	75.3	76.3	76.9	69.3	60.2	44.8	42.2	57.5
1997	39.4	46.7	54.8	54.8	62.5	73.1	79.5	76.1	72.0	59.3	44.3	39.2	58.5
1998	43.2	45.8	49.4	57.6	71.4	76.4	80.4	79.2	76.6	62.8	50.8	44.9	61.5
1999	42.9	44.4	45.8	62.0	67.3	75.1	79.7	77.9	70.2	59.1	52.7	42.9	60.0
POR= 52 YRS	37.2	40.7	48.2	57.9	66.0	73.5	77.2	76.0	70.0	58.6	47.3	39.5	57.7

HEATING DEGREE DAYS (base 65°F) 1999 OAK RIDGE, TN (OQT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	19	134	536	689	870	717	633	233	87	0	3918
1971-72	0	0	0	73	551	526	748	792	568	244	67	17	3586
1972-73	0	0	10	241	536	642	848	745	304	301	122	0	3749
1973-74	0	0	11	139	415	789	548	651	347	228	65	26	3219
1974-75	0	0	61	330	568	781	736	610	629	318	24	0	4057
1975-76	0	0	79	203	490	786	1000	556	459	262	148	5	3988
1976-77	1	0	45	389	752	936	1242	788	437	169	60	23	4842
1977-78	0	0	10	352	448	890	1161	946	577	232	110	2	4728
1978-79	0	0	0	281	393	780	1043	826	462	230	86	2	4103
1979-80	0	0	7	267	507	783	804	883	629	288	63	3	4234
1980-81	0	0	23	304	545	821	1009	695	643	145	120	0	4305
1981-82	0	0	68	307	562	944	1030	662	450	367	29	0	4419
1982-83	0	0	62	263	522	678	910	734	529	413	78	11	4200
1983-84	0	0	57	181	572	942	977	682	616	304	173	5	4509
1984-85	0	0	58	47	648	588	1140	824	525	239	84	20	4173
1985-86	0	0	61	123	311	1049	917	603	508	214	62	0	3848
1986-87	0	3	0	199	417	841	892	673	515	282	11	0	3833
1987-88	0	0	9	353	445	682	988	764	477	217	45	11	3991
1988-89	0	0	6	413	498	805	697	695	379	260	154	0	3907
1989-90	0	1	40	220	539	1066	682	481	384	282	83	0	3778
1990-91	0	0	26	200	436	675	770	624	426	96	14	0	3267
1991-92	0	0	48	167	580	705	794	583	538	236	121	7	3779
1992-93	0	0	14	230	536	803	701	729	595	292	37	3	3940
1993-94	0	0	26	182	559	781	1030	624	535	193	134	0	4064
1994-95	0	0	27	162	374	629	824	710	385	182	62	2	3357
1995-96	0	0	22	197	639	841	884	765	617	301	42	3	4311
1996-97	0	0	21	168	604	699	786	506	316	309	112	9	3530
1997-98	0	0	1	226	615	792	668	532	499	222	24	10	3589
1998-99	0	0	1	108	418	616	675	571	585	132	15	0	3121
1999-	0	0	28	191	358	678							

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COOLING DEGREE DAYS (base 65°F) 1999 OAK RIDGE, TN (OQT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	37	140	219	371	361	291	25	0	0	1444
1971	0	0	0	16	46	323	316	312	232	47	9	0	1301
1972	0	0	0	41	40	168	322	330	229	5	2	0	1137
1973	0	0	2	16	34	277	374	325	254	56	0	0	1338
1974	0	0	1	20	103	116	330	295	86	2	0	0	953
1975	0	0	0	23	133	216	306	353	114	11	0	0	1156
1976	0	1	0	6	17	187	273	234	53	0	0	0	771
1977	0	0	3	4	109	241	387	324	177	7	4	0	1256
1978	0	0	0	3	89	234	342	335	240	1	0	0	1244
1979	0	0	2	5	74	202	285	314	151	11	0	0	1044
1980	0	0	0	6	92	244	491	435	291	13	0	0	1572
1981	0	0	0	39	40	319	404	286	126	3	0	0	1217
1982	0	0	15	2	167	207	392	279	120	44	0	3	1229
1983	0	0	0	5	47	211	405	445	196	12	0	0	1321
1984	0	0	0	3	47	283	275	318	106	69	0	0	1101
1985	0	0	2	16	63	207	313	258	125	31	3	0	1018
1986	0	0	0	22	121	329	477	337	219	47	5	0	1557
1987	0	0	0	36	222	306	412	409	152	0	0	0	1537
1988	0	0	1	23	94	291	400	429	187	9	0	0	1434
1989	0	1	3	51	72	249	379	341	219	31	0	0	1346
1990	0	0	11	25	78	305	393	397	235	26	3	0	1473
1991	0	0	5	36	242	300	441	370	245	39	0	0	1678
1992	0	0	0	43	86	204	387	261	198	1	0	0	1180
1993	0	0	0	3	115	298	532	429	234	36	0	0	1647
1994	0	0	0	39	39	304	359	318	101	9	0	0	1169
1995	0	0	4	35	140	286	478	541	206	34	2	0	1726
1996	0	0	0	12	208	320	359	378	159	26	3	0	1465
1997	0	0	5	9	41	262	458	350	219	56	0	0	1400
1998	0	0	21	9	229	360	485	448	355	48	0	1	1956
1999	0	0	0	49	94	310	464	405	190	15	0	0	1527

SNOWFALL (inches) 1999 OAK RIDGE, TN (OQT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.0	T	5.4	1.7	1.9	2.6	0.3	0.0	0.0	11.9
1971-72	0.0	0.0	0.0	0.0	0.2	0.7	0.4	5.0	4.0	0.0	0.0	0.0	10.3
1972-73	0.0	0.0	0.0	0.0	0.4	T	8.0	0.2	0.6	0.2	0.0	0.0	9.4
1973-74	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	0.4	0.0	0.0	0.0	1.3
1974-75	0.0	0.0	0.0	0.0	0.4	1.5	1.1	T	3.1	T	0.0	0.0	6.1
1975-76	0.0	0.0	0.0	0.0	0.1	T	2.2	3.9	0.0	0.0	0.0	0.0	6.2
1976-77	0.0	0.0	0.0	0.0	T	1.3	8.7	T	T	0.0	0.0	0.0	10.0
1977-78	0.0	0.0	0.0	0.0	T	1.0	8.6	6.2	3.4	T	0.0	0.0	19.2
1978-79	0.0	0.0	0.0	0.0	0.0	T	4.2	17.2	0.5	0.0	0.0	0.0	21.9
1979-80	0.0	0.0	0.0	0.0	T	T	1.0	7.9	3.2	T	0.0	0.0	12.1
1980-81	0.0	0.0	0.0	0.0	T	T	5.3	0.2	0.1	0.0	0.0	0.0	5.6
1981-82	0.0	0.0	0.0	0.0	T	0.9	4.4	0.5	1.8	T	0.0	0.0	7.6
1982-83	0.0	0.0	0.0	0.0	0.0	2.8	1.4	4.8	T	0.2	0.0	0.0	9.2
1983-84	0.0	0.0	0.0	0.0	T	0.3	4.6	5.1	0.2	0.0	0.0	0.0	10.2
1984-85	0.0	0.0	0.0	0.0	0.0	0.1	9.4	3.6	0.0	0.0	0.0	0.0	13.1
1985-86	0.0	0.0	0.0	0.0	0.0	T	2.5	5.0	T	0.0	0.0	0.0	7.5
1986-87	0.0	0.0	0.0	0.0	0.0	T	4.7	T	T	5.9	0.0	0.0	10.6
1987-88	0.0	0.0	0.0	0.0	T	T	6.9	0.1	T	0.0	0.0	0.0	7.0
1988-89	0.0	0.0	0.0	0.0	T	4.2	T	4.1	0.0	T	0.0	0.0	8.3
1989-90	0.0	0.0	0.0	T	T	9.5	T	T	T	0.0	T	0.0	9.5
1990-91	0.0	T	0.0	0.0	0.0	T	T	T	T	0.0	0.0	0.0	T
1991-92	T	0.0	0.0	0.0	0.0	T	T	0.0	1.0	T	0.0	0.0	1.0
1992-93	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.8	12.0	T	T	0.0	15.4
1993-94	T	0.0	0.0	T	0.0	0.5	0.9	0.1	T	0.0		0.0	
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.4	2.2	0.0	0.0	0.0	6.4
1995-96	0.0	0.0	0.0	0.0	T	T	9.0	12.0	0.8	T	0.0	0.0	21.8
1996-97	0.0	0.0	0.0	0.0	0.5	T	3.2	T	0.0	0.0	0.0	0.0	3.7
1997-98	0.0	0.0	0.0	0.0	0.0	5.5	T	2.8	T	T	0.0	T	8.3
1998-99	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.5					
1999-													
POR= 49 YRS	T	T	0.0	T	0.3	1.8	3.1	2.9	1.4	0.1	T	0.0	9.6

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REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999
OAK RIDGE,
TENNESSEE (OQT)

Oak Ridge is located in a broad valley between the Cumberland Mountains, which lie to the northwest of the area, and the Great Smoky Mountains, to the southeast. These mountain ranges are oriented northeast-southwest and the valley between is corrugated by broken ridges 300 to 500 feet high and oriented parallel to the main valley. During periods of light winds, daytime winds are usually southwesterly, nighttime winds northeasterly. Wind velocities are somewhat decreased by the ridges. Tornadoes rarely occur in the valley between the Cumberlands and the Great Smokies. In winter the Cumberland Mountains have a moderating influence on the local climate by retarding the flow of cold air from the north and west.

Temperatures of 100 degrees or more have occurred during less than one-half of the years of the period of record, and temperatures of zero or below are rare. Summer nights are seldom oppressively hot and humid.

Precipitation is more than adequate for agriculture and is normally well distributed through the year for agricultural purposes.

Occasionally there is sufficient dry weather in late summer or early fall to cause small damage to crops and pastures and to create conditions favorable for destructive forest fires. Winter and early spring are the seasons of heaviest precipitation. A few of the larger monthly precipitation amounts recorded have occurred in the normally drier fall months.

Light snow usually occurs in all of the months from November through March, but the total monthly snowfall is often only a trace. Snowfalls sufficiently heavy to interfere with traffic and outdoor activities occur infrequently.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 27 and the average last occurrence in the spring is April 11.

STATION LOCATION

OAK RIDGE, TENNESSEE

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE											REMARKS	
						SEA LEVEL	GROUND											
							WIND	TEMP	PRECIP	REL HUM	WIND DIR	WIND SPC	WIND DIR	WIND SPC	WIND DIR	WIND SPC		WIND DIR
<u>COOPERATIVE</u>																		
493 West Outer Drive	5/1947	4/1948		36°02'	84°15'	1120		5										
Cheyenne Hall Tyronne Road at Tyndale Street	5/1948	12/07/48	1.75 mi. E	36°01'	84°14'	905	46	5				38						
<u>CITY</u>																		
Administration Building Atomic Energy Comm., Oak Ridge Turnpike and Central Avenue	12/07/48	1973	2200 ft. E	36°01'	84°14"	905	46 c41	5					4	b4				Wind, temperature and precipitation instruments remain at second location of station.
465 S. Illinois	1973	09/01/98	6.7 NE	36°00'	84°15'	880	d30	5	NA	NA	NA	NA	3	2	NA	NA		b - Added February 1957. c - Effective December 1958. d - Removed 10/19/79.
Oak Ridge	09/01/98	Present	NA	36°01'	84°14'	910										S		ASOS Commissioned 09/01/98

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.
INQUIRIES/COMMENTS CALL: (828) 271-4800

National Climatic Data Center
151 Patton Avenue, Rm 120
Asheville NC 28801-5001

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