



# JULY 2012

## LOCAL CLIMATOLOGICAL DATA

### NOAA, National Climatic Data Center

OAK RIDGE, TN  
 OAK RIDGE (KOQT)  
 Lat:36° 1'N Long: 84° 14'W Elev (Ground) 910 Feet  
 Time Zone : EASTERN WBAN: 53868 ISSN#: 0198-487X



Date 1	Temperature °F						Deg Days BASE 65°		WEATHER 10	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								Date 24			
	MAXIMUM 2	MINIMUM 3	AVERAGE 4	DEP FROM NORMAL 5	AVERAGE DEW PT 6	AVERAGE WET BULB 7	HEATING 8	COOLING 9		LST 11	LST 12	LST 13	LST 14	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM								
																			3-SEC		2-MIN						
																			SPEED 20	DIR 21	SPEED 22	DIR 23					
01	104*	75	90*	14	68	74	0	25	RA HZ			0.02	29.00	29.91	0.2	17	1.2	22	31	14	28	01					
02	97	70	84	8	65	71	0	19	RA			0.05	29.10	30.03	2.2	23	5.0	22	16	14	17	02					
03	94	67	81	5	65	70	0	16	RA			T	29.08	30.00	0.3	31	1.8	26	33	16	33	03					
04	96	72	84	8	68	72	0	19	RA			0.26	29.05	29.98	1.5	22	3.0	29	26	17	27	04					
05	100	69	85	8	68	72	0	20	RA BR			0.46	29.08	29.99	0.5	04	2.3	33*	03	18*	36	05					
06	97	67	82	5	66	71	0	17	BR			0.00	29.07	29.99	1.3	07	1.9	13	07	9	07	06					
07	99	72	86	9	68	74	0	21				0.00	29.05	29.97	1.0	20	2.0	13	14	9	15	07					
08	99	78	89	12	69	75	0	24				0.00	29.03	29.94	2.4	23	4.4	22	23	13	26	08					
09	91	73	82	5	70	73	0	17	RA BR			0.06	29.02	29.94	0.7	02	2.2	18	32	12	33	09					
10	86	71	79	2	70	72	0	14	RA BR			0.04	29.03	29.97	0.3	13	1.4	15	20	10	17	10					
11	80	71	76	-1	69	71	0	11	RA BR			0.30	29.11	30.05	0.4	10	0.5	8	06	6	08	11					
12	74	70	72*	-5	69	70	0	7	RA BR			0.85	29.14	30.08	1.3	07	1.3	13	06	8	07	12					
13	88	69	79	2	69	71	0	14	RA FG+ BR			0.54	29.15	30.09	0.6	11	1.7	21	14	11	14	13					
14	89	71	80	3	71	72	0	15	RA FG+ FG BR			0.66	29.18	30.12	0.6	15	1.5	17	29	12	28	14					
15	91	69	80	3	70	73	0	15	FG BR			0.00	29.20	30.13	0.5	16	1.4	18	18	12	18	15					
16	89	72	81	4	71	74	0	16	RA FG+ FG BR			0.14	29.13	30.04	0.7	21	1.2	16	26	9	27	16					
17	91	71	81	4	70	72	0	16	RA BR			0.46	29.05	29.98	0.7	09	1.4	20	22	13	07	17					
18	87	69	78	0	70	71	0	13	RA FG+ FG BR			0.82	29.07	30.00	0.7	16	1.1	20	29	13	28	18					
19	91	69	80	2	71	74	0	15	RA BR			0.27	29.05	29.99	1.6	21	2.9		7		19	19					
20	86	69	78	0	70	72	0	13	RA BR			0.36	29.03	29.95	2.1	22	4.4	15	26	9	25	20					
21	89	72	81	3	70	73	0	16				0.00	29.08	30.01	0.6	22	1.8	14	19	9	19	21					
22	92	74	83	5	69	73	0	18	RA			T	29.18	30.12	2.0	22	3.5	17	19	10	21	22					
23	92	72	82	4	71	74	0	17	RA			T	29.20	30.12	1.0	22	1.8	15	26	10	20	23					
24	95	75	85	7	71	75	0	20				0.00	29.09	30.00	2.0	23	3.4	18	26	12	27	24					
25	94	76	85	7	71	75	0	20				0.00	29.02	29.92	1.0	22	2.3	13	29	9	25	25					
26	94	75	85	7	71	75	0	20				0.00	28.96	29.87	2.0	22	3.8	21	20	13	20	26					
27	92	77	85	7	69	74	0	20	RA			T	28.99	29.91	1.6	25	2.7	17	28	12	26	27					
28	93	70	82	4	63	69	0	17				0.00	29.07	30.00	0.9	35	3.4	17	01	12	27	28					
29	89	66*	78	0	63	68	0	13				0.00	29.08	30.00	1.2	36	1.5	13	36	8	35	29					
30	92	67	80	2	64	70	0	15				0.00	29.03	29.94	0.8	28	1.3	14	26	8	27	30					
31	91	72	82	5	69	73	0	17	RA BR			0.55	28.97	29.89	0.1	19	1.6	16	06	12	08	31					
91.7		71.3	81.5	☼	68.6	72.4	0.0	16.8	< MONTHLY AVERAGES   TOTALS >					5.84	29.07	30.00	0.5	22	2.2	< MONTHLY AVERAGES							
3.3		2.7	3.0		-----DEPARTURE FROM NORMAL ----->					0.57	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																
<b>DEGREE DAYS</b>									GREATEST 24-HR PRECIPITATION : 1.10 DATE : 12-13				SEA LEVEL PRESSURE				DATE		TIME								
MONTHLY				SEASON TO DATE					GREATEST 24-HR SNOWFALL :				MAXIMUM :				15		0953								
TOTAL DEPARTURE				TOTAL DEPARTURE					GREATEST SNOW DEPTH :				MINIMUM :				26		1853								
HEATING :		0		0		0		0		NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 :		21		MINIMUM TEMP <= 32 :		0		PRECIPITATION >= 0.01 INCH :		16			
COOLING :		520		102		1180		313		MAXIMUM TEMP <= 32 :				0		MINIMUM TEMP <= 0 :		0		PRECIPITATION >= 0.10 INCH :		12		SNOWFALL >= 1.0 INCH :			

JULY 2012  
 OAK RIDGE, TN

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

OAK RIDGE, TN (KOQT)  
JULY 2012

WBAN # 53868

Date	FOR HOUR (LST) ENDING AT												Date	FOR HOUR (LST) ENDING AT												Date	Sum of Hourly Data	2400 LST Water Equiv.
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			
01													01												01	0.02	0.02	
02						0.03	T						02											T	0.05	0.05		
03	T												03				T							T	0.02	T		
04													04		0.23	0.03		T						T	0.26	0.26		
05													05						0.32	0.13	0.01				0.46	0.46		
06													06												0.00	0.00		
07													07												0.00	0.00		
08													08												0.00	0.00		
09		0.05	T										09		T	T								T	0.06	0.06		
10	0.01	T	0.03							T	T		10		T	T							T	0.01	0.04	0.04		
11					T	T	0.06	0.05	0.03	0.03	0.10	0.02	11	0.01	T									0.30	0.30			
12					0.01	0.01	T	0.03	0.03	0.04	0.08	0.09	12	0.09	0.16	0.04	0.03	0.01	0.02	0.06	0.05	0.03	0.05	T	0.02	0.85	0.85	
13	0.03	0.15	0.07	T									13					0.14						0.54	0.54			
14													14		0.23	0.43								0.66	0.66			
15													15											0.00	0.00			
16												0.14	16	T										0.14	0.14			
17													17	0.38	0.08	T								0.46	0.46			
18													18	0.47	0.14	T	0.01							0.82	0.82			
19													19											0.27	0.27			
20	0.13	0.07	0.11		T	0.01	T			0.01			20								0.01	0.02	0.27	0.36	0.36			
21													21											0.00	0.00			
22					T								22											T	T			
23													23			T								T	T			
24													24											0.00	0.00			
25													25											0.00	0.00			
26													26											0.00	0.00			
27													27		T									T	T			
28													28											0.00	0.00			
29													29											0.00	0.00			
30													30											0.00	0.00			
31			0.48	0.03		T	0.04	T		T			31											0.55	0.55			

\* Indicates sum of Hourly and Daily disagree.

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	0.31	0.44	0.46	0.46	0.48	0.56	0.63	0.63	0.66	0.66	0.66	0.66
Ending Date	14	14	14	14	18	18	14	14	14	14	14	14
Ending Time (Hr/Min)	1504	1507	1509	1509	1302	1317	1509	1509	1538	1538	1538	1538

Note : The hourly and daily precipitation totals are printed in the last 2 columns and hi-lighted in red when they disagree. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

Date and time are not entered for TRACE amounts.

# REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

\* = Extreme for the month (last occurrence if more than one).

T = Trace precipitation amount.

+ = also occurs on earlier date.

FG+ = Heavy fog, visibility .25 miles or less.

BLANK entries denote missing or unreported data.

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1981-2010

## WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
DESCRIPTOR	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unkown Precipitation		

Intensity (as indicated on pages 4 to 6):  
'+' = Heavy    '' = Moderate    '-' = Light

# OAK RIDGE, TN JULY 2012

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR-SS), or midnight to midnight (MN-MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0-2 oktas, Partly Cloudy = 3-6 oktas, Cloudy = 7-8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

### ADDITIONAL NOTES:

Station Augmentation-OAK RIDGE ATDD COOP  
Lat/Lon:36.00278/-84.24861 Elevation:905FT  
Distance:1.5 MI Dir:SW  
Augmented Elements:Temp,Precip,Snow  
Equipment:Pcpn-Model TRP525M, Temp Vaisala HMP35C,  
Snow Board, Snow Stick

Date	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			Sky Cover	Satellite	Sky Cover	Satellite			
01							6.00	10.00	
02							7.00	10.00	
03							8.00	10.00	
04							1.50	10.00	
05							5.00	10.00	
06							2.00	10.00	
07							8.00	10.00	
08							9.00	10.00	
09							3.00	10.00	
10							7.00	10.00	
11							3.00	10.00	
12							3.00	10.00	
13							0.25	10.00	
14							0.25	10.00	
15							0.50	10.00	
16							0.00	10.00	
17							1.00	10.00	
18							0.25	10.00	
19							1.50	10.00	
20							4.00	10.00	
21							9.00	10.00	
22							10.00	10.00	
23							8.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							10.00	10.00	
30							10.00	10.00	
31							1.25	10.00	
MONTHLY AVGS							5.44	10.00	
<b>SUNSHINE (Minutes)</b>									
Total : 0					Possible :				
Percent Possible :									
<b>NUMBER OF DAYS WITH :</b>									
SKY CONDITION									
Clear		Partly CLDY			Cloudy			Missing	
<b>MINIMUM VISIBILITY (MILES)</b>									
<= .25		<= 3.0			>= 7.0				
4		13			15				

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

JULY 2012

KOQT

WBAN # 53868

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)			
			Observation Time (LST)	Eff Cld Amt Oktas			DRY BULB	DEW POINT	WET BULB		RELATIVE HUMIDITY (PCT)	STATION	SEA LEVEL	
														Observation Time (LST)
SUNRISE: 0524      JUL 01      SUNSET: 1958														
01	CLR	NC			9.00		80	70	73	72	0	00	28.96	29.86
04	FEW	100			8.00		76	69	71	79	0	00	28.98	29.88
07	CLR	NC			6.00	HZ	76	70	72	82	0	00	29.04	29.93
10	CLR	NC			10.00		91	65	73	42	0	00	29.06	29.96
13	CLR	NC			10.00		102	64	76	29	6	VR	29.06	29.96
16	FEW	100			10.00		104	60	74	24	3	VR	28.99	29.89
19	SCT	110			10.00		88	65	73	47	0	00	28.96	29.87
22	CLR	NC			9.00		81	71	74	72	0	00	29.01	29.91
SUNRISE: 0524      JUL 02      SUNSET: 1958														
01	SCT	095			10.00		82	64	70	55	6	07	29.09	29.99
04	CLR	NC			10.00		74	66	69	76	3	22	29.13	30.03
07	SCT	100			10.00		74	68	70	82	3	26	29.16	30.08
10	CLR	NC			10.00		82	65	71	56	8	25	29.15	30.08
13	CLR	NC			10.00		90	65	73	44	7	21	29.10	30.02
16	CLR	NC			10.00		93	64	73	38	6	21	29.06	29.97
19	BKN	080			10.00		90	67	74	47	3	35	29.05	29.96
22	SCT	120			10.00	-RA	75	63	67	66	7	VR	29.13	30.06
SUNRISE: 0525      JUL 03      SUNSET: 1958														
01	CLR	NC			10.00		71	66	68	84	0	00	29.10	30.02
04	CLR	NC			10.00		68	65	66	90	0	00	29.08	29.99
07	CLR	NC			10.00		69	65	66	87	0	00	29.13	30.04
10	CLR	NC			10.00		83	65	71	55	5	12	29.13	30.05
13	CLR	NC			10.00		91	65	73	42	5	VR	29.08	30.00
16	BKN	090			10.00	-RA	82	63	70	53	8	33	29.04	29.97
19	CLR	NC			10.00		81	65	70	58	0	00	29.02	29.95
22	SCT	095			10.00		76	68	71	76	0	00	29.06	29.98
SUNRISE: 0525      JUL 04      SUNSET: 1957														
01	CLR	NC			10.00		74	69	71	84	3	23	29.07	29.98
04	CLR	NC			10.00		73	66	68	79	0	00	29.06	29.98
07	OVC	110			10.00		75	66	69	74	0	00	29.10	30.02
10	CLR	NC			10.00		83	67	72	59	3	VR	29.10	30.03
13	CLR	NC			10.00		92	68	75	45	6	VR	29.07	29.98
16	CLR	NC			10.00		94	68	76	43	3	VR	29.02	29.93
19	CLR	NC			10.00		92	68	75	45	5	VR	29.00	29.91
22	CLR	NC			10.00		83	70	74	65	3	24	29.05	29.96
SUNRISE: 0526      JUL 05      SUNSET: 1957														
01	CLR	NC			10.00		78	68	71	71	0	00	29.06	29.97
04	CLR	NC			10.00		74	68	70	82	0	00	29.05	29.96
07	CLR	NC			10.00		73	69	70	87	0	00	29.09	30.00
10	CLR	NC			10.00		87	70	75	57	3	19	29.09	30.00
13	CLR	NC			10.00		96	68	76	40	0	00	29.05	29.95
16	CLR	NC			10.00		98	65	75	34	5	23	28.99	29.90
19	BKN	110			5.00	-RA BR	70	68	69	93	5	09	29.17	30.11
22	CLR	NC			10.00		70	67	68	90	0	00	29.06	29.98
SUNRISE: 0526      JUL 06      SUNSET: 1957														
01	BKN	004			6.00	BR	70	67	68	90	0	00	29.07	29.98
04	FEW	002			5.00	BR	68	66	67	93	0	00	29.08	30.00
07	SCT	004			5.00	BR	69	66	67	90	0	00	29.12	30.05
10	FEW	011			10.00		76	67	70	74	5	08	29.12	30.05
13	CLR	NC			10.00		89	63	72	42	6	09	29.09	30.00
16	CLR	NC			10.00		95	65	74	37	3	VR	29.02	29.93
19	CLR	NC			10.00		93	63	73	37	5	07	29.01	29.93
22	CLR	NC			10.00		81	68	72	65	0	00	29.06	29.97
SUNRISE: 0527      JUL 07      SUNSET: 1957														
01	CLR	NC			10.00		76	69	71	79	0	00	29.05	29.97
04	CLR	NC			10.00		74	69	71	84	0	00	29.07	29.98
07	CLR	NC			10.00		75	70	72	85	0	00	29.10	30.01
10	CLR	NC			10.00		88	69	75	53	3	VR	29.10	30.01
13	FEW	055			10.00		95	67	76	40	6	14	29.07	29.98
16	CLR	NC			10.00		98	65	75	34	5	VR	29.02	29.93
19	CLR	NC			10.00		94	66	75	40	6	20	29.00	29.91
22	CLR	NC			10.00		85	70	75	61	0	00	29.05	29.96
SUNRISE: 0527      JUL 08      SUNSET: 1957														
01	CLR	NC			10.00		82	70	74	67	0	00	29.07	29.97
04	CLR	NC			10.00		79	70	73	74	0	00	29.07	29.97
07	CLR	NC			9.00		79	70	73	74	5	VR	29.10	30.00
10	CLR	NC			10.00		87	71	76	59	3	VR	29.10	30.00
13	CLR	NC			10.00		95	69	77	43	0	00	29.05	29.95
16	CLR	NC			10.00		98	64	75	33	6	18	28.97	29.86
19	CLR	NC			10.00		96	66	75	37	5	27	28.94	29.84
22	FEW	070			10.00		86	68	74	55	11	28	29.03	29.93
SUNRISE: 0528      JUL 09      SUNSET: 1956														
01	BKN	120			10.00		78	70	73	77	0	00	29.06	29.96
04	CLR	NC			10.00		74	71	72	90	3	25	28.99	29.90
07	BKN	004			3.00	BR	74	71	72	90	0	00	29.04	29.94
10	SCT	045			10.00		80	70	73	72	5	VR	29.07	29.98
13	OVC	075			10.00		84	70	74	63	0	00	29.04	29.96
16	CLR	NC			10.00		88	67	74	50	0	00	28.99	29.91
19	OVC	110			10.00	-RA	84	69	74	61	0	00	28.98	29.89
22	SCT	120			10.00	-RA	79	72	74	79	0	00	29.02	29.93
SUNRISE: 0528      JUL 10      SUNSET: 1956														
01	OVC	090			7.00	-RA	75	72	73	90	0	00	29.03	29.94
04	SCT	036			10.00		72	69	70	90	0	00	29.02	29.94
07	FEW	050			10.00		73	68	70	84	0	00	29.05	29.97
10	OVC	040			10.00		76	69	71	79	6	09	29.09	30.01
13	SCT	027			10.00		86	69	74	57	3	VR	29.04	29.96
16	OVC	070			10.00	-RA	80	70	73	72	6	27	29.04	29.97
19	BKN	055			10.00		77	72	74	85	0	00	29.04	29.97
22	CLR	NC			10.00		73	69	70	87	0	00	29.08	30.00
SUNRISE: 0529      JUL 11      SUNSET: 1956														
01	BKN	110			10.00		73	69	70	87	0	00	29.09	30.01
04	BKN	120			10.00		72	68	69	87	0	00	29.08	30.00
07	OVC	100			4.00	-RA BR	71	69	70	93	0	00	29.12	30.05
10	OVC	085			5.00	-RA BR	72	70	71	93	0	00	29.14	30.08
13	OVC	110			10.00	-RA	74	70	71	87	0	00	29.15	30.09
16	BKN	085			10.00		80	67	71	65	3	07	29.10	30.03
19	BKN	100			10.00		78	69	72	74	0	00	29.10	30.04
22	FEW	090			10.00		74	69	71	84	0	00	29.13	30.06
SUNRISE: 0530      JUL 12      SUNSET: 1955														
01	OVC	100			10.00		72	68	69	87	3	05	29.13	30.06
04	BKN	120			10.00		71	67	68	87	0	00	29.12	30.04
07	OVC	110			7.00		70	68	69	93	0	00	29.13	30.07
10	OVC	009			4.00	-RA BR	71	69	70	93	3	07	29.16	30.10
13	OVC	075			3.00	-RA BR	73	70	71	90	0	00	29.17	30.11
16	OVC	110			10.00	-RA	73	70	71	90	0	00	29.14	30.08
19	OVC	049			4.00	RA BR	70	68	69	93	0	00	29.14	30.08
22	OVC	070			10.00	-RA	70	68	69	93	0	00	29.15	30.10

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

JULY 2012

KOQT

WBAN # 53868

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)							
			Observation Time (LST)	Eff Cld Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)				STATION	SEA LEVEL		Observation Time (LST)	Eff Cld Amt Oktas	VISIBILITY (MILES)		DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	STATION	SEA LEVEL		
																												WEATHER	WEATHER
SUNRISE: 0530						JUL 13						SUNSET: 1955																	
01	OVC	050			9.00	-RA	70	68	69	93	0	00	29.14	30.08	01	CLR	NC			10.00	BR	73	70	71	90	3	23	29.06	29.98
04	OVC	009			9.00		70	68	69	93	0	00	29.12	30.06	04	CLR	NC			8.00		72	70	71	93	0	00	29.09	30.02
07	OVC	045			8.00		70	68	69	93	0	00	29.16	30.11	07	OVC	004			6.00		73	70	71	90	3	21	29.12	30.05
10	OVC	065			10.00		76	69	71	79	3	VR	29.18	30.12	10	CLR	NC			10.00		82	72	75	72	5	VR	29.13	30.06
13	BKN	037			10.00		83	68	73	61	3	VR	29.16	30.09	13	CLR	NC			10.00		87	71	76	59	3	19	29.09	30.01
16	BKN	075			10.00		79	68	72	69	11	14	29.13	30.06	16	FEW	037			10.00		91	72	78	54	7	21	29.02	29.93
19	OVC	095			10.00	-RA	77	72	74	85	0	00	29.14	30.08	19	CLR	NC			10.00		88	72	77	59	5	19	28.99	29.91
22	CLR	NC			9.00		74	72	73	94	0	00	29.17	30.11	22	BKN	095			10.00		81	74	76	79	0	00	29.04	29.95
SUNRISE: 0531						JUL 14						SUNSET: 1955																	
01	OVC	043			1.25	BR	73	72	72	97	0	00	29.18	30.11	01	OVC	110			4.00	RA BR	70	68	69	93	6	19	29.07	29.99
04	OVC	002			1.25	BR	72	71	71	97	0	00	29.17	30.10	04	SCT	110			10.00		70	68	69	93	5	23	29.02	29.93
07	VV	002			0.50	FG	72	71	71	97	0	00	29.21	30.15	07	OVC	008			10.00		71	69	70	93	0	00	29.02	29.93
10	OVC	012			10.00		80	72	74	77	0	00	29.23	30.16	10	BKN	017			10.00		76	70	72	82	3	VR	29.06	29.98
13	BKN	041			10.00		85	69	74	59	7	13	29.17	30.09	13	SCT	060			10.00		82	69	73	65	3	VR	29.04	29.97
16	SCT	110			10.00		74	71	72	90	0	00	29.17	30.11	16	SCT	042			10.00		84	70	74	63	6	19	29.00	29.92
19	CLR	NC			10.00		75	71	72	87	3	06	29.18	30.12	19	CLR	NC			10.00		83	71	75	67	6	VR	28.99	29.91
22	CLR	NC			10.00		72	70	71	93	0	00	29.21	30.14	22	OVC	070			9.00	-RA	77	70	72	79	5	33	29.06	29.98
SUNRISE: 0532						JUL 15						SUNSET: 1954																	
01	SCT	002			10.00		71	69	70	93	0	00	29.19	30.12	01	BKN	055			10.00		73	70	71	90	0	00	29.06	29.98
04	VV	001			0.75	BR	69	68	68	97	0	00	29.19	30.14	04	OVC	011			10.00		73	70	71	90	0	00	29.04	29.96
07	OVC	002			9.00		70	69	69	97	0	00	29.24	30.18	07	OVC	011			9.00		72	70	71	93	0	00	29.08	30.00
10	FEW	017			10.00		80	71	74	74	0	00	29.27	30.20	10	OVC	015			10.00		76	70	72	82	0	00	29.10	30.03
13	SCT	035			10.00		87	71	76	59	5	VR	29.21	30.14	13	BKN	034			10.00		84	71	75	65	5	VR	29.10	30.03
16	FEW	050			10.00		88	70	76	55	8	16	29.15	30.08	16	CLR	NC			10.00		88	68	74	52	3	VR	29.07	29.99
19	CLR	NC			10.00		84	71	75	65	0	00	29.15	30.08	19	CLR	NC			10.00		84	72	76	67	8	26	29.08	30.00
22	CLR	NC			10.00		77	73	74	88	0	00	29.18	30.11	22	OVC	100			10.00		79	71	74	77	3	23	29.13	30.05
SUNRISE: 0532						JUL 16						SUNSET: 1954																	
01	CLR	NC			10.00		75	72	73	90	0	00	29.17	30.10	01	CLR	NC			10.00		76	72	73	87	0	00	29.13	30.06
04	CLR	NC			9.00		74	71	72	90	0	00	29.14	30.06	04	OVC	032			10.00		75	70	72	85	0	00	29.15	30.07
07					0.75	BR	72	71	71	97	0	00	29.17	30.10	07	BKN	014			10.00		75	71	72	87	5	20	29.19	30.11
10	CLR	NC			10.00		85	70	75	61	5	VR	29.16	30.09	10	FEW	020			10.00		82	70	74	67	6	26	29.23	30.16
13	CLR	NC			10.00		82	71	74	69	0	00	29.12	30.04	13	FEW	040			10.00		89	67	74	48	10	26	29.22	30.14
16	CLR	NC			10.00		88	67	74	50	0	00	29.07	29.98	16	CLR	NC			10.00		90	66	74	45	6	VR	29.19	30.11
19	CLR	NC			10.00		84	70	74	63	0	00	29.05	29.98	19	CLR	NC			10.00		87	67	73	52	3	VR	29.17	30.10
22	CLR	NC			10.00		77	72	74	85	0	00	29.08	29.99	22	CLR	NC			10.00		79	71	74	77	0	00	29.22	30.15
SUNRISE: 0533						JUL 17						SUNSET: 1953																	
01	CLR	NC			10.00		77	72	74	85	0	00	29.06	29.98	01	CLR	NC			10.00		75	71	72	87	0	00	29.23	30.15
04	CLR	NC			10.00		73	71	72	93	0	00	29.05	29.96	04	CLR	NC			10.00		73	70	71	90	0	00	29.21	30.14
07	CLR	NC			10.00		75	70	72	85	0	00	29.09	30.00	07	BKN	065			10.00		74	70	71	87	0	00	29.25	30.18
10	SCT	120			10.00		84	70	74	63	0	00	29.09	30.01	10	CLR	NC			10.00		86	70	75	59	0	00	29.24	30.16
13	OVC	049			1.00	+RA BR	75	71	72	87	11	07	29.08	30.00	13	FEW	035			10.00		87	72	76	61	0	00	29.21	30.14
16	CLR	NC			10.00		74	69	71	84	5	07	29.06	29.99	16	FEW	080			10.00		90	71	77	54	3	VR	29.15	30.07
19	CLR	NC			10.00		75	69	71	82	0	00	29.03	29.95	19	CLR	NC			10.00		88	72	77	59	0	00	29.13	30.05
22	CLR	NC			9.00		72	70	71	93	0	00	29.05	29.98	22	CLR	NC			10.00		81	75	77	82	0	00	29.15	30.07
SUNRISE: 0534						JUL 18						SUNSET: 1953																	
01	CLR	NC			10.00		70	68	69	93	0	00	29.04	29.97	01	CLR	NC			10.00		78	75	76	91	0	00	29.14	30.07
04	OVC	090			5.00	BR	70	68	69	93	0	00	29.05	29.98	04	CLR	NC			10.00		76	72	73	87	0	00	29.13	30.04
07	VV	002			0.25	FG	69	68	68	97	0	00	29.10	30.03	07	CLR	NC			10.00		78	71	73	79	0	00	29.13	30.06
10	FEW	049			10.00		80	71	74	74	3	17	29.10	30.03	10	CLR	NC			10.00		86	72	76	63	7	25	29.13	30.03
13	OVC	075			0.50	+RA FG	72	69	70	90	3	VR	29.12	30.05	13	SCT	046			10.00		91	69	76	49	5	VR	29.09	30.00
16	OVC	100			10.00	-RA	73	71	72	93	0	00	29.04	29.97	16	CLR	NC			10.00		94	66	75	40	3	32	29.05	29.96
19	CLR	NC			10.00		75	72	73	90	0	00	29.04	29.98	19	CLR	NC			10.00		90	69	75	50	3	VR	29.01	29.92
22	CLR	NC			10.00		73	71	72	93	0	00	29.09	30.01	22	CLR	NC			10.00		83	72	75	70	0	00	29.03	29.94

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

JULY 2012

KOQT

WBAN # 53868

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)						
			Observation Time (LST)	Eff Cld Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL			
															Observation Time (LST)	Eff Cld Amt Oktas	VISIBILITY (MILES)
<b>SUNRISE: 0539</b>						<b>JUL 25</b>						<b>SUNSET: 1948</b>					
01	CLR	NC				81	71	74	72	0	00	29.02	29.92				
04	CLR	NC				80	70	73	72	0	00	29.01	29.92				
07	CLR	NC				77	72	74	85	0	00	29.08	29.98				
10	CLR	NC				87	71	76	59	3	15	29.05	29.96				
13	SCT	049				92	71	77	50	7	VR	29.03	29.93				
16	CLR	NC				92	71	77	50	6	17	28.99	29.90				
19	SCT	055				90	70	76	52	3	VR	28.96	29.87				
22	CLR	NC				84	73	76	70	0	00	28.99	29.90				
<b>SUNRISE: 0539</b>						<b>JUL 26</b>						<b>SUNSET: 1948</b>					
01	CLR	NC				79	73	75	82	0	00	28.98	29.88				
04	CLR	NC				76	72	73	87	0	00	28.95	29.86				
07	CLR	NC				78	73	75	85	6	20	29.01	29.92				
10	CLR	NC				87	73	77	63	5	VR	29.01	29.92				
13	BKN	050				92	71	77	50	9	22	28.98	29.88				
16	FEW	050				93	69	76	46	7	VR	28.93	29.84				
19	CLR	NC				90	70	76	52	5	VR	28.90	29.80				
22	CLR	NC				84	71	75	65	5	VR	28.96	29.87				
<b>SUNRISE: 0540</b>						<b>JUL 27</b>						<b>SUNSET: 1947</b>					
01	CLR	NC				80	71	74	74	0	00	28.97	29.87				
04	CLR	NC				78	71	73	79	0	00	28.95	29.85				
07	CLR	NC				79	72	74	79	3	25	28.99	29.90				
10	CLR	NC				85	70	75	61	0	00	29.02	29.93				
13	OVC	100				88	68	74	52	7	VR	29.03	29.94				
16	FEW	045				90	67	74	47	6	26	28.98	29.89				
19	CLR	NC				89	69	75	52	5	20	28.99	29.90				
22	CLR	NC				79	70	73	74	0	00	29.03	29.94				
<b>SUNRISE: 0541</b>						<b>JUL 28</b>						<b>SUNSET: 1946</b>					
01	BKN	100				74	70	71	87	3	VR	29.08	29.99				
04	CLR	NC				72	61	65	68	3	16	29.07	29.99				
07	CLR	NC				72	63	66	73	0	00	29.09	30.01				
10	CLR	NC				83	64	71	53	7	VR	29.10	30.02				
13	CLR	NC				89	67	74	48	5	20	29.08	29.99				
16	FEW	070				92	61	72	36	6	32	29.04	29.96				
19	CLR	NC				86	64	71	48	3	35	29.05	29.97				
22	CLR	NC				79	61	68	54	3	31	29.10	30.02				
<b>SUNRISE: 0542</b>						<b>JUL 29</b>						<b>SUNSET: 1945</b>					
01	CLR	NC				70	64	66	81	0	00	29.10	30.01				
04	CLR	NC				68	64	65	87	0	00	29.08	29.99				
07	CLR	NC				69	64	66	84	0	00	29.10	30.03				
10	CLR	NC				82	65	71	56	0	00	29.13	30.04				
13	SCT	070				85	62	70	46	6	36	29.10	30.02				
16	CLR	NC				88	59	69	38	7	02	29.05	29.97				
19	CLR	NC				83	62	69	49	0	00	29.05	29.97				
22	CLR	NC				76	64	68	67	0	00	29.07	29.98				
<b>SUNRISE: 0542</b>						<b>JUL 30</b>						<b>SUNSET: 1945</b>					
01	CLR	NC				71	65	67	81	0	00	29.05	29.97				
04	CLR	NC				68	64	65	87	0	00	29.03	29.95				
07	CLR	NC				69	64	66	84	0	00	29.07	30.00				
10	CLR	NC				81	64	70	56	0	00	29.07	29.99				
13	CLR	NC				89	63	72	42	6	27	29.03	29.95				
16	CLR	NC				92	60	71	34	5	26	28.98	29.90				
19	CLR	NC				88	66	73	48	3	VR	28.98	29.90				
22	CLR	NC				79	69	72	72	0	00	29.00	29.91				

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)								
			Observation Time (LST)	Eff Cld Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL					
															Observation Time (LST)	Eff Cld Amt Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT
<b>SUNRISE: 0543</b>						<b>JUL 31</b>						<b>SUNSET: 1944</b>							
01	OVC	075										79	70	73	74	0	00	28.99	29.90
04	OVC	075										72	69	70	90	0	00	28.97	29.88
07	OVC	110										73	71	72	93	3	20	29.00	29.91
10	OVC	015										79	70	73	74	0	00	28.99	29.91
13	SCT	043										85	69	74	59	0	00	28.98	29.90
16	CLR	NC										89	68	75	50	0	00	28.94	29.85
19	BKN	060										88	70	75	55	6	26	28.93	29.84
22	CLR	NC										76	64	68	67	7	VR	29.03	29.96

## 3-HOURLY OBSERVATION NOTES

Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, W = Vertical Visibility = 8/8

Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC = No Ceiling detected.

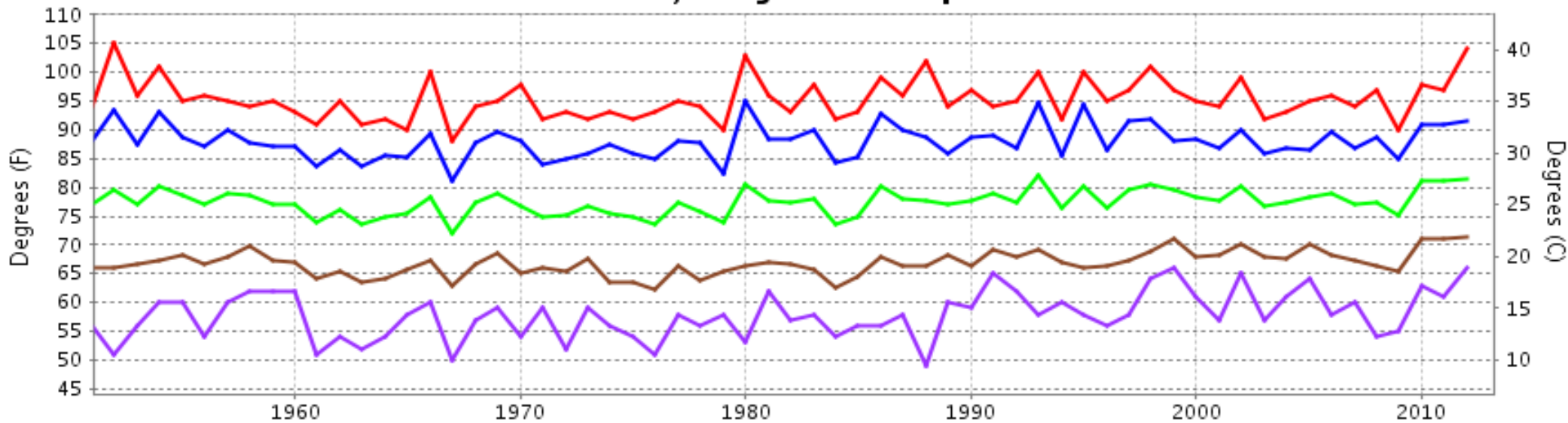
& = Original observation contained additional weather elements.

See page 3 for additional notes.

## SUMMARY BY HOUR

HOUR (LST)	AVERAGES										RESULTANT WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (Inches, HG)		VISIBILITY (Miles)	WIND SPEED (MPH)	SPEED	DIRECTION
							STATION	SEA LEVEL				
01			75	69	71	83	29.08	29.99	9.23	1	2	17
02			74	69	71	85	29.07	29.99	8.84	1	3	12
03			73	69	70	86	29.07	29.99	8.85	1	xxx	xx
04			73	68	70	87	29.07	29.99	8.84	0	2	22
05			72	69	70	88	29.08	30.00	8.48	0	2	20
06			72	68	70	89	29.09	30.01	7.38	0	xxx	xx
07			73	69	70	87	29.11	30.03	7.82	1	2	23
08			76	69	71	81	29.12	30.04	9.19	2	2	23
09			79	69	72	74	29.12	30.04	9.68	3	1	22
10			82	69	73	67	29.12	30.04	9.65	3	1	18
11			84	69	74	60	29.11	30.03	9.58	3	3	25
12			86	69	74	58	29.11	30.02	9.52	4	3	26
13			87	68	74	56	29.09	30.01	9.18	4	1	19
14			88	68	74	54	29.07	29.99	9.50	4	2	25
15			88	67	74	52	29.06	29.98	9.90	5	1	24
16			88	67	74	52	29.04	29.96	10.00	4	1	24
17			87	67	74	54	29.04	29.96	9.90	4	1	23
18			86	68	74	58	29.04	29.96	9.61	4	1	17
19			84	69	74	61	29.04	29.96	9.65	3	1	23
20			82	69	73	68	29.05	29.97	9.53	1	1	21
21			80	70	73	73	29.06	29.99	9.77	1	4	25
22			78	70	72	77	29.08	30.00	9.87	1	4	25
23			77	70	72	80	29.08	30.00	9.59	1	xx	xx
24			75	69	71	83	29.08	30.00	9.25	1	2	19

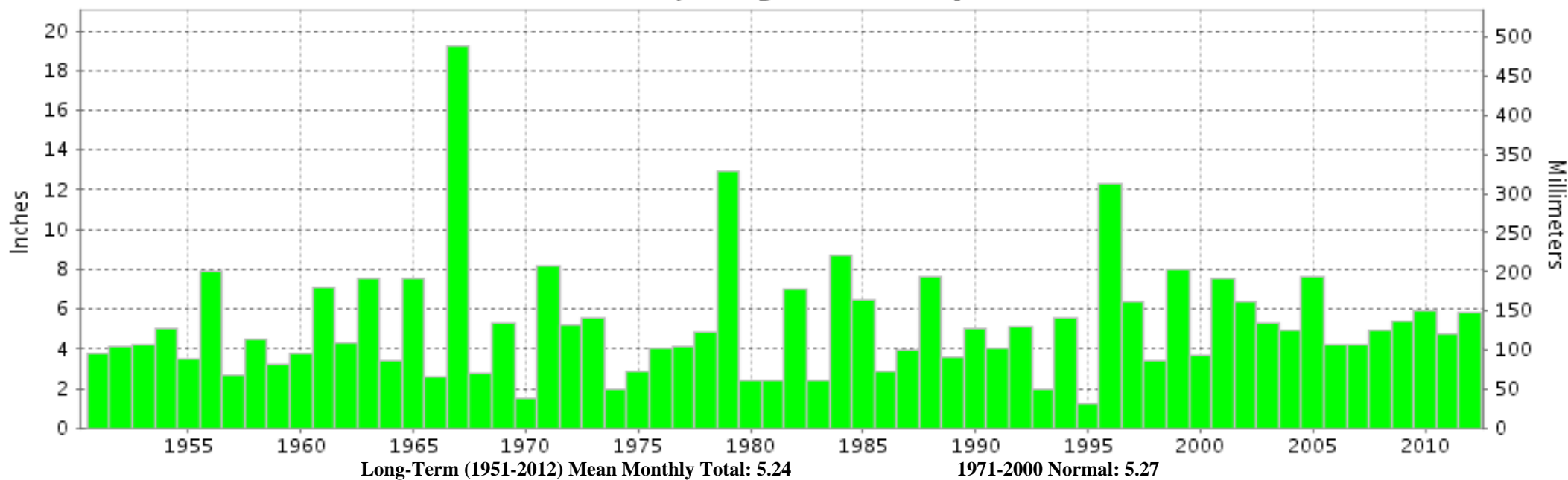
## OAK RIDGE, TN JULY Temperatures



— Extreme Max — Mean Max — Mean — Mean Min — Extreme Min

**Long-Term (1951-2012) Mean: 77.4**  
**1971-2000 Normal: 78.5**

## OAK RIDGE, TN JULY Precipitation



**Long-Term (1951-2012) Mean Monthly Total: 5.24**

**1971-2000 Normal: 5.27**



**JULY 2012**  
**OAK RIDGE, TN**

**LOCAL CLIMATOLOGICAL DATA**  
**NOAA, National Climatic Data Center**

*I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA-National Weather Service / Department Of Transportation-Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.*

A handwritten signature in black ink, appearing to read "Thomas R. Karl".

**DIRECTOR**

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