



# OCTOBER 2010 LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

OAK RIDGE, TN  
OAK RIDGE (KOQT)  
Lat:36° 1' N Long: 84° 14' W Elev (Ground) 913 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			
01	75	52	64	0	49	56	1	0				0.00	28.97	29.94	1.1	04	3.4	22	07	13	36	01		
02	77	47	62	-2	46	53	3	0				0.00	29.02	29.98	0.6	34	1.2	15	35	9	36	02		
03	59	47	53	-11	43	49	12	0				0.00	29.13	30.12	2.0	34	2.9	18	32	10	33	03		
04	58	44	51	-12	42	47	14	0				0.00	29.26	30.26	0.7	06	1.6	14	01	9	06	04		
05	67	39	53	-10	39	45	12	0				0.00	29.31	30.30	0.4	30	1.2	17	32	9	34	05		
06	74	39	57	-5	39	47	8	0				0.00	29.21	30.18	0.8	27	1.3	16	28	9	26	06		
07	83	44	64	2	48	54	1	0				0.00	29.13	30.10	0.8	31	1.8	14	33	9	31	07		
08	81	48	65	4	50	55	0	0	FG+ BR			0.00	29.14	30.10	0.3	11	0.4	8	18	6	06	08		
09	83	48	66	5	48	54	0	1	FG+ BR			0.00	29.12	30.08	0.7	10	1.5	13	07	8	07	09		
10	83	47	65	4	50	55	0	0	BR			0.00	29.06	30.02	0.2	16	0.7	12	21	7	21	10		
11	84*	49	67	7	51	56	0	2	FG+ FG BR			0.00	29.00	29.94	0.4	20	0.7	12	18	9	19	11		
12	71	51	61	1	54	57	4	0	RA BR			0.11	29.00	29.96	0.2	11	1.7	16	19	10	18	12		
13	74	54	64	5	56	59	1	0	RA FG BR			T	29.03	29.99	0.3	35	0.9	17	36	10	36	13		
14	69	44	57	-2	44	51	8	0	RA BR			0.04	29.06	30.02	1.9	32	3.0	20	28	12	32	14		
15	72	41	57	-2	38	47	8	0				0.00	29.02	30.01	1.5	26	3.0	24	30	13	33	15		
16	70	38	54	-4	40	47	11	0				0.00	29.19	30.18	0.4	12	0.9	12	14	7	13	16		
17	76	39	58	0	42	48	7	0	FG+ FG BR			0.00	29.18	30.15	0.6	25	0.8	9	20	7	19	17		
18	78	45	62	4	46	52	3	0				0.00	29.05	30.01	0.9	21	1.3	10	19	8	18	18		
19	80	45	63	6	48	54	2	0	RA			T	28.95	29.91	0.3	23	1.2	13	27	9	22	19		
20	72	47	60	3	46	53	5	0	RA BR			0.10	28.97	29.93	0.7	28	1.0	18	27	10	26	20		
21	78	43	61	5	38	48	4	0				0.00	28.98	29.96	2.5	25	3.9	23	24	14	26	21		
22	71	39	55	-1	34	44	10	0				0.00	29.18	30.19	1.0	06	1.1	14	13	9	08	22		
23	75	38	57	1	41	48	8	0				0.00	29.26	30.25	0.1	24	0.9	12	20	8	20	23		
24	79	46	63	8	50	56	2	0				0.00	29.16	30.10	1.6	19	2.0	23	23	13	21	24		
25	73	59	66	11	59	60	0	1	RA FG+ FG BR			2.38	28.90	29.84	1.8	21	2.8	25	19	16	20	25		
26	83	57	70*	15	62	64	0	5	RA BR			0.74	28.79	29.73	5.7	20	5.9	41*	19	26*	19	26		
27	71	53	62	8	56	58	3	0	RA BR			0.46	29.00	29.97	0.4	24	0.4	10	21	7	19	27		
28	74	51	63	9	42	53	2	0	FG+ FG BR			0.00	29.13	30.12	2.3	28	3.5	20	26	14	26	28		
29	61	38	50*	-3	34	42	15	0				0.00	29.31	30.30	1.0	05	2.3	16	35	10	07	29		
30	69	34*	52	-1	35	43	13	0	SN FG+ BR			T	29.18	30.16	1.2	22	2.3	20	21	12	21	30		
31	72	41	57	4	40	47	8	0				0.00	29.08	30.06	1.1	21	1.8	15	20	10	21	31		

73.9	45.4	59.7	☼	45.5	51.7	5.3	0.3	< MONTHLY AVERAGES   TOTALS >				3.83	29.09	30.06	0.4	24	1.9	< MONTHLY AVERAGES			
2.8	-0.3	1.3		-----DEPARTURE FROM NORMAL ----->				0.81	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3												

<b>DEGREE DAYS</b>				<b>GREATEST 24-HR PRECIPITATION :</b> 2.39 <b>DATE :</b> 25-26				<b>SEA LEVEL PRESSURE</b>			
<b>MONTHLY</b>				<b>GREATEST 24-HR SNOWFALL :</b>				<b>MAXIMUM :</b> 30.38 <b>DATE</b> 05 <b>TIME</b> 0933			
<b>TOTAL DEPARTURE</b>				<b>GREATEST SNOW DEPTH :</b>				<b>MINIMUM :</b> 29.62 <b>DATE</b> 26 <b>TIME</b> 1453			
<b>SEASON TO DATE</b>				<b>NUMBER OF -&gt; DAYS WITH</b>				<b>PRECIPITATION &gt;= 0.01 INCH:</b> 6			
<b>HEATING :</b> 165 -65 169 -91				<b>MAXIMUM TEMP &gt;= 90 :</b> 0				<b>MINIMUM TEMP &lt;= 32 :</b> 0			
<b>COOLING :</b> 9 -14 1916 616				<b>MAXIMUM TEMP &lt;= 32 :</b> 0				<b>PRECIPITATION &gt;= 0.10 INCH:</b> 5			
				<b>THUNDERSTORMS :</b> 0				<b>HEAVY FOG :</b> 7			
								<b>SNOWFALL &gt;= 1.0 INCH :</b>			

OCTOBER 2010  
OAK RIDGE, TN

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

OAK RIDGE, TN (KOQT)  
OCTOBER 2010

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	0.00	0.00	
02													02												02	0.00	0.00	
03													03												03	0.00	0.00	
04													04												04	0.00	0.00	
05													05												05	0.00	0.00	
06													06												06	0.00	0.00	
07													07												07	0.00	0.00	
08													08												08	0.00	0.00	
09													09												09	0.00	0.00	
10													10												10	0.00	0.00	
11													11												11	0.00	0.00	
12													12			0.11	T							12	0.11	0.11		
13													13									T		13	T	T		
14	0.01	0.02	0.01										14											14	0.04	0.04		
15													15											15	0.00	0.00		
16													16											16	0.00	0.00		
17													17											17	0.00	0.00		
18													18											18	0.00	0.00		
19													19								T	T	T	T	19	T	T	
20	0.04	0.02	0.04	T	T								20											20	0.10	0.10		
21													21											21	0.00	0.00		
22													22											22	0.00	0.00		
23													23											23	0.00	0.00		
24													24											24	0.00	0.00		
25			0.05	0.64	0.42	0.90	0.21	0.05					25		0.06	0.05								25	2.38	2.38		
26		0.01											26				T	0.04	0.25	0.15	0.16		0.04	0.09	26	0.74	0.74	
27	0.02	0.14	T	0.02	0.05	0.15	0.04	0.02	0.01	0.01			27											27	0.46	0.46		
28													28											28	0.00	0.00		
29													29											29	0.00	0.00		
30													30											30	T	T		
31													31											31	0.00	0.00		

\* 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)	0.29	0.35	0.39	0.43	0.48	0.70	0.92	0.97	1.14	1.37	1.81	1.98
Ending Date	25	25	25	25	25	25	25	25	25	25	25	25
Ending Time (Hr/Min)	0347	0347	0349	0349	0358	0555	0601	0620	0522	0541	0601	0607

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 1971-2000

## 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 OCTOBER 2010

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							8.00	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							9.00	10.00	
05							8.00	10.00	
06							10.00	10.00	
07							10.00	10.00	
08							0.00	10.00	
09							0.00	10.00	
10							0.75	10.00	
11							0.25	10.00	
12							2.50	10.00	
13							0.50	10.00	
14							4.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							0.25	10.00	
18							9.00	10.00	
19							9.00	10.00	
20							2.50	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							0.25	10.00	
26							0.75	10.00	
27							2.50	10.00	
28							0.25	10.00	
29							10.00	10.00	
30							0.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							5.73	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		
7			13				17		





# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

OCTOBER 2010 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)			
			Observation Time (LST)	Eff Cl'd Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)	STATION	SEA LEVEL
<b>SUNRISE: 0653      OCT 25      SUNSET: 1749</b>													
01	OVC	060				63	56	59	78	0 00	28.97	29.91	
04	OVC	043			+RA BR	60	60	60	100	3 15	28.92	29.86	
07	OVC	090			RA BR	61	60	60	97	5 VR	28.91	29.85	
10	SCT	010				62	59	60	90	3 25	28.93	29.88	
13	SCT	080				71	58	63	64	11 22	28.90	29.84	
16	OVC	090				66	61	63	84	0 00	28.88	29.83	
19	BKN	080			FG	61	60	60	97	0 00	28.86	29.82	
22	OVC	001			BR	59	59	59	100	0 00	28.85	29.81	
<b>SUNRISE: 0654      OCT 26      SUNSET: 1748</b>													
01	OVC	080				60	59	59	97	0 00	28.83	29.77	
04	OVC	080				61	60	60	97	0 00	28.80	29.75	
07	BKN	070				62	60	61	93	0 00	28.78	29.73	
10	BKN	080				76	65	69	69	17 20	28.78	29.72	
13	BKN	060				81	64	70	56	13 19	28.74	29.66	
16	FEW	055				79	65	70	62	10 20	28.71	29.64	
19	OVC	036			+RA BR	62	61	61	97	0 00	28.80	29.75	
22	OVC	033				61	60	60	97	0 00	28.87	29.81	
<b>SUNRISE: 0654      OCT 27      SUNSET: 1747</b>													
01	OVC	049			RA BR	57	55	56	93	0 00	28.92	29.85	
04	OVC	075			RA BR	58	56	57	93	3 22	28.95	29.89	
07	OVC	060			-RA	54	52	53	93	0 00	29.01	29.97	
10	OVC	060			-RA	56	53	54	90	3 28	29.08	30.04	
13	BKN	120				65	55	59	70	0 00	29.04	29.99	
16	FEW	100				71	59	64	66	0 00	29.01	29.95	
19	CLR	NC				64	60	62	87	0 00	29.05	30.01	
22	OVC	012				61	59	60	93	0 00	29.08	30.04	
<b>SUNRISE: 0655      OCT 28      SUNSET: 1746</b>													
01	OVC	011				64	62	63	93	3 20	29.10	30.05	
04	BKN	003			BR	60	59	59	97	0 00	29.09	30.03	
07	VV	001			FG	58	58	58	100	0 00	29.14	30.11	
10	FEW	090				64	42	53	45	3 27	29.18	30.14	
13	CLR	NC				72	31	52	22	7 VR	29.14	30.09	
16	CLR	NC				71	29	51	21	8 25	29.12	30.07	
19	CLR	NC				63	33	49	33	0 00	29.18	30.14	
22	CLR	NC				56	34	46	44	5 33	29.26	30.23	
<b>SUNRISE: 0656      OCT 29      SUNSET: 1745</b>													
01	CLR	NC				49	35	43	59	6 VR	29.30	30.26	
04	SCT	028				43	34	39	71	0 00	29.33	30.30	
07	CLR	NC				39	32	36	76	0 00	29.35	30.34	
10	CLR	NC				49	32	42	52	7 06	29.37	30.35	
13	CLR	NC				56	33	45	42	6 06	29.32	30.31	
16	CLR	NC				60	32	47	35	0 00	29.27	30.25	
19	CLR	NC				50	38	44	64	0 00	29.28	30.28	
22	CLR	NC				43	38	41	83	0 00	29.28	30.28	
<b>SUNRISE: 0657      OCT 30      SUNSET: 1744</b>													
01	CLR	NC				38	36	37	93	0 00	29.26	30.25	
04	CLR	NC				36	33	35	89	0 00	29.26	30.25	
07	VV	001			FG	35	35	35	100	0 00	29.26	30.27	
10	CLR	NC				46	40	43	80	0 00	29.25	30.25	
13	CLR	NC				63	37	50	38	7 VR	29.15	30.14	
16	CLR	NC				69	35	52	29	6 VR	29.09	30.06	
19	CLR	NC				58	35	47	42	0 00	29.08	30.06	
22	CLR	NC				51	37	44	59	0 00	29.08	30.06	

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 Cl'd Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)	STATION	SEA LEVEL
<b>SUNRISE: 0658      OCT 31      SUNSET: 1743</b>													
01	CLR	NC				49	38	44	66	0 00	29.08	30.04	
04	CLR	NC				42	38	40	86	0 00	29.09	30.05	
07	CLR	NC				41	38	40	89	0 00	29.10	30.07	
10	CLR	NC				58	42	50	55	5 VR	29.10	30.07	
13	CLR	NC				68	36	52	31	5 22	29.06	30.02	
16	CLR	NC				71	38	54	30	5 VR	29.05	30.01	
19	CLR	NC				57	44	50	62	0 00	29.10	30.09	
22	CLR	NC				50	43	47	77	0 00	29.14	30.12	

## 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.

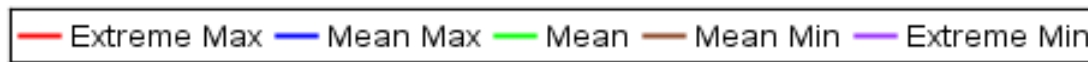
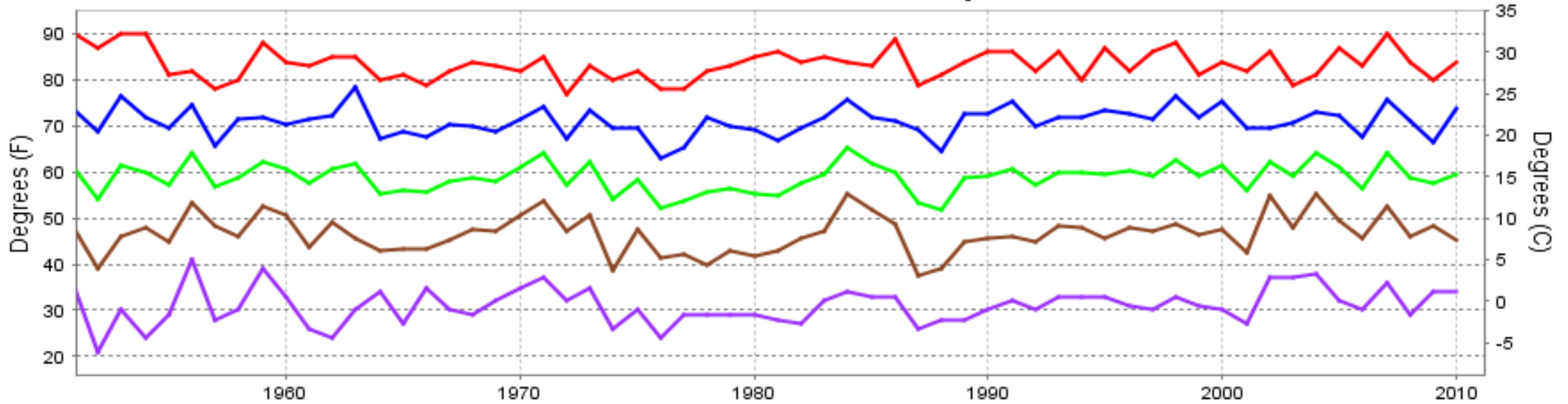
& = Original observation contained additional weather elements.

See page 3 for additional notes.

## SUMMARY BY HOUR

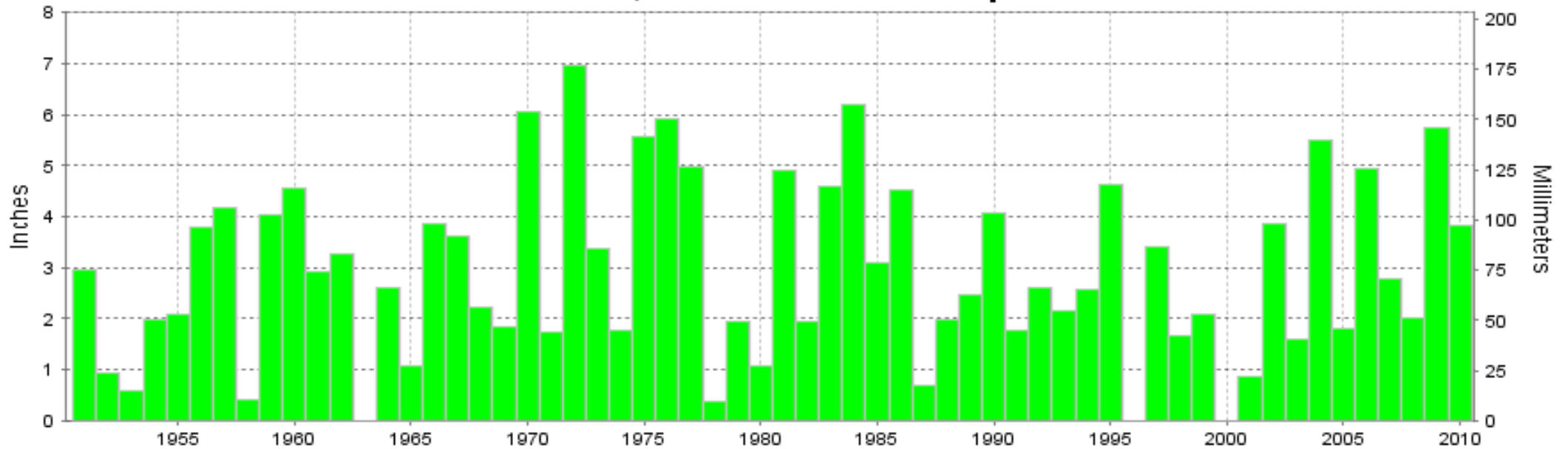
HOUR (LST)	AVERAGES								RESULTANT WIND (MPH)			
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (Inches, HG)		WIND SPEED (MPH)	DIRECTION		
							STATION	SEA LEVEL				
01			51	46	49	84	29.10	30.05	9.23	0	xxx	xx
02			51	46	48	85	29.10	30.05	9.26	1	xxx	xx
03			50	46	48	87	29.09	30.05	9.10	1	xxx	xx
04			49	45	47	88	29.09	30.05	8.44	1	3	35
05			48	45	47	89	29.10	30.06	8.42	0	xxx	xx
06			48	45	46	90	29.11	30.08	7.82	1	3	35
07			48	45	46	90	29.12	30.09	6.91	1	xxx	xx
08			50	46	48	86	29.13	30.10	7.20	1	xxx	xx
09			54	47	51	78	29.14	30.11	8.46	2	2	35
10			60	47	53	64	29.14	30.10	10.00	3	2	32
11			64	45	54	52	29.13	30.09	10.00	4	2	31
12			68	45	56	45	29.12	30.08	10.00	4	2	30
13			70	44	56	41	29.09	30.05	10.00	4	2	31
14			72	43	57	38	29.07	30.02	10.00	5	4	29
15			72	43	57	38	29.06	30.01	9.60	5	3	29
16			72	43	57	38	29.05	30.01	10.00	4	4	29
17			71	43	56	39	29.05	30.01	10.00	4	2	30
18			67	45	56	47	29.06	30.03	9.90	2	2	31
19			62	47	54	59	29.07	30.05	9.40	1	3	36
20			58	47	53	68	29.09	30.06	9.46	0	xxx	xx
21			56	47	52	73	29.09	30.06	9.60	0	3	36
22			54	47	51	78	29.10	30.07	9.65	0	xxx	xx
23			53	47	50	81	29.11	30.07	9.39	1	xx	xx
24			52	46	49	82	29.10	30.07	9.68	1	4	33

## OAK RIDGE, TN OCTOBER Temperatures



Long-Term (1951-2010) Mean: 58.8  
 1971-2000 Normal: 58.4

## OAK RIDGE, TN OCTOBER Precipitation



Long-Term (1951-2010) Mean Monthly Total: 2.91

1971-2000 Normal: 3.02



OCTOBER 2010  
OAK RIDGE, TN

## LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

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