



SEPTEMBER 2014 LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

KNOXVILLE, TN
MC GHEE TYSON AIRPORT (KTYS)
Lat:35° 49'N Long: 83° 59'W Elev (Ground) 962 Feet
Time Zone : EASTERN WBAN: 13891 ISSN#: 0198-4810



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		0700 LST	1300 LST	2400 LST	2400 LST	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
11	12	13	14	15	16	17	18	19	20	21	22	23	24											
01	89	70	80	6	70	72	0	15		0		0.0	0.00	29.04	30.05	5.3	22	5.7	23	21	20	22	01	
02	89	70	80	6	69	72	0	15	TS RA	0		0.0	0.09	29.00	30.01	5.0	23	8.6	26	01	21	01	02	
03	85	69	77	3	70	72	0	12	RA	0		0.0	0.01	29.00	30.02	2.7	02	4.2	13	01	10	03	03	
04	86	71	79	5	70	72	0	14	TS RA	0		0.0	0.01	29.07	30.09	2.3	23	3.6	22	20	17	21	04	
05	87	69	78	4	70	72	0	13	FG BCFG BR	0		0.0	0.00	29.09	30.11	0.8	32	3.3	12	28	10	28	05	
06	89	69	79	5	70	72	0	14	TS RA	0		0.0	T	29.00	30.01	1.3	05	1.8	22	02	16	02	06	
07	86	66	76	2	68	70	0	11	BCFG BR	0		0.0	0.00	28.98	30.00	6.9	02	7.6	20	01	15	04	07	
08	86	65	76	2	67	70	0	11	BR	0		0.0	0.00	29.00	30.01	1.1	36	3.2	11	36	9	22	08	
09	84	70	77	4	69	71	0	12	RA FG BR	0		0.0	0.01	29.03	30.04	2.9	25	4.1	14	22	12	22	09	
10	87	67	77	4	66	69	0	12	BCFG	0		0.0	0.00	28.98	29.99	7.7	21	8.3	26	22	21	22	10	
11	89*	70	80*	7	70	72	0	15	RA	0		0.0	0.03	28.96	29.98	4.7	24	6.5	23	22	20	24	11	
12	86	69	78	5	69	71	0	13	FG+ FG BR	0		0.0	0.00	29.00	30.02	2.6	36	3.1	14	34	12	35	12	
13	74	63	69	-3	61	64	0	4		0		0.0	0.00	29.09	30.13	8.4	01	9.2	22	36	17	04	13	
14	76	59	68	-4	60	63	0	3		0		0.0	0.00	29.13	30.17	3.1	02	4.8	13	03	12	03	14	
15	78	65	72	1	66	68	0	7	RA BR	0		0.0	T	29.11	30.13	3.2	25	3.9	14	26	10	23	15	
16	81	67	74	3	65	68	0	9	BR	0		0.0	0.00	29.02	30.03	4.0	27	6.6	17	31	14	23	16	
17	79	59	69	-2	56	61	0	4		0		0.0	0.00	28.94	29.95	2.4	31	4.5	16	29	10	25	17	
18	80	60	70	0	56	61	0	5		0		0.0	0.00	28.94	29.97	3.5	04	5.3	14	03	10	04	18	
19	86	57	72	2	59	63	0	7		0		0.0	0.00	29.02	30.05	2.1	07	4.6	16	16	13	17	19	
20	85	60	73	3	59	64	0	8		0		0.0	0.00	29.05	30.07	1.5	05	3.1	14	03	10	05	20	
21	82	62	72	2	63	66	0	7	RA BR	0		0.0	0.03	28.92	29.94	6.7	24	8.4	29*	24	24*	24	21	
22	74	56	65	-4	49	56	0	0		0		0.0	0.00	29.05	30.10	6.6	02	7.5	23	03	18	05	22	
23	77	50*	64*	-4	51	56	1	0		0		0.0	0.00	29.16	30.21	4.5	04	4.9	16	05	13	05	23	
24	79	52	66	-2	52	58	0	1		0		0.0	0.00	29.21	30.25	3.9	04	5.5	17	36	13	02	24	
25	83	56	70	2	58	62	0	5		0		0.0	0.00	29.16	30.19	5.0	04	5.7	24	06	16	04	25	
26	83	60	72	5	61	65	0	7		0		0.0	0.00	29.10	30.13	1.8	04	3.3	14	36	12	36	26	
27	82	63	73	6	61	65	0	8		0		0.0	0.00	29.10	30.13	0.2	01	1.7	12	05	9	07	27	
28	80	60	70	4	61	64	0	5		0		0.0	0.00	29.08	30.10	0.9	08	2.5	11	09	8	15	28	
29	81	64	73	7	62	65	0	8	RA	0		0.0	0.01	28.96	29.98	2.0	07	2.5	13	02	10	03	29	
30	83	59	71	6	59	63	0	6		0		0.0	0.00	28.90	29.92	0.4	34	2.0	15	30	10	33	30	

82.9	63.2	73.1	☼	62.9	66.2	0.0	8.4	< MONTHLY AVERAGES TOTALS >				0.0	0.19	29.03	30.06	0.9	34	4.9	< MONTHLY AVERAGES			
1.1	2.8	2.0		-----DEPARTURE FROM NORMAL -----								-3.05	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									
DEGREE DAYS								GREATEST 24-HR PRECIPITATION : 0.09 DATE : 02				SEA LEVEL PRESSURE				DATE TIME						
MONTHLY				SEASON TO DATE				GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM : 30.31 24 1045										
TOTAL DEPARTURE				TOTAL DEPARTURE				GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.86 30 1653										
HEATING :		1 -22		1 -22				NUMBER OF ->		MAXIMUM TEMP >= 90 : 0		MINIMUM TEMP <= 32 : 0		PRECIPITATION >= 0.01 INCH: 7								
COOLING :		251 -45		1450 -37				THUNDERSTORMS : 3		MAXIMUM TEMP <= 32 : 0		MINIMUM TEMP <= 0 : 0		PRECIPITATION >= 0.10 INCH: 0								
										HEAVY FOG : 1				SNOWFALL >= 1.0 INCH : 0								

SEPTEMBER 2014
 KNOXVILLE, TN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN (KTYS)
 SEPTEMBER 2014

WBAN # 13891

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	0.09	0.09	
03	T												03											03	0.01	0.01		
04	T	T											04			T		T	0.01	T				04	0.01	0.01		
05													05											05	0.00	0.00		
06													06											06	T	T		
07													07											07	0.00	0.00		
08													08											08	0.00	0.00		
09	0.01	T											09											09	0.01	0.01		
10													10											10	0.00	0.00		
11													11											11	0.03	0.03		
12													12											12	0.00	0.00		
13													13											13	0.00	0.00		
14													14											14	0.00	0.00		
15													15											15	T	T		
16													16											16	0.00	0.00		
17													17											17	0.00	0.00		
18													18											18	0.00	0.00		
19													19											19	0.00	0.00		
20													20											20	0.00	0.00		
21													21											21	0.03	0.03		
22													22											22	0.00	0.00		
23													23											23	0.00	0.00		
24													24											24	0.00	0.00		
25													25											25	0.00	0.00		
26													26											26	0.00	0.00		
27													27											27	0.00	0.00		
28													28											28	0.00	0.00		
29	T	T		T	0.01	T	T					29												29	0.01	0.01		
30													30											30	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)	0.02	0.03	0.04	0.05	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.09
Ending Date	21	02	02	02	02	02	02	02	02	02	02	02
Ending Time (Hr/Min)	1556	2301	2301	2301	2301	2301	2301	2335	2335	2335	2335	2335

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.

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).

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

KNOXVILLE, TN SEPTEMBER 2014

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet.

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.

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

NORMALS ARE FOR THE YEARS 1981-2010

ADDITIONAL NOTES & ERRATA:

Station Augmentation-CONTRACTOR ON AIRPORT
Lat/Lon:/ Elevation:
Distance:2200 FT Dir:W
Augmented Elements:Temp,Precip,Snow
Equipment:SRG, PSY, Snow Board, Snow stick

Date	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	8.00	10.00
02	7.00	10.00
03	10.00	10.00
04	10.00	10.00
05	2.00	10.00
06	7.00	10.00
07	1.00	10.00
08	4.00	10.00
09	3.00	10.00
10	7.00	10.00
11	8.00	10.00
12	0.00	10.00
13	7.00	10.00
14	8.00	10.00
15	3.00	10.00
16	3.00	10.00
17	7.00	10.00
18	8.00	10.00
19	10.00	10.00
20	8.00	10.00
21	4.00	10.00
22	10.00	10.00
23	10.00	10.00
24	9.00	10.00
25	7.00	10.00
26	10.00	10.00
27	10.00	10.00
28	7.00	10.00
29	9.00	10.00
30	9.00	10.00
AVGS	6.87	10.00
MINIMUM VISIBILITY (MILES)		
	<= .25	<= 3.0 >= 7.0
1	6	22

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL
SUNRISE: 0626 SEP 25					SUNSET: 1829							
01	CLR	NC	10.00		60	52	56	75	6	03	29.18	30.22
04	CLR	NC	10.00		59	55	57	87	7	02	29.18	30.22
07	FEW	250	9.00		58	55	56	90	0	00	29.21	30.25
10	FEW	080	10.00		69	57	62	66	5	02	29.21	30.25
13	FEW	180	10.00		78	59	66	52	9	02	29.15	30.19
16	SCT	250	7.00		80	58	66	47	10	04	29.10	30.12
19	FEW	250	10.00		74	60	65	62	6	04	29.09	30.12
22	BKN	250	10.00		67	61	63	81	0	00	29.12	30.15
SUNRISE: 0627 SEP 26					SUNSET: 1827							
01	OVC	250	10.00		64	61	62	90	0	00	29.12	30.14
04	BKN	250	10.00		64	62	63	93	6	31	29.11	30.13
07	BKN	250	10.00		61	59	60	93	3	03	29.14	30.16
10	SCT	250	10.00		73	63	67	71	5	04	29.15	30.18
13	BKN	250	10.00		78	61	67	56	8	07	29.11	30.14
16	BKN	250	10.00		81	59	67	47	6	05	29.07	30.09
19	BKN	250	10.00		76	60	66	58	3	03	29.06	30.09
22	BKN	250	10.00		71	61	65	71	0	00	29.10	30.12
SUNRISE: 0628 SEP 27					SUNSET: 1826							
01	BKN	250	10.00		66	62	64	87	5	03	29.10	30.12
04	OVC	250	10.00		63	61	62	93	0	00	29.11	30.13
07	BKN	035	10.00		64	62	63	93	0	00	29.14	30.16
10	OVC	045	10.00		69	63	65	81	0	00	29.15	30.19
13	BKN	040	10.00		78	56	65	47	0	00	29.12	30.14
16	BKN	050	10.00		79	59	66	50	0	00	29.07	30.09
19	SCT	080	10.00		73	59	64	62	0	00	29.07	30.09
22	BKN	250	10.00		70	62	65	76	5	19	29.09	30.11
SUNRISE: 0628 SEP 28					SUNSET: 1824							
01	OVC	250	10.00		67	62	64	84	5	26	29.09	30.11
04	OVC	250	10.00		62	61	61	96	5	05	29.10	30.12
07	BKN	250	7.00		60	60	60	100	0	00	29.13	30.16
10	BKN	023	10.00		73	61	66	66	6	36	29.13	30.16
13	BKN	080	10.00		77	58	65	52	5	15	29.09	30.11
16	OVC	100	10.00		77	58	65	52	3	VR	29.04	30.07
19	OVC	120	10.00		74	62	66	67	3	14	29.03	30.06
22	OVC	070	10.00		70	63	66	79	0	00	29.02	30.04
SUNRISE: 0629 SEP 29					SUNSET: 1823							
01	OVC	065	10.00	-RA	69	64	66	84	3	34	29.00	30.03
04	OVC	060	10.00	-RA	67	64	65	91	0	00	28.99	30.01
07	OVC	065	10.00		66	64	65	93	0	00	28.99	30.02
10	OVC	085	10.00		69	64	66	84	6	07	29.01	30.03
13	BKN	180	10.00		76	62	67	62	3	10	28.96	29.98
16	SCT	200	10.00		78	60	67	54	8	09	28.90	29.92
19	FEW	035	10.00		73	59	64	62	3	12	28.89	29.91
22	FEW	040	10.00		66	61	63	84	0	00	28.92	29.95
SUNRISE: 0630 SEP 30					SUNSET: 1822							
01	CLR	NC	10.00		63	60	61	90	0	00	28.91	29.93
04	CLR	NC	10.00		61	59	60	93	0	00	28.90	29.92
07	OVC	010	9.00		61	59	60	93	3	15	28.92	29.95
10	BKN	014	10.00		69	63	65	81	7	30	28.93	29.96
13	FEW	020	10.00		78	63	68	60	5	VR	28.90	29.91
16	SCT	050	10.00		82	56	66	41	3	36	28.84	29.86
19	CLR	NC	10.00		75	57	64	54	0	00	28.86	29.88
22	FEW	040	10.00		66	59	62	78	0	00	28.89	29.92

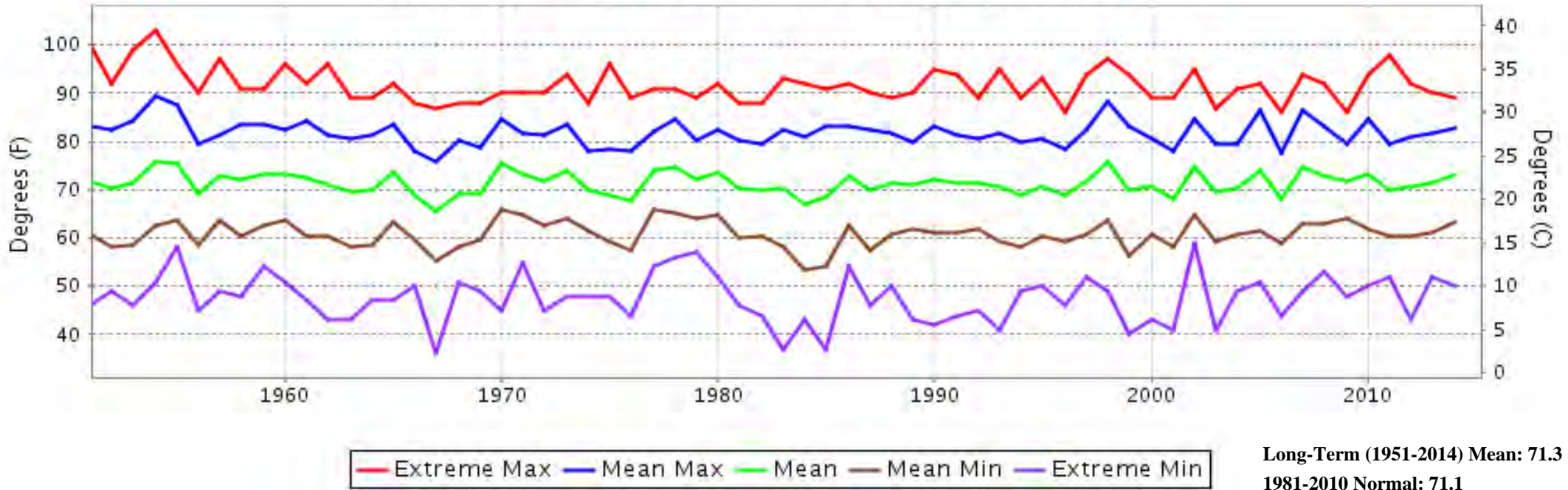
HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL

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.

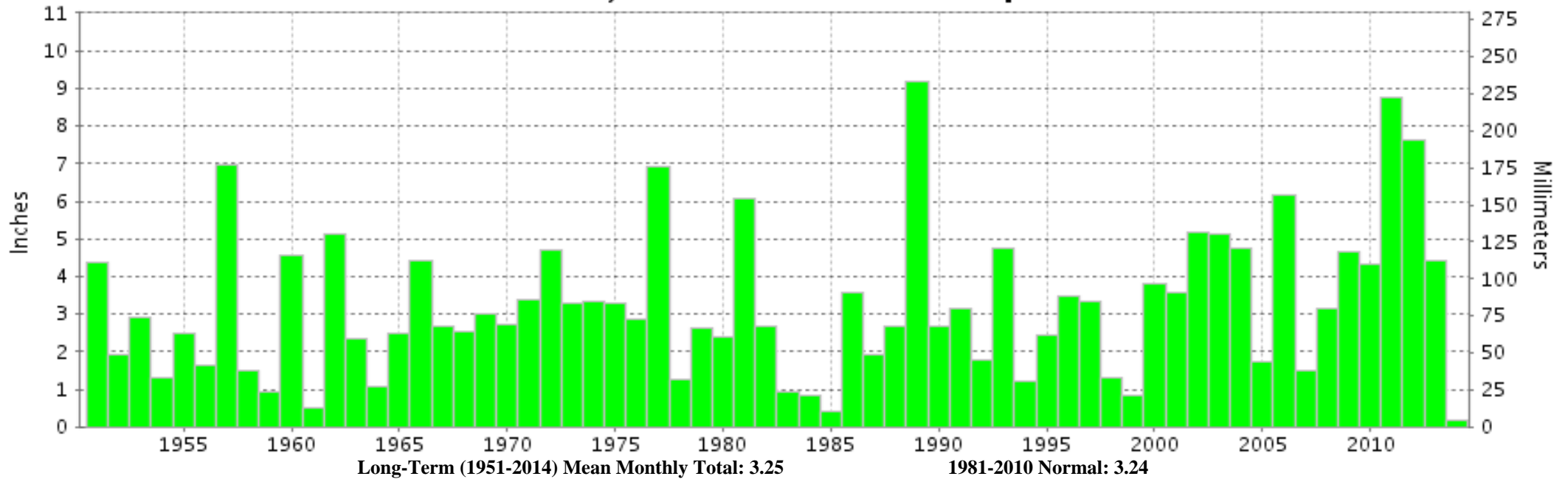
SUMMARY BY HOUR

HOUR (LST)	AVERAGES								RESULTANT WIND (MPH)	
	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (Inches, HG)		VISIBILITY (Miles)	WIND SPEED (MPH)	SPEED	DIRECTION
					STATION	SEA LEVEL				
01	67	63	65	87	29.04	30.06	9.40	4	2	36
02	66	63	64	90	29.04	30.06	9.20	3	2	36
03	66	63	64	90	29.03	30.05	9.03	3	2	34
04	65	63	64	92	29.04	30.06	9.03	3	2	01
05	65	63	64	93	29.04	30.07	9.00	4	2	36
06	65	63	63	93	29.05	30.08	8.85	3	3	35
07	65	63	64	92	29.07	30.09	8.32	3	2	01
08	67	63	65	87	29.07	30.10	9.00	5	2	04
09	70	63	66	80	29.08	30.10	9.27	6	2	03
10	73	63	67	73	29.08	30.11	9.77	6	2	35
11	75	63	68	67	29.08	30.10	9.83	5	3	33
12	77	63	68	62	29.07	30.09	10.00	6	3	31
13	79	63	69	58	29.05	30.07	9.87	7	3	31
14	80	63	69	55	29.03	30.05	9.93	7	5	30
15	81	62	69	53	29.01	30.03	9.87	8	2	32
16	81	62	69	54	29.00	30.02	9.70	7	3	31
17	80	62	69	56	29.00	30.02	10.00	7	2	01
18	78	62	68	61	29.00	30.02	9.97	7	2	02
19	75	63	67	68	29.00	30.03	10.00	5	2	03
20	72	63	67	74	29.02	30.04	9.97	5	2	01
21	71	63	66	77	29.03	30.05	9.93	4	2	01
22	70	63	66	81	29.04	30.06	9.97	3	2	01
23	69	63	65	83	29.04	30.06	9.83	4	2	01
24	68	63	65	84	29.04	30.06	9.77	4	2	34

KNOXVILLE, TN SEPTEMBER Temperatures



KNOXVILLE, TN SEPTEMBER Precipitation





**SEPTEMBER 2014
KNOXVILLE, TN**

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

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

DIRECTOR

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