



OCTOBER 2016 LOCAL CLIMATOLOGICAL DATA

NOAA, National Centers for Environmental Information

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 11	1300 LST 12	2400 LST 13	2400 LST 14	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
									DEPTH 11	WATER- EQUIV 12	SNOW- FALL 13	WATER EQUIV 14					SPEED 20	DIR 21	SPEED 22	DIR 23				
01	76	50	63	-2	50	56	2	0		0		0.0	0.00	29.02	30.05	1.6	27	2.5	16	24	12	22	01	
02	77	56	67	2	53	59	0	2		0		0.0	0.00	29.02	30.05	1.0	31	1.8	12	29	10	28	02	
03	81	54	68	4	54	59	0	3		0		0.0	0.00	28.98	30.00	3.0	03	4.0	15	01	12	02	03	
04	86	59	73	9	55	61	0	8		0		0.0	0.00	29.00	30.03	2.7	05	4.7	14	04	10	17	04	
05	84	56	70	7	53	60	0	5		0		0.0	0.00	29.08	30.10	2.8	04	3.5	20	03	15	04	05	
06	84	55	70	7	50	58	0	5	RA	0		0.0	0.00	29.08	30.11	6.8	04	7.0	28	04	21	04	06	
07	86	53	70	8	58	62	0	5		0		0.0	T	29.00	30.01	4.8	05	6.2	22	10	17	07	07	
08	76	57	67	5	54	61	0	2		0		0.0	0.00	28.95	29.99	10.7	01	11.3	31*	36	25*	02	08	
09	74	50	62	1	38	50	3	0		0		0.0	0.00	29.18	30.24	10.3	03	10.7	25	35	22	05	09	
10	76	50	63	2	40	51	2	0		0		0.0	0.00	29.24	30.29	7.4	04	7.7	24	04	18	04	10	
11	78	47	63	2	43	52	2	0		0		0.0	0.00	29.23	30.28	0.8	29	1.9	13	28	8	23	11	
12	76	47	62	2	41	51	3	0		0		0.0	0.00	29.18	30.21	0.7	23	2.3	15	29	10	26	12	
13	79	50	65	5	47	55	0	0		0		0.0	0.00	29.13	30.17	2.1	03	3.3	14	34	13	35	13	
14	83	59	71	12	53	60	0	6		0		0.0	0.00	29.15	30.19	1.3	24	7.3	21	21	17	22	14	
15	83	58	71	12	54	61	0	6		0		0.0	0.00	29.18	30.20	4.8	22	6.4	22	27	16	24	15	
16	82	63	73	14	57	62	0	8		0		0.0	0.00	29.11	30.13	4.2	23	5.1	22	21	14	26	16	
17	83	57	70	12	56	61	0	5		0		0.0	0.00	28.99	30.01	4.5	21	5.0	24	22	16	24	17	
18	85	60	73	15	58	64	0	8		0		0.0	0.00	28.95	29.97	7.9	22	8.6	30	23	24	23	18	
19	88	63	76	19	59	65	0	11		0		0.0	0.00	29.00	30.03	0.9	22	2.1	13	32	10	22	19	
20	88*	63	76*	19	58	64	0	11	RA	0		0.0	T	28.93	29.92	6.2	23	7.0	28	23	18	23	20	
21	68	50	59	2	48	53	6	0	RA	0		0.0	0.14	28.89	29.94	7.6	31	10.1	26	26	22	27	21	
22	62	43	53*	-3	35	44	12	0		0		0.0	0.00	29.03	30.08	3.0	31	4.0	19	31	15	34	22	
23	72	39*	56	0	38	47	9	0		0		0.0	0.00	29.15	30.20	4.7	22	5.0	16	27	13	22	23	
24	79	48	64	8	42	52	1	0		0		0.0	0.00	29.16	30.21	2.5	27	5.8	17	22	13	22	24	
25	75	49	62	7	38	49	3	0		0		0.0	0.00	29.23	30.27	5.5	04	5.9	18	03	16	03	25	
26	78	41	60	5	44	51	5	0		0		0.0	0.00	29.21	30.25	3.2	22	4.2	21	20	16	23	26	
27	78	56	67	12	54	59	0	2	TS TSRA RA	0		0.0	0.04	29.16	30.19	5.1	24	5.9	21	23	17	22	27	
28	80	52	66	12	51	57	0	1	BCFG BR	0		0.0	0.00	29.18	30.22	1.1	02	1.9	8	27	7	27	28	
29	83	47	65	11	48	55	0	0		0		0.0	0.00	29.15	30.18	1.9	23	3.3	16	26	14	24	29	
30	83	53	68	14	50	57	0	3		0		0.0	0.00	29.08	30.10	3.1	25	3.8	21	25	17	24	30	
31	83	54	69	15	53	59	0	4		0		0.0	0.00	29.05	30.07	1.3	22	2.3	16	22	14	22	31	
79.5		52.9	66.2	Σ	49.4	56.6	1.5	3.1	< MONTHLY AVERAGES TOTALS >			0.0	0.18	29.08	30.12	0.9	32	5.2	< MONTHLY AVERAGES					
8.3		4.4	6.3		<-----DEPARTURE FROM NORMAL----->							-2.33	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3											
DEGREE DAYS									GREATEST 24-HR PRECIPITATION : 0.14 DATE : 21				SEA LEVEL PRESSURE				DATE		TIME					
MONTHLY									GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM :				11		1015					
TOTAL DEPARTURE									GREATEST SNOW DEPTH : 0 DATE :				MINIMUM :				21		0219					
SEASON TO DATE									NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0		MINIMUM TEMP <= 32 : 0		PRECIPITATION >= 0.01 INCH: 2							
TOTAL DEPARTURE									MAXIMUM TEMP <= 32 : 0		MINIMUM TEMP <= 0 : 0		PRECIPITATION >= 0.10 INCH: 1											
HEATING : 48 -148									THUNDERSTORMS : 1		HEAVY FOG : 0		SNOWFALL >= 1.0 INCH : 0											
COOLING : 95 159																								

OCTOBER 2016
KNOXVILLE, TN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN (KTYS)
OCTOBER 2016

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	0.00	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	T	T	
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												12	0.00	0.00	
13													13												13	0.00	0.00	
14													14												14	0.00	0.00	
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												19	0.00	0.00	
20													20												20	T	T	
21	0.01	T	0.03	0.01	T		T	T	T	0.06	T	T	21	T	0.03	T								21	0.14	0.14		
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	0.04	0.04	
28													28												28	0.00	0.00	
29													29												29	0.00	0.00	
30													30												30	0.00	0.00	
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)	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Ending Date	27	27	21	21	21	21	21	21	21	21	21	21
Ending Time (Hr/Min)	0729	0729	0925	0925	0925	0925	0925	0925	0925	0925	0925	0925

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 OCTOBER 2016

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:2200ft Dir:W
Augmented Elements:TEMP, PRECIP, SNOW
Equipment:SRG, PSY, SNOWBOARD, SNOWSTICK

Date	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	10.00	10.00
02	10.00	10.00
03	8.00	10.00
04	8.00	10.00
05	9.00	10.00
06	9.00	10.00
07	10.00	10.00
08	10.00	10.00
09	9.00	10.00
10	10.00	10.00
11	10.00	10.00
12	8.00	10.00
13	10.00	10.00
14	8.00	10.00
15	7.00	10.00
16	10.00	10.00
17	8.00	10.00
18	9.00	10.00
19	9.00	10.00
20	9.00	10.00
21	2.00	10.00
22	10.00	10.00
23	10.00	10.00
24	10.00	10.00
25	8.00	10.00
26	10.00	10.00
27	7.00	10.00
28	4.00	10.00
29	10.00	10.00
30	7.00	10.00
31	10.00	10.00
AVGS	8.68	10.00
MINIMUM VISIBILITY (MILES)		
<= .25	<= 3.0	>= 7.0
0	1	29

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

OCTOBER 2016

KTYS

WBAN # 13891

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: 0651 OCT 25 SUNSET: 1748					01	CLR	NC	10.00		53	42	48	66	5	03	29.22	30.26
04	CLR	NC	10.00		51	41	46	69	5	02	29.22	30.26					
07	CLR	NC	10.00		49	40	45	71	9	04	29.25	30.29					
10	CLR	NC	8.00		60	41	50	50	13	05	29.28	30.32					
13	SCT	250	10.00		71	36	53	28	10	05	29.23	30.28					
16	BKN	250	10.00		73	28	52	19	5	04	29.18	30.22					
19	BKN	250	10.00		62	39	51	43	0	00	29.21	30.25					
22	SCT	250	10.00		54	36	46	51	3	36	29.22	30.27					
SUNRISE: 0652 OCT 26 SUNSET: 1747					01	CLR	NC	10.00		49	39	44	69	0	00	29.22	30.27
04	CLR	NC	10.00		44	38	41	79	0	00	29.23	30.27					
07	SCT	250	10.00		42	37	40	82	3	06	29.25	30.30					
10	SCT	250	10.00		58	41	50	53	3	08	29.28	30.33					
13	FEW	250	10.00		71	43	56	36	0	00	29.22	30.27					
16	BKN	250	10.00		76	47	60	36	14	22	29.15	30.20					
19	OVC	250	10.00		68	51	58	55	7	23	29.15	30.20					
22	OVC	250	10.00		65	51	57	61	3	22	29.16	30.21					
SUNRISE: 0653 OCT 27 SUNSET: 1746					01	BKN	250	10.00		63	50	56	63	6	27	29.18	30.21
04	BKN	250	10.00		57	50	53	78	0	00	29.15	30.19					
07	OVC	250	8.00		59	51	55	75	5	29	29.16	30.20					
10	OVC	090	10.00	-RA	63	57	60	81	6	27	29.21	30.24					
13	BKN	180	10.00		73	56	63	55	15	23	29.15	30.19					
16	BKN	180	10.00		78	54	64	43	13	24	29.12	30.15					
19	SCT	095	10.00		69	55	61	61	6	21	29.14	30.17					
22	SCT	090	10.00		64	55	59	73	7	24	29.16	30.20					
SUNRISE: 0654 OCT 28 SUNSET: 1745					01	CLR	NC	10.00		61	55	58	81	0	00	29.18	30.20
04	FEW	060	9.00		55	51	53	87	0	00	29.18	30.21					
07	SCT	250	6.00	BCFG BR	53	51	52	93	0	00	29.21	30.26					
10	FEW	250	8.00		66	56	60	70	0	00	29.25	30.29					
13	SCT	250	10.00		75	50	61	41	3	35	29.21	30.23					
16	SCT	250	10.00		79	49	62	35	0	00	29.15	30.18					
19	BKN	250	10.00		69	48	57	47	0	00	29.15	30.19					
22	FEW	250	10.00		62	49	55	62	3	08	29.18	30.21					
SUNRISE: 0655 OCT 29 SUNSET: 1744					01	FEW	250	10.00		56	48	52	75	0	00	29.16	30.20
04	FEW	250	10.00		51	47	49	86	0	00	29.18	30.21					
07	FEW	250	10.00		49	45	47	86	3	02	29.21	30.24					
10	FEW	250	10.00		65	50	57	59	0	00	29.21	30.25					
13	FEW	250	10.00		81	49	62	33	7	24	29.15	30.17					
16	CLR	NC	10.00		82	47	62	29	9	21	29.08	30.11					
19	CLR	NC	10.00		72	48	59	43	3	22	29.09	30.12					
22	CLR	NC	10.00		67	49	57	53	5	27	29.11	30.14					
SUNRISE: 0656 OCT 30 SUNSET: 1743					01	CLR	NC	10.00		61	49	55	65	0	00	29.11	30.13
04	CLR	NC	10.00		55	49	52	80	0	00	29.10	30.13					
07	BKN	250	10.00		56	49	52	77	0	00	29.11	30.14					
10	BKN	250	10.00		66	52	58	61	3	19	29.13	30.16					
13	FEW	250	10.00		80	51	63	37	14	25	29.07	30.09					
16	FEW	070	10.00		82	48	62	31	13	24	29.01	30.03					
19	CLR	NC	10.00		74	48	59	40	3	25	29.04	30.06					
22	CLR	NC	10.00		65	49	56	56	0	00	29.05	30.08					

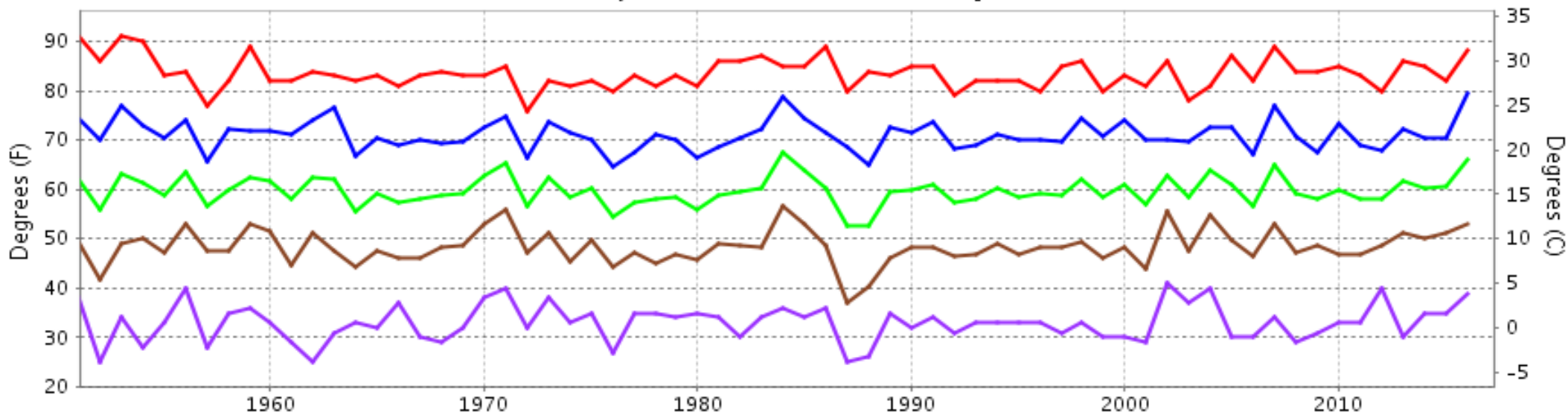
HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)						
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL					
SUNRISE: 0657 OCT 31 SUNSET: 1742					01	SCT	070	10.00		61	50	55	67	0	00	29.05	30.07
04	FEW	070	10.00		59	50	54	72	0	00	29.04	30.06					
07	FEW	250	10.00		57	50	53	78	0	00	29.06	30.09					
10	BKN	050	10.00		68	53	59	59	0	00	29.11	30.13					
13	BKN	250	10.00		81	54	65	39	8	15	29.05	30.07					
16	BKN	250	10.00		82	53	64	37	7	26	29.01	30.03					
19	OVC	250	10.00		73	53	61	50	0	00	29.03	30.06					
22	OVC	250	10.00		67	55	60	66	0	00	29.04	30.06					

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	60	50	55	71	29.08	30.11	9.97	3	1	32
02	59	50	54	74	29.08	30.11	10.00	3	1	36
03	57	50	53	76	29.08	30.11	9.97	4	1	35
04	56	50	53	79	29.09	30.12	9.97	3	1	33
05	56	49	52	79	29.10	30.13	9.90	4	1	34
06	55	49	52	81	29.11	30.14	9.81	3	1	02
07	55	49	52	81	29.12	30.16	9.71	3	1	36
08	57	50	53	79	29.13	30.17	9.35	3	3	07
09	61	51	56	69	29.14	30.18	9.84	4	2	07
10	66	51	58	59	29.14	30.18	9.87	5	1	01
11	70	51	59	51	29.14	30.17	10.00	6	1	30
12	73	50	60	45	29.12	30.15	10.00	7	3	28
13	76	49	61	40	29.09	30.12	9.87	9	3	28
14	77	48	61	37	29.07	30.10	9.61	9	2	29
15	78	48	61	35	29.06	30.08	9.90	9	3	28
16	78	47	61	35	29.05	30.07	9.87	8	3	28
17	77	47	60	36	29.05	30.07	10.00	9	2	28
18	73	48	59	42	29.05	30.08	9.87	7	2	28
19	70	48	58	46	29.06	30.09	10.00	5	1	32
20	68	49	57	51	29.07	30.10	10.00	5	1	02
21	66	50	57	56	29.07	30.11	10.00	4	1	01
22	65	49	56	59	29.08	30.11	10.00	4	1	31
23	62	50	56	64	29.08	30.11	10.00	4	1	31
24	61	50	55	67	29.08	30.11	10.00	4	1	33

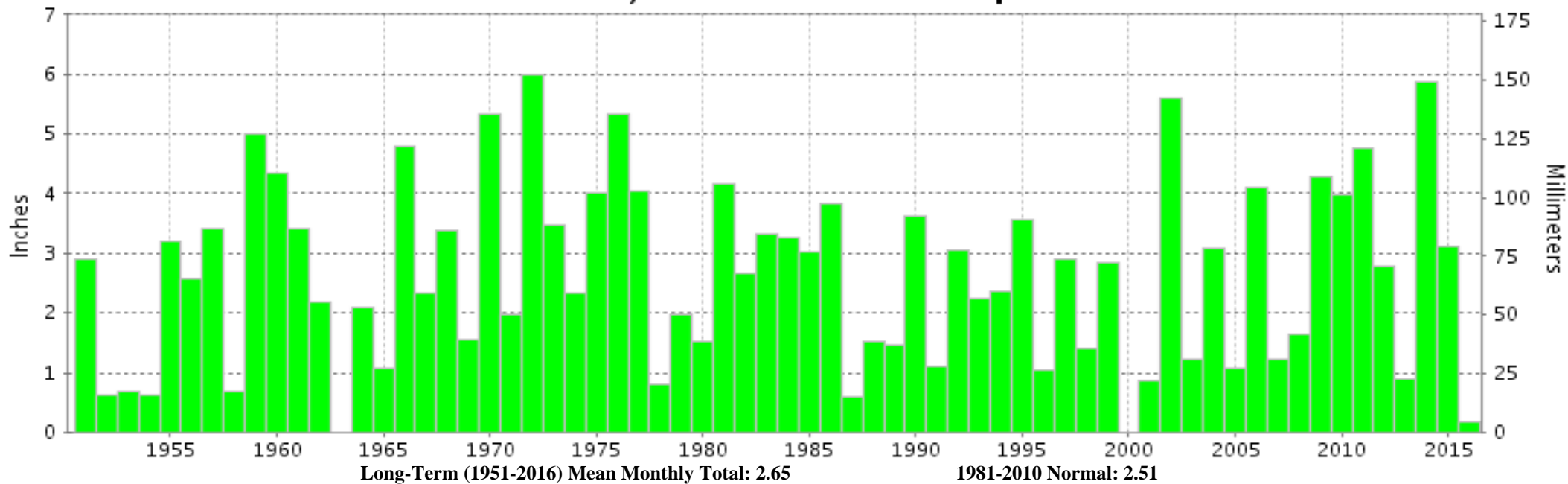
KNOXVILLE, TN OCTOBER Temperatures



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

Long-Term (1951-2016) Mean: 59.7
1981-2010 Normal: 59.9

KNOXVILLE, TN OCTOBER Precipitation



Long-Term (1951-2016) Mean Monthly Total: 2.65 1981-2010 Normal: 2.51



OCTOBER 2016

KNOXVILLE, TN

LOCAL CLIMATOLOGICAL DATA

NOAA, National Centers for Environmental Information

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 Centers for Environmental Information (NCEI), Asheville, North Carolina 28801.

A handwritten signature in cursive script that reads "Margarita Fess".

DIRECTOR (ACTING)

NCEI now offers free online access to the **Edited Local Climatological Data Publication**. Go to : www.ncdc.noaa.gov and choose Most Popular.

We welcome your questions or comments, please contact us at:
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