



DECEMBER 2015 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	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			
																			SPEED 20	DIR 21	SPEED 22	DIR 23		
01	62	57	60	15	58	58	5	0	RA BCFG BR	0		0.0	1.58	28.90	29.94	3.3	24	6.2	28	29	20	28	01	
02	59	44	52	7	45	48	13	0	RA BR	0		0.0	0.81	28.83	29.90	8.1	25	9.1	21	25	17	26	02	
03	47	33	40	-4	29	36	25	0		0		0.0	0.00	29.21	30.27	5.6	01	7.2	18	02	14	02	03	
04	53	30	42	-2	29	35	23	0		0		0.0	0.00	29.44	30.52	6.8	03	7.0	16	04	13	04	04	
05	56	28	42	-1	30	36	23	0		0		0.0	0.00	29.51	30.58	2.3	02	2.9	11	02	9	04	05	
06	57	28	43	0	33	38	22	0		0		0.0	0.00	29.37	30.44	0.8	02	2.0	7	28	7	19	06	
07	58	38	48	5	39	43	17	0		0		0.0	0.00	29.15	30.20	2.3	32	4.5	18	27	13	32	07	
08	59	32	46	4	36	40	19	0	BR	0		0.0	0.00	29.08	30.12	0.9	28	0.9	12	29	9	29	08	
09	60	31	46	4	41	43	19	0	RA BCFG BR	0		0.0	T	28.95	30.00	3.7	25	5.3	24	22	21	23	09	
10	65	47	56	14	49	52	9	0	FG+ FG BR	0		0.0	0.00	28.92	29.94	4.2	24	5.2	25	22	15	22	10	
11	71	55	63	21	55	58	2	0		0		0.0	0.00	28.94	29.98	10.3	22	10.5	27	22	22	22	11	
12	70	55	63	21	56	59	2	0		0		0.0	0.00	29.11	30.16	5.8	25	6.1	17	28	15	26	12	
13	68	49	59	18	52	55	6	0	FG+ FG BCFG BR	0		0.0	0.00	29.05	30.05	1.2	10	3.3	14	16	10	14	13	
14	72	55	64	23	50	56	1	0	RA BR	0		0.0	0.20	28.67	29.69	15.5	21	16.7	46*	26	35*	26	14	
15	65	46	56	15	44	49	9	0		0		0.0	0.00	28.85	29.91	3.0	23	5.3	19	22	15	23	15	
16	66	36	51	10	44	47	14	0	RA BCFG BR	0		0.0	0.01	28.89	29.91	0.3	02	1.2	9	02	8	02	16	
17	55	44	50	10	48	49	15	0	RA BR	0		0.0	1.02	28.79		2.1	34	4.3	13	27	12	27	17	
18	44	28	36	-4	27	32	29	0	SN	0		0.0	T	29.03	30.15	6.8	26	8.4	25	25	21	28	18	
19	46	25*	36*	-4	23	31	29	0		0		0.0	0.00	29.36	30.47	5.6	23	6.2	18	24	15	26	19	
20	48	26	37	-3	28	33	28	0		0		0.0	0.00	29.38	30.45	0.5	07	0.6	11	13	7	11	20	
21	56	37	47	7	40	42	18	0	RA	0		0.0	0.04	29.16	30.19	2.2	36	3.7	15	29	13	30	21	
22	60	48	54	15	52	52	11	0	RA BR	0		0.0	0.12	28.92	29.94	1.9	03	2.8	15	29	13	29	22	
23	67	53	60	21	56	57	5	0	RA BR	0		0.0	0.13	28.77	29.79	0.4	15	4.5	20	20	15	19	23	
24	73	59	66	27	62	63	0	1	TS TSRA RA BR VCTS	0		0.0	0.93	28.90	29.97	4.8	21	6.5	37	19	29	20	24	
25	69	57	63	24	60	61	2	0	TS TSRA RA FG+ FG BR	0		0.0	2.19	29.10	30.13	4.4	17	6.3	35	16	28	15	25	
26	74	59	67*	28	59	62	0	2	RA	0		0.0	0.02	29.14	30.17	0.7	36	5.0	43	17	31	15	26	
27	77*	55	66	27	60	62	0	1	RA BCFG BR	0		0.0	T	29.01	30.03	5.2	23	6.3	36	22	30	22	27	
28	76	55	66	28	59	61	0	1	RA FG BCFG BR	0		0.0	0.72	28.82	29.83	4.9	16	7.9	41	18	30	17	28	
29	68	52	60	22	51	55	5	0		0		0.0	0.00	28.92	29.98	11.9	24	12.2	31	25	24	25	29	
30	56	49	53	15	50	51	12	0	RA BR	0		0.0	0.07	29.09	30.14	3.0	25	4.3	15	22	12	27	30	
31	52	37	45	7	41	44	20	0	BR HZ	0		0.0	0.00	29.15	30.22	5.2	36	5.5	15	36	13	36	31	
61.6		43.5	52.5	Σ	45.4	48.6	12.4	0.2	< MONTHLY AVERAGES TOTALS >			T	7.84	29.05	30.10	2.3	24	5.7	< MONTHLY AVERAGES					
11.8	11.8	11.7	<-----DEPARTURE FROM NORMAL----->									3.34	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3											
DEGREE DAYS									GREATEST 24-HR PRECIPITATION : 2.24 DATE : 01-02				SEA LEVEL PRESSURE				DATE		TIME					
MONTHLY									GREATEST 24-HR SNOWFALL : T DATE : 18				MAXIMUM :				30.65		05		1053			
TOTAL DEPARTURE									GREATEST SNOW DEPTH : 0 DATE :				MINIMUM :				29.60		14		1553			
SEASON TO DATE									NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0		MINIMUM TEMP <= 32 : 8		PRECIPITATION >= 0.01 INCH : 13							
HEATING : 383 -369 893 -540									MAXIMUM TEMP <= 32 : 0		MINIMUM TEMP <= 0 : 0		PRECIPITATION >= 0.10 INCH : 9											
COOLING : 5 5 1707 181									THUNDERSTORMS : 2		HEAVY FOG : 3		SNOWFALL >= 1.0 INCH : 0											

DECEMBER 2015
KNOXVILLE, TN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN (KTYS)
DECEMBER 2015

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	0.01	0.07	T			0.02	0.02	0.04	0.01	0.03	0.04	0.09	01	0.06	0.01	T	0.02	0.03	0.28	0.15	0.08	0.19	0.27	0.06	0.10	01	1.58	1.58
02	0.08	0.10	0.19	0.18	0.09	0.09	0.05	0.02	0.01				02													02	0.81	0.81
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						T							09	T	T
10													10							T						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											0.10	0.05	0.03	14	0.02											14	0.20	0.20
15													15													15	0.00	0.00
16													16											0.01	16	0.01	0.01	
17		T	0.06	0.13	0.05	0.02	0.14	0.08	0.13	0.10	0.11	T	17	0.15	0.03	0.01	0.01	T							17	1.02	1.02	
18													18				T		T						18	T	T	
19													19													19	0.00	0.00
20													20													20	0.00	0.00
21								T	T	0.01	0.01	T	21						T	T	T	0.01	0.01	T	21	0.04	0.04	
22	0.05	0.02	0.05	T		0.01	0.01	T	T	0.01			22							T	T	T	0.01	0.01	T	22	0.12	0.12
23		T	0.01	T	0.02	0.01	0.01	T	T	0.01			23	T	T	0.01	T			0.04	0.01	T		0.01	23	0.13	0.13	
24	T	T	0.03	0.72	0.10	0.08	T		T	T			24												24	0.93	0.93	
25					T	0.04	0.02	0.08	0.13	0.03	0.01	0.71	25	0.39	0.20	0.23	0.06	0.04	0.01	0.01	0.02	0.05	0.13	0.03	T	25	2.19	2.19
26	T	T						0.02	T	T			26												26	0.02	0.02	
27													27			T					T				27	T	T	
28						0.03	0.02	0.03	T				28			T	T	0.02	0.07	0.37	0.18	T	T		28	0.72	0.72	
29													29												29	0.00	0.00	
30								T	T	0.01	T	T	30	0.05	0.01	T									30	0.07	0.07	
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)	0.26	0.43	0.53	0.60	0.67	0.76	0.88	1.00	1.10	1.16	1.29	1.38
Ending Date	25	25	25	25	25	25	25	25	25	25	25	25
Ending Time (Hr/Min)	1142	1143	1146	1150	1200	1214	1230	1250	1305	1322	1351	1423

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	
VC In the Vicinity	UP Unkown Precipitation		GL Glaze

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

KNOXVILLE, TN DECEMBER 2015

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	0.75	10.00
02	3.00	10.00
03	10.00	10.00
04	10.00	10.00
05	9.00	10.00
06	8.00	10.00
07	10.00	10.00
08	5.00	10.00
09	5.00	10.00
10	0.00	10.00
11	10.00	10.00
12	8.00	10.00
13	0.25	10.00
14	1.50	10.00
15	10.00	10.00
16	1.25	10.00
17	1.00	10.00
18	10.00	10.00
19	10.00	10.00
20	10.00	10.00
21	7.00	10.00
22	1.50	10.00
23	0.75	10.00
24	1.50	10.00
25	0.50	10.00
26	10.00	10.00
27	1.00	10.00
28	0.50	10.00
29	10.00	10.00
30	2.00	10.00
31	3.00	10.00
AVGS	5.18	10.00
MINIMUM VISIBILITY (MILES)		
	<= .25	<= 3.0 >= 7.0
	2	15 14

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN
DECEMBER 2015 KTYS

WBAN # 13891

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		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						DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL
SUNRISE: 0727 DEC 01					SUNSET: 1723					SUNRISE: 0733 DEC 07					SUNSET: 1722										
01	OVC	055	8.00	-RA	59	58	58	96	0	00	28.97	30.01	01	BKN	070	10.00		42	37	40	82	0	00	29.22	30.28
04	OVC	110	0.75	BR	57	57	57	100	0	00	28.95	29.98	04	OVC	043	10.00		42	38	40	85	0	00	29.18	30.24
07	OVC	100	10.00	-RA	59	57	58	93	7	27	28.96	30.00	07	BKN	055	10.00		42	39	41	89	0	00	29.18	30.23
10	OVC	100	7.00	-RA	60	57	58	90	7	29	28.97	30.01	10	BKN	150	10.00		48	42	45	80	0	00	29.18	30.23
13	BKN	110	10.00		61	58	59	90	10	19	28.87	29.90	13	BKN	046	10.00		56	42	49	60	13	32	29.13	30.17
16	OVC	060	10.00		61	58	59	90	8	26	28.86	29.90	16	SCT	042	10.00		57	38	48	49	8	32	29.11	30.15
19	OVC	090	10.00	-RA	60	58	59	93	10	15	28.87	29.91	19	FEW	040	10.00		49	36	43	61	3	04	29.14	30.19
22	BKN	041	7.00		59	58	58	96	8	27	28.87	29.91	22	CLR	NC	10.00		43	37	40	80	7	02	29.12	30.17
SUNRISE: 0728 DEC 02					SUNSET: 1722					SUNRISE: 0733 DEC 08					SUNSET: 1722										
01	OVC	080	7.00	-RA	59	58	58	96	6	29	28.82	29.85	01	CLR	NC	10.00		39	36	38	89	0	00	29.11	30.16
04	OVC	031	5.00	-RA BR	55	54	54	96	6	23	28.82	29.85	04	FEW	010	8.00		35	33	34	93	5	29	29.08	30.13
07	OVC	033	10.00	-RA	54	52	53	93	7	24	28.81	29.83	07	CLR	NC	7.00		32	31	32	96	0	00	29.14	30.20
10	BKN	110	10.00		53	48	50	83	10	24	28.84	29.88	10	FEW	250	10.00		43	37	40	80	0	00	29.12	30.18
13	OVC	130	10.00		52	45	48	77	11	24	28.85	29.89	13	FEW	250	10.00		54	41	48	62	0	00	29.07	30.12
16	BKN	250	10.00		52	40	46	64	10	24	28.84	29.87	16	CLR	NC	10.00		59	40	50	49	3	29	29.01	30.06
19	BKN	250	10.00		47	35	42	63	7	26	28.90	29.94	19	CLR	NC	10.00		51	38	45	61	0	00	29.02	30.08
22	BKN	050	10.00		46	37	42	71	5	25	28.96	30.01	22	CLR	NC	10.00		44	36	40	73	0	00	29.01	30.06
SUNRISE: 0729 DEC 03					SUNSET: 1722					SUNRISE: 0734 DEC 09					SUNSET: 1722										
01	BKN	045	10.00		42	33	38	71	8	25	29.04	30.09	01	FEW	250	10.00		37	35	36	93	3	01	29.00	30.04
04	FEW	040	10.00		39	28	35	65	5	36	29.09	30.14	04	FEW	250	9.00		35	33	34	93	0	00	28.99	30.04
07	CLR	NC	10.00		36	29	33	76	9	01	29.14	30.20	07	SCT	250	9.00		32	30	31	92	0	00	29.00	30.06
10	FEW	180	10.00		41	30	37	65	9	35	29.22	30.28	10	BKN	200	9.00		40	37	39	89	0	00	28.98	30.03
13	FEW	200	10.00		45	27	38	49	13	36	29.22	30.28	13	BKN	250	10.00		54	42	48	64	0	00	28.90	29.95
16	FEW	250	10.00		47	27	39	46	9	05	29.24	30.31	16	OVC	060	10.00		58	47	52	67	13	23	28.87	29.91
19	CLR	NC	10.00		40	29	36	65	6	01	29.29	30.37	19	OVC	025	10.00	-RA	56	50	53	81	10	27	28.91	29.96
22	CLR	NC	10.00		37	28	33	70	10	02	29.33	30.40	22	BKN	250	7.00		50	48	49	93	3	23	28.95	30.00
SUNRISE: 0730 DEC 04					SUNSET: 1722					SUNRISE: 0735 DEC 10					SUNSET: 1723										
01	CLR	NC	10.00		35	27	32	72	7	02	29.35	30.42	01	BKN	015	4.00	BR	50	49	49	96	0	00	28.95	30.00
04	CLR	NC	10.00		32	27	30	82	7	01	29.39	30.46	04	OVC	022	3.00	BR	51	49	50	92	0	00	28.93	29.97
07													07	BKN	250	4.00	BR	47	46	47	97	3	34	28.94	29.98
10	CLR	NC	10.00		40	30	36	68	10	03	29.49	30.56	10	VV	001	0.12	FG	50	49	49	96	3	02	28.96	30.00
13	CLR	NC	10.00		48	30	40	50	8	05	29.47	30.54	13	BKN	250	10.00		61	52	56	72	8	29	28.91	29.94
16	CLR	NC	10.00		52	30	42	43	9	01	29.45	30.52	16	OVC	250	10.00		64	50	56	60	15	22	28.84	29.87
19													19	FEW	050	10.00		58	48	53	70	6	23	28.87	29.91
22	CLR	NC	10.00		40	30	36	68	7	01	29.48	30.55	22	SCT	038	10.00		55	48	51	77	7	23	28.86	29.91
SUNRISE: 0731 DEC 05					SUNSET: 1722					SUNRISE: 0736 DEC 11					SUNSET: 1723										
01	CLR	NC	10.00		37	30	34	76	8	35	29.49	30.55	01	BKN	038	10.00		56	50	53	81	7	27	28.88	29.92
04	CLR	NC	10.00		30	27	29	88	0	00	29.51	30.58	04	OVC	049	10.00		57	52	54	83	7	21	28.89	29.93
07	CLR	NC	10.00		28	26	27	92	0	00	29.54	30.62	07	OVC	037	10.00		59	54	56	83	10	25	28.93	29.96
10	CLR	NC	10.00		39	31	36	73	7	05	29.57	30.65	10	OVC	024	10.00		62	57	59	84	10	23	28.97	30.01
13	CLR	NC	10.00		50	31	42	48	0	00	29.52	30.59	13	BKN	250	10.00		69	58	62	68	21	22	28.96	29.99
16	CLR	NC	10.00		55	30	44	38	6	02	29.48	30.55	16	BKN	250	10.00		70	58	63	66	14	22	28.95	29.98
19	CLR	NC	10.00		46	32	40	58	5	04	29.48	30.56	19	BKN	065	10.00		63	55	58	76	6	19	28.98	30.01
22	CLR	NC	10.00		40	32	37	73	0	00	29.49	30.56	22	BKN	050	10.00		60	54	57	80	9	22	29.01	30.04
SUNRISE: 0732 DEC 06					SUNSET: 1722					SUNRISE: 0736 DEC 12					SUNSET: 1723										
01	CLR	NC	10.00		36	30	34	79	3	25	29.47	30.54	01	FEW	030	10.00		60	55	57	84	9	22	29.04	30.07
04	CLR	NC	10.00		31	28	30	89	0	00	29.46	30.53	04	SCT	055	10.00		60	56	58	86	9	24	29.07	30.10
07	FEW	200	10.00		29	26	28	89	3	23	29.47	30.55	07	FEW	200	10.00		59	56	57	90	7	24	29.13	30.16
10	BKN	250	10.00		40	32	37	73	3	03	29.46	30.53	10	BKN	250	10.00		67	58	62	73	8	24	29.16	30.20
13	BKN	250	10.00		53	33	44	47	0	00	29.38	30.45	13	OVC	250	10.00		69	57	62	66	9	27	29.15	30.19
16	BKN	060	10.00		55	37	46	51	6	33	29.30	30.37	16	OVC	250	10.00		68	57	61	68	8	27	29.13	30.16
19	CLR	NC	10.00		51	36	44	56	3	06	29.25	30.32	19	BKN	180	10.00		63	55	58	76	0	00	29.15	30.20
22	CLR	NC	10.00		43	37	40	80	0	00	29.24	30.30	22	SCT	180	9.00		58	55	56	90	0	00	29.15	30.19

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN
DECEMBER 2015 **KTYS**

WBAN # 13891

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		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						DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL				
SUNRISE: 0737					DEC 13					SUNSET: 1723					SUNRISE: 0741					DEC 19					SUNSET: 1725				
01	OVC	200	8.00	BCFG	55	53	54	93	3	28	29.14	30.17	01	CLR	NC	10.00			27	22	25	81	8	22	29.26	30.35			
04	VV	002	0.25	FG	52	51	51	97	3	31	29.11	30.14	04	CLR	NC	10.00			27	21	25	78	5	23	29.30	30.38			
07	VV	001	0.25	FG	52	51	51	97	0	00	29.13	30.16	07	CLR	NC	10.00			25	21	24	85	8	22	29.36	30.45			
10	OVC	250	2.00	BR	54	54	54	100	0	00	29.11	30.15	10	CLR	NC	10.00			35	24	31	64	11	22	29.43	30.51			
13	BKN	150	10.00		66	56	60	70	3	02	29.02	30.05	13	CLR	NC	10.00			43	25	36	49	8	24	29.42	30.50			
16	OVC	050	10.00		67	55	60	66	3	06	28.94	29.97	16	CLR	NC	10.00			46	25	38	44	9	24	29.41	30.48			
19	OVC	150	10.00		61	54	57	78	3	09	28.91	29.95	19	CLR	NC	10.00			41	24	35	51	0	00	29.43	30.51			
22	OVC	150	10.00		66	50	57	56	10	15	28.86	29.90	22	CLR	NC	10.00			35	24	31	64	0	00	29.45	30.53			
SUNRISE: 0738					DEC 14					SUNSET: 1723					SUNRISE: 0741					DEC 20					SUNSET: 1726				
01	FEW	150	10.00		66	50	57	56	8	18	28.79	29.80	01	CLR	NC	10.00			29	26	28	89	3	06	29.43	30.50			
04	SCT	250	10.00		70	51	59	51	20	17	28.73	29.74	04	CLR	NC	10.00			27	24	26	89	0	00	29.42	30.49			
07	BKN	060	10.00		69	56	61	63	21	20	28.67	29.69	07	CLR	NC	10.00			26	23	25	88	0	00	29.41	30.49			
10	OVC	037	1.50	-RA BR	59	56	57	90	16	23	28.70	29.72	10	FEW	250	10.00			35	27	32	72	0	00	29.46	30.53			
13	BKN	180	10.00		60	56	58	86	11	25	28.61	29.63	13	OVC	050	10.00			45	28	38	52	0	00	29.40	30.47			
16	FEW	037	10.00		65	45	54	49	22	23	28.59	29.60	16	OVC	250	10.00			48	27	39	44	0	00	29.31	30.39			
19	CLR	NC	10.00		59	43	51	56	17	22	28.62	29.64	19	OVC	180	10.00			43	30	38	60	0	00	29.30	30.38			
22	CLR	NC	10.00		56	43	49	62	14	22	28.71	29.74	22	OVC	180	10.00			39	31	36	73	0	00	29.29	30.36			
SUNRISE: 0738					DEC 15					SUNSET: 1724					SUNRISE: 0742					DEC 21					SUNSET: 1726				
01	CLR	NC	10.00		53	44	48	72	10	23	28.78	29.81	01	OVC	180	10.00			38	32	36	79	0	00	29.28	30.35			
04	CLR	NC	10.00		48	43	46	83	7	20	28.84	29.87	04	OVC	180	10.00			37	32	35	82	0	00	29.23	30.30			
07	FEW	020	10.00		47	42	45	83	5	22	28.88	29.92	07	OVC	180	10.00			39	33	36	79	3	34	29.21	30.28			
10	CLR	NC	10.00		54	46	50	75	5	21	28.92	29.96	10	OVC	100	7.00	-RA			40	34	37	79	6	07	29.21	30.27		
13	CLR	NC	10.00		61	44	52	54	3	28	28.88	29.92	13	OVC	250	10.00			48	41	45	77	8	28	29.14	30.20			
16	CLR	NC	10.00		65	46	55	51	3	VR	28.85	29.89	16	SCT	180	10.00			56	49	52	77	3	35	29.04	30.09			
19	CLR	NC	10.00		56	44	50	65	3	07	28.87	29.92	19	OVC	100	10.00	-RA			51	45	48	80	5	35	29.05	30.10		
22	CLR	NC	10.00		48	44	46	86	5	05	28.90	29.94	22	OVC	100	10.00	-RA			49	46	47	90	3	30	29.02	30.07		
SUNRISE: 0739					DEC 16					SUNSET: 1724					SUNRISE: 0743					DEC 22					SUNSET: 1727				
01	CLR	NC	10.00		46	42	44	86	0	00	28.89	29.93	01	OVC	044	6.00	-RA BR			48	47	47	96	0	00	28.96	30.01		
04	FEW	001	6.00	BR	40	38	39	93	0	00	28.90	29.94	04	BKN	080	2.50	BR			48	47	47	96	0	00	28.89	29.93		
07	BKN	001	2.50	BR	36	35	36	97	0	00	28.91	29.95	07	OVC	006	1.50	BR			49	48	48	97	5	16	28.90	29.95		
10	FEW	003	7.00		45	42	44	90	0	00	28.94	29.98	10	OVC	022	1.50	BR			51	49	50	92	5	07	28.95	29.99		
13	FEW	250	10.00		60	45	52	58	0	00	28.87	29.92	13	OVC	026	7.00				57	54	55	90	0	00	28.91	29.95		
16	BKN	200	10.00		65	47	55	52	3	12	28.84	29.87	16	OVC	034	9.00				60	56	58	86	0	00	28.88	29.92		
19	BKN	200	10.00		58	47	52	67	0	00	28.84	29.88	19	OVC	070	10.00				58	55	56	90	5	02	28.90	29.93		
22	BKN	200	10.00		54	47	50	77	0	00	28.79		22	SCT	150	6.00				55	54	54	96	5	36	28.88	29.92		
SUNRISE: 0740					DEC 17					SUNSET: 1724					SUNRISE: 0743					DEC 23					SUNSET: 1727				
01					52	50	51	93	0	00	28.76	29.79	01	VV	001	0.75	BR			53	53	53	100	6	10	28.84	29.88		
04	OVC	080	4.00	RA BR	52	52	52	100	3	21	28.75	29.78	04	OVC	095	5.00	RA BR			54	54	54	100	0	00	28.84	29.87		
07	OVC	019	2.50	RA BR	53	52	52	96	5	30	28.76	29.79	07	OVC	042	4.00	RA BR			55	54	54	96	3	08	28.82	29.86		
10	OVC	016	1.00	-RA BR	54	52	53	93	6	32	28.76	29.79	10	OVC	075	1.75	BR			56	55	55	97	6	11	28.82	29.84		
13	OVC	012	3.00	BR	54	52	53	93	6	32	28.76	29.79	13	OVC	110	5.00	-RA BR			58	57	57	97	0	00	28.74	29.77		
16	OVC	015	3.00	-RA BR	53	52	52	96	0	00	28.78		16	BKN	180	10.00				62	59	60	90	9	33	28.70	29.72		
19	OVC	035	10.00		50	44	47	80	10	27	28.82		19	BKN	180	8.00				57	56	56	96	5	06	28.69	29.71		
22	OVC	045	10.00		46	40	43	79	6	35	28.85		22	BKN	100	10.00				64	57	60	78	7	19	28.70	29.72		
SUNRISE: 0740					DEC 18					SUNSET: 1725					SUNRISE: 0743					DEC 24					SUNSET: 1728				
01	OVC	031	10.00		43	34	39	71	5	36	28.87		01	OVC	110	10.00	-RA			69	61	64	76	20	20	28.71	29.73		
04	OVC	036	10.00		40	32	37	73	6	33	28.90	29.95	04	OVC	030	1.50	TS+RA BR			64	63	63	96	21	23	28.78	29.80		
07	OVC	012	10.00		35	31	33	85	8	28	28.96	30.01	07	OVC	065	10.00				63	62	62	97	6	14	28.89	29.93		
10	OVC	031	10.00		35	28	32	76	13	27	29.04	30.10	10	BKN	100	9.00				64	62	63	93	3	09	28.98	30.01		
13	OVC	029	10.00		35	25	31	67	14	27	29.09	30.14	13	SCT	250	10.00				71	61	65	71	7	24	28.96	29.98		
16	OVC	038	10.00		35	24	31	64	13	26	29.15	30.21	16	OVC	250	10.00				70	62	65	76	5	24	28.96	29.99		
19	CLR	NC	10.00		32	23	29	69	6	25	29.21	30.29	19	OVC	250	10.00				65	61	63	87	3	17	29.03	30.06		
22	CLR	NC	10.00		29	23	27	78	8	22	29.25	30.33	22	BKN	250	9.00				63	61	62	93	0	00	29.09	30.12		

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN
DECEMBER 2015 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: 0744 DEC 25 SUNSET: 1728					01	OVC	060	0.50	FG	58	58	58	100	0	00	29.10	30.13
04	OVC	090	1.50	BR	58	58	58	100	0	00	29.07	30.10					
07	OVC	110	5.00	-RA BR	60	59	59	96	5	15	29.07	30.11					
10	OVC	100	10.00	-RA	64	63	63	96	0	00	29.07	30.10					
13	OVC	080	1.25	+RA BR	63	63	63	100	9	18	29.15	30.18					
16	OVC	110	10.00	-RA	63	61	62	93	6	13	29.10	30.14					
19	OVC	100	10.00	-RA	62	60	61	93	6	14	29.11	30.14					
22	OVC	100	9.00	-RA	63	60	61	90	15	17	29.15	30.18					
SUNRISE: 0744 DEC 26 SUNSET: 1729					01	OVC	100	10.00	-RA	66	57	61	73	13	18	29.11	30.14
04	SCT	200	10.00		62	57	59	84	7	28	29.12	30.15					
07	OVC	120	10.00		61	59	60	93	7	18	29.18	30.23					
10	BKN	110	10.00		63	61	62	93	7	01	29.21	30.26					
13	BKN	250	10.00		67	59	62	76	0	00	29.15	30.19					
16	BKN	250	10.00		74	61	66	64	0	00	29.11	30.14					
19	SCT	070	10.00		67	61	63	81	3	07	29.12	30.15					
22	FEW	070	10.00		63	60	61	90	5	06	29.09	30.12					
SUNRISE: 0745 DEC 27 SUNSET: 1729					01	BKN	065	10.00	BCFG	59	58	58	96	0	00	29.06	30.10
04	SCT	065	1.00	BCFG BR	58	56	57	93	5	31	29.05	30.08					
07	BKN	047	10.00	BCFG	61	59	60	93	3	27	29.04	30.07					
10	BKN	250	10.00		65	60	62	84	0	00	29.04	30.06					
13	OVC	250	10.00		76	61	67	60	17	22	28.98	30.00					
16	BKN	055	10.00	-RA	71	61	65	71	23	23	28.95	29.98					
19	OVC	100	10.00		67	61	63	81	5	24	28.98	30.01					
22	OVC	120	10.00		64	62	63	93	0	00	28.97	30.00					
SUNRISE: 0745 DEC 28 SUNSET: 1730					01	SCT	080	6.00		60	59	59	96	3	07	28.96	29.98
04	OVC	250	2.50	BCFG BR	56	55	55	97	3	05	28.92	29.95					
07	OVC	070	10.00		60	59	59	96	0	00	28.90	29.93					
10	BKN	180	10.00		63	61	62	93	7	06	28.88	29.91					
13	OVC	200	10.00		71	63	66	76	3	VR	28.79	29.80					
16	BKN	110	10.00		75	54	62	48	18	17	28.69	29.70					
19	OVC	085	8.00	RA	70	60	64	71	14	17	28.67	29.69					
22	OVC	250	10.00	-RA	66	63	64	90	6	20	28.72	29.74					
SUNRISE: 0745 DEC 29 SUNSET: 1731					01	SCT	150	10.00		67	59	62	76	20	24	28.76	29.77
04	FEW	002	10.00		61	53	57	75	17	24	28.82	29.84					
07	SCT	050	10.00		58	50	54	75	11	23	28.89	29.92					
10	SCT	250	10.00		61	52	56	72	17	25	28.97	30.00					
13	SCT	200	10.00		63	53	57	70	14	26	28.98	30.01					
16	BKN	250	10.00		65	52	58	63	13	25	29.00	30.03					
19	BKN	250	10.00		58	48	53	70	3	21	29.05	30.09					
22	BKN	250	10.00		55	47	51	74	0	00	29.06	30.10					
SUNRISE: 0745 DEC 30 SUNSET: 1731					01	OVC	250	10.00		51	48	49	89	0	00	29.09	30.13
04	OVC	110	10.00		51	48	49	89	0	00	29.10	30.14					
07	SCT	250	10.00		51	48	49	89	7	32	29.07	30.11					
10	OVC	100	10.00		53	51	52	93	3	20	29.13	30.17					
13	OVC	043	2.00	-RA BR	55	53	54	93	7	22	29.10	30.14					
16	OVC	070	10.00		56	54	55	93	9	27	29.08	30.12					
19	BKN	090	10.00		55	52	53	90	8	23	29.11	30.16					
22	BKN	090	10.00		53	51	52	93	5	28	29.11	30.15					

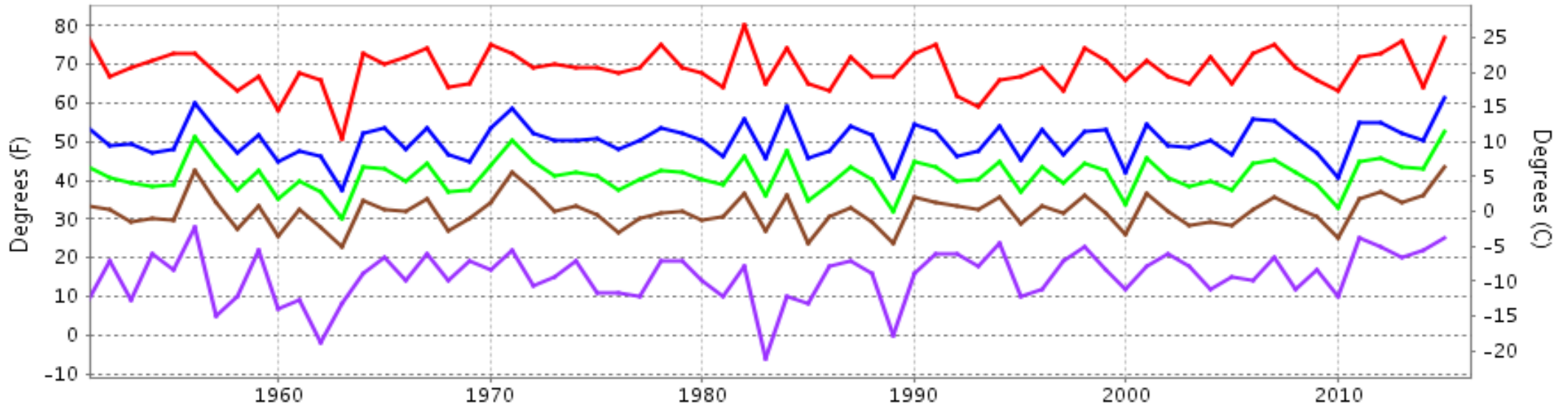
HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)						
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL					
SUNRISE: 0746 DEC 31 SUNSET: 1732					01	OVC	010	10.00		51	46	48	83	5	35	29.12	30.16
04	OVC	016	3.00	BR	49	47	48	93	0	00	29.15	30.19					
07	OVC	012	3.00	BR	49	48	48	97	0	00	29.15	30.20					
10	OVC	018	10.00		48	42	45	80	6	36	29.18	30.23					
13	OVC	016	10.00		48	41	45	77	8	36	29.16	30.21					
16	OVC	024	10.00		49	40	45	71	3	04	29.15	30.19					
19	OVC	027	10.00		44	35	40	71	10	35	29.21	30.26					
22	OVC	025	10.00		41	34	38	76	7	02	29.21	30.27					

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	50	45	47	84	29.05	30.10	8.68	5	3	25
02	49	45	47	85	29.03	30.09	8.31	6	3	25
03	48	44	46	86	29.04	30.08	7.40	5	3	25
04	48	44	46	88	29.04	30.08	6.87	4	4	25
05	47	44	46	88	29.04	30.08	7.80	4	3	25
06	47	44	46	89	29.05	30.09	7.61	4	4	25
07	48	45	46	90	29.05	30.09	7.96	5	3	25
08	47	44	45	89	29.07	30.11	6.98	4	2	24
09	49	45	47	87	29.08	30.12	7.42	6	2	25
10	51	46	49	84	29.09	30.13	7.96	6	2	25
11	53	47	50	79	29.09	30.13	8.24	7	2	25
12	56	47	51	74	29.07	30.13	8.81	7	4	26
13	57	47	52	70	29.05	30.09	8.98	7	6	26
14	59	47	53	65	29.04	30.08	9.50	9	6	26
15	59	47	53	65	29.02	30.07	9.48	8	5	26
16	59	47	53	64	29.02	30.07	9.74	8	5	26
17	58	46	52	67	29.02	30.08	9.74	7	3	26
18	56	46	51	71	29.03	30.08	9.74	6	2	25
19	55	46	50	73	29.03	30.08	9.87	5	1	24
20	53	45	49	76	29.05	30.11	9.58	5	2	25
21	52	45	48	79	29.05	30.11	9.58	5	1	23
22	51	45	48	80	29.05	30.11	9.58	5	2	23
23	50	45	48	81	29.05	30.10	9.37	6	1	23
24	50	45	47	82	29.05	30.10	9.24	6	2	24

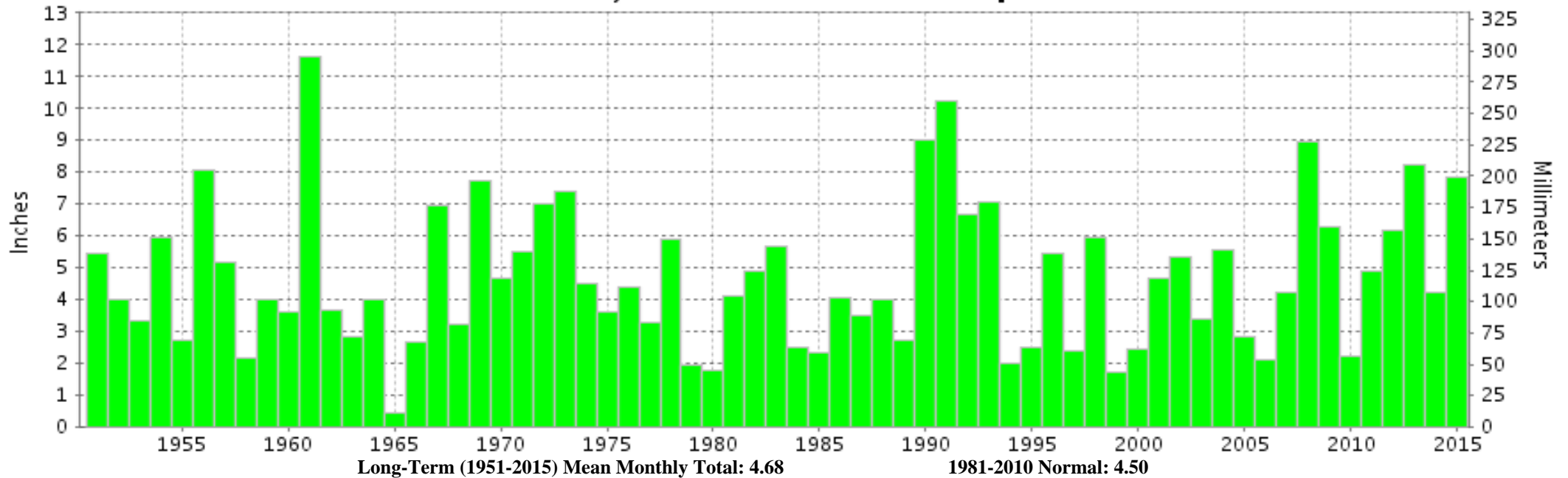
KNOXVILLE, TN DECEMBER Temperatures



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

Long-Term (1951-2015) Mean: 41.2
1981-2010 Normal: 40.8

KNOXVILLE, TN DECEMBER Precipitation



Long-Term (1951-2015) Mean Monthly Total: 4.68

1981-2010 Normal: 4.50



**DECEMBER 2015
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 black ink, appearing to read "Thomas R. Karl".

DIRECTOR

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or Email : ncei.orders@noaa.gov

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Attn: Customer Engagement Branch
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Asheville, NC 28801-5001