

2003

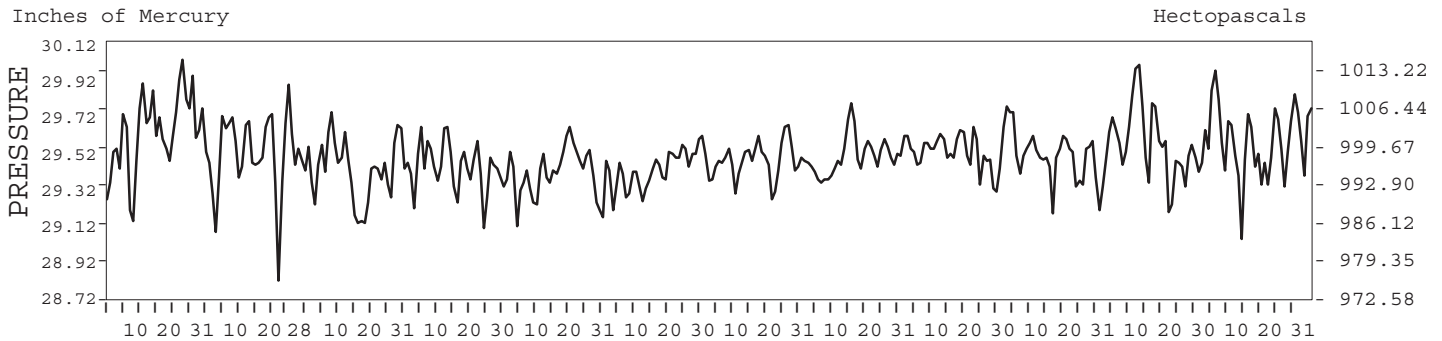
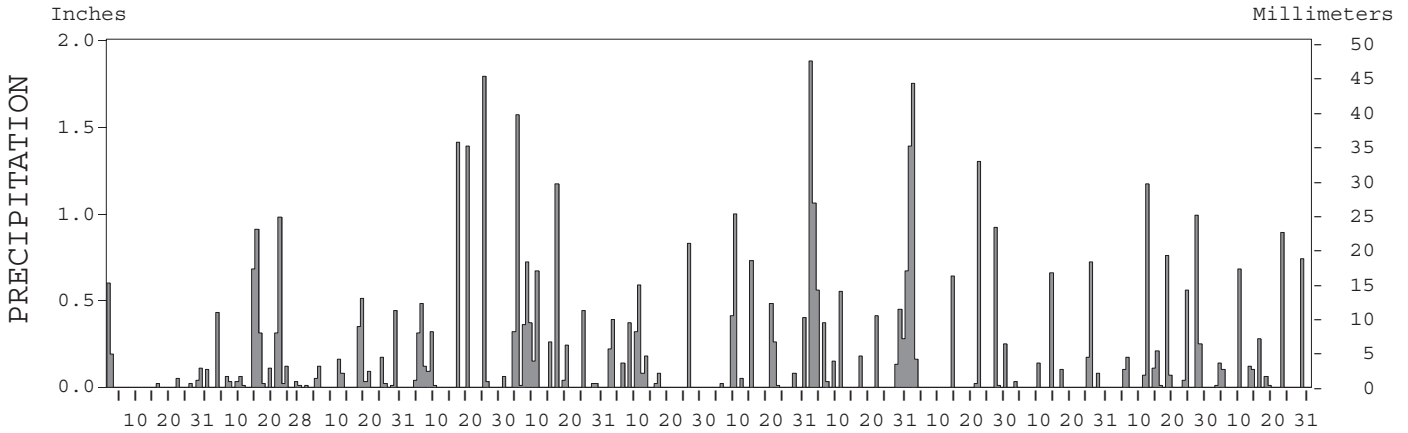
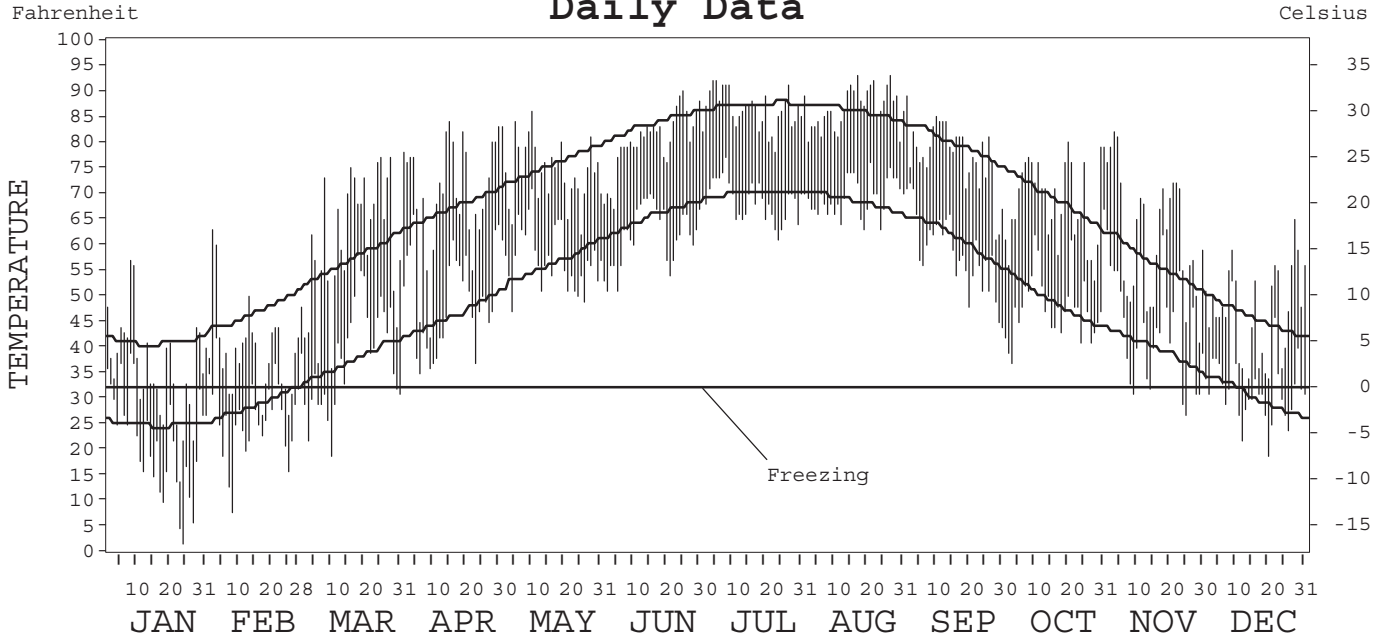
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2257

LOUISVILLE,
KENTUCKY (SDF)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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METEOROLOGICAL DATA FOR 2003

LOUISVILLE, KY (SDF)

LATITUDE: 38° 10' 38" N LONGITUDE: 85° 43' 47" W ELEVATION (FT): GRND: 481 BARO: 484 TIME ZONE: EASTERN (UTC + 5) WBAN: 93821

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	35.9	39.1	60.6	69.9	74.4	80.3	86.3	86.7	77.4	68.4	61.5	46.7	65.6	
	HIGHEST DAILY MAXIMUM	57	63	77	84	86	90	92	93	89	80	82	65	93	
	DATE OF OCCURRENCE	08	02	28+	15	10	25	05+	27+	01	20	03	28	AUG 27+	
	MEAN DAILY MINIMUM	21.8	26.1	38.4	49.1	57.5	61.9	68.6	69.3	58.6	48.5	43.8	32.0	48.0	
	LOWEST DAILY MINIMUM	2	8	19	35	47	51	61	63	44	37	27	19	2	
	DATE OF OCCURRENCE	24	08	10	06	04	05+	24	24+	30	03	25	20	JAN 24	
	AVERAGE DRY BULB	28.9	32.6	49.5	59.5	66.0	71.1	77.5	78.0	68.0	58.5	52.7	39.4	56.8	
	MEAN WET BULB	26.0	30.5	44.1	52.4	60.9	64.7	70.8	71.7	62.2	53.1	47.5	35.0	51.6	
	MEAN DEW POINT	18.6	25.8	37.2	45.9	57.4	60.6	67.2	68.8	58.4	48.4	41.5	28.4	46.5	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	1	7	9	0	0	0	0	0	17
	MAXIMUM ≤ 32°	10	7	0	0	0	0	0	0	0	0	0	1	18	
MINIMUM ≤ 32°	26	23	11	0	0	0	0	0	0	0	6	19	85		
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	1114	898	474	205	48	14	0	0	37	214	380	788	4172	
	COOLING DEGREE DAYS	0	0	0	46	87	203	398	411	136	17	17	0	1315	
RH	MEAN (PERCENT)	66	77	66	65	76	72	72	76	74	72	68	68	71	
	HOUR 01 LST	68	79	75	72	83	83	82	83	85	83	71	69	78	
	HOUR 07 LST	72	81	80	80	88	87	87	91	92	89	79	73	83	
	HOUR 13 LST	61	73	55	55	64	59	62	63	59	57	60	65	61	
	HOUR 19 LST	64	75	55	54	68	62	61	67	64	63	62	66	63	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	1	0	1	2	2	0	0	0	2	3	0	11	
	THUNDERSTORMS	0	1	2	5	10	6	8	12	3	2	1	1	51	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
SATELLITE (> 12,000 FT.)															
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.64	29.52	29.44	29.45	29.41	29.44	29.48	29.51	29.54	29.50	29.58	29.59	29.51	
	MEAN SEA-LEVEL PRESS. (IN.)	30.18	30.06	29.96	29.97	29.92	29.95	29.99	30.02	30.05	30.02	30.10	30.12	30.03	
WINDS	RESULTANT SPEED (MPH)	4.5	2.6	1.5	1.6	1.9	0.3	1.4	1.2	0.8	1.7	3.4	3.5	1.7	
	RES. DIR. (TENS OF DEGS.)	28	30	24	34	26	32	31	28	25	25	22	23	27	
	MEAN SPEED (MPH)	9.3	8.4	7.9	8.2	7.6	6.5	6.7	5.8	6.0	6.3	9.0	8.8	7.5	
	PREVAIL. DIR. (TENS OF DEGS.)	28	27	13	36	01	13	22	22	28	20	18	29	22	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	25	32	29	53	38	30	30	38	33	29	32	31	53	
	DIR. (TENS OF DEGS.)	28	28	23	27	28	27	19	28	29	29	29	24	27	
	DATE OF OCCURRENCE	10+	04+	08	20	05	08	06	02	01	14	12	10	APR 20	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	29	41	35	67	46	36	36	45	40	36	38	35	67	
DIR. (TENS OF DEGS.)	25	27	22	28	25	27	19	27	29	28	29	29	28		
DATE OF OCCURRENCE	08	03	08	20	01	08	06	02	01	14	12	30	APR 20		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.13	4.12	2.04	5.99	6.42	3.22	3.44	6.72	6.44	1.90	4.51	3.13	49.06	
	GREATEST 24-HOUR (IN.)	1.76	1.00	0.86	1.80	1.89	0.91	1.16	2.73	3.09	0.89	1.24	0.89	3.09	
	DATE OF OCCURRENCE	31-01	21-22	18-19	25-26	04-05	10-11	09-10	02-03	01-02	25-26	11-12	23	SEP 01-02	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	8	17	13	11	16	11	10	13	9	7	13	11	139	
PRECIPITATION ≥ 0.10	4	8	6	7	11	8	6	12	7	5	9	8	91		
PRECIPITATION ≥ 1.00	0	0	0	3	2	0	1	2	3	0	1	0	12		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	3.5	6.3	T	T	0.0	0.0	0.0	T	0.0	0.0	T	3.6	13.4	
	GREATEST 24-HOUR (IN.)	1.6	1.5	T	T	0.0	0.0	0.0	T	0.0	0.0	T	2.2	2.2	
	DATE OF OCCURRENCE	22	06	03+	20	0	0	0	11	0	0	29+	13	DEC 13	
	MAXIMUM SNOW DEPTH (IN.)	2	2	0	0	0	0	0	0	0	0	T	3	3	
	DATE OF OCCURRENCE	23	17+									29+	14	DEC 14	
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	1	3	0	0	0	0	0	0	0	0	0	2	6		

NORMALS, MEANS, AND EXTREMES

LOUISVILLE, KY (SDF)

LATITUDE: 38° 10' 38" N LONGITUDE: 85° 43' 47" W ELEVATION (FT): GRND: 481 BARO: 484 TIME ZONE: EASTERN (UTC + 5) WBAN: 93821

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	41.0	46.6	56.8	66.8	75.4	83.3	87.0	85.8	79.4	68.4	55.9	45.4	66.0
	MEAN DAILY MAXIMUM	53	41.5	46.3	55.8	67.7	76.4	84.4	88.1	87.1	80.5	69.2	56.1	45.4	66.5
	HIGHEST DAILY MAXIMUM	56	77	77	86	91	95	102	106	101	104	92	84	76	106
	YEAR OF OCCURRENCE		1950	2000	1981	1960	1959	1952	1999	2002	1954	1959	1958	1982	JUL 1999
	MEAN OF EXTREME MAXS.	56	64.2	67.8	77.4	84.5	88.6	93.7	94.1	93.8	90.7	84.2	75.1	66.0	81.7
	NORMAL DAILY MINIMUM	30	24.9	28.5	37.1	46.0	56.1	65.1	69.8	68.2	60.9	48.5	39.3	29.9	47.9
	MEAN DAILY MINIMUM	53	24.8	28.2	35.9	46.0	55.2	64.1	67.0	65.5	58.0	46.9	37.5	29.3	46.5
	LOWEST DAILY MINIMUM	56	-22	-19	-1	22	31	42	0	0	0	23	-1	-15	-22
	YEAR OF OCCURRENCE		1994	1951	1960	1982	1966	1966	1996	1996	1996	1952	1950	1989	JAN 1994
	MEAN OF EXTREME MINS.	56	3.8	8.7	19.1	30.3	40.2	51.3	56.6	54.9	43.0	31.6	21.0	10.0	30.9
	NORMAL DRY BULB	30	33.0	37.6	46.9	56.4	65.8	74.2	78.4	77.0	70.1	58.5	47.6	37.6	56.9
	MEAN DRY BULB	56	33.4	37.3	45.8	56.8	66.0	74.2	78.3	76.8	69.8	58.2	46.7	37.3	56.7
	MEAN WET BULB	50	29.9	33.3	40.4	49.7	58.8	66.9	70.3	69.1	62.8	52.1	41.9	33.8	50.8
	MEAN DEW POINT	50	23.8	27.1	33.3	42.7	53.8	62.8	66.5	65.3	58.5	47.1	36.2	28.3	45.4
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.0	*	0.6	6.5	12.3	10.4	3.4	0.0	0.0	0.0	33.2
	MAXIMUM ≤ 32°	30	8.2	4.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.2	17.7
MINIMUM ≤ 32°	30	23.1	17.8	11.1	2.1	*	0.0	0.0	0.0	0.0	1.0	8.7	18.8	82.6	
MINIMUM ≤ 0°	30	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4	
H/C	NORMAL HEATING DEG. DAYS	30	992	779	569	280	84	6	0	1	36	240	527	838	4352
	NORMAL COOLING DEG. DAYS	30	0	0	6	24	109	287	421	374	189	29	3	1	1443
RH	NORMAL (PERCENT)	30	71	68	64	62	68	69	70	72	72	70	70	73	69
	HOUR 01 LST	30	74	73	69	69	77	79	80	82	81	79	74	75	76
	HOUR 07 LST	30	78	77	76	76	82	83	84	87	88	85	79	79	81
	HOUR 13 LST	30	65	61	56	52	55	57	58	58	57	56	60	66	58
	HOUR 19 LST	30	68	63	56	53	57	59	60	61	62	62	65	69	61
S	PERCENT POSSIBLE SUNSHINE	48	41	49	51	56	61	67	68	67	65	61	46	40	56
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	56	0.9	0.9	0.5	0.2	0.3	0.3	0.5	0.9	1.0	1.5	0.7	0.8	8.5
	THUNDERSTORMS	56	0.9	1.1	3.2	4.7	7.0	7.6	8.3	7.0	3.4	1.7	1.5	0.6	47.0
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1								3.2					
	MIDNIGHT-MIDNIGHT (OKTAS)	1								3.2					
	MEAN NO. DAYS WITH:														
CLEAR	1					1.0		3.0	4.0	3.0	8.0		1.0		
PARTLY CLOUDY	1									1.0					
CLOUDY	1	1.0	4.0	6.0		3.0	1.0			3.0	4.0		2.0		
PR	MEAN STATION PRESSURE (IN)	29	29.61	29.57	29.49	29.47	29.46	29.46	29.49	29.52	29.54	29.57	29.57	29.59	29.53
	MEAN SEA-LEVEL PRES. (IN)	49	30.14	30.10	30.03	29.99	29.98	29.98	30.00	30.02	30.05	30.09	30.09	30.13	30.05
WINDS	MEAN SPEED (MPH)	51	9.6	9.6	10.1	9.8	8.0	7.4	6.9	6.4	6.8	7.2	9.0	9.1	8.3
	PREVAIL. DIR (TENS OF DEGS)	34	28	30	31	19	18	18	18	01	01	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	9	38	44	43	56	40	54	39	47	38	40	44	40	56
	DIR. (TENS OF DEGS)		21	16	19	22	23	04	30	21	27	29	23	27	22
	YEAR OF OCCURRENCE		1999	2002	2002	1999	1996	1998	2002	1999	2001	2001	1998	2000	APR 1999
	MAXIMUM 5-SECOND:														
SPEED (MPH)	9	43	52	49	67	53	60	47	56	44	46	49	49	67	
DIR. (TENS OF DEGS)		26	16	19	28	22	04	30	22	30	31	22	27	28	
YEAR OF OCCURRENCE		2000	2002	2002	2003	1996	1998	2002	1999	2002	2001	1998	2000	APR 2003	
PRECIPITATION	NORMAL (IN)	30	3.28	3.25	4.41	3.91	4.88	3.76	4.30	3.41	3.05	2.79	3.81	3.69	44.54
	MAXIMUM MONTHLY (IN)	56	11.38	9.02	14.91	11.10	11.57	10.11	10.05	8.79	10.49	6.47	9.12	8.86	14.91
	YEAR OF OCCURRENCE		1950	1989	1964	1970	1990	1960	1979	1974	1979	1983	1957	1990	MAR 1964
	MINIMUM MONTHLY (IN)	56	0.45	0.76	1.02	0.76	1.37	0.49	0.34	0.23	0.01	0.39	0.72	0.65	0.01
	YEAR OF OCCURRENCE		1981	1978	1966	1976	1977	1984	1999	1953	1995	1987	1976	1976	SEP 1995
	MAXIMUM IN 24 HOURS (IN)	56	3.99	3.66	7.22	4.85	4.60	5.14	5.46	3.13	5.28	3.25	3.58	2.79	7.22
	YEAR OF OCCURRENCE		2000	1990	1997	1970	1961	1960	1979	1992	2002	1977	1948	1978	MAR 1997
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	11.0	10.5	12.9	11.7	12.2	10.4	9.9	8.3	8.8	7.5	10.6	11.8	125.6	
PRECIPITATION ≥ 1.00	30	0.7	0.7	0.8	0.8	1.3	0.8	1.2	0.8	0.7	0.7	1.0	1.0	10.5	
SNOWFALL	NORMAL (IN)	30	5.1	4.5	2.1	0.2	0.*	0.0	0.0	0.0	0.1	0.6	2.0	14.6	
	MAXIMUM MONTHLY (IN)	56	28.4	19.3	22.9	1.6	T	T	T	T	0.0	2.4	13.2	9.7	28.4
	YEAR OF OCCURRENCE		1978	1998	1960	1973	1989	1993	1994	1999	1993	1966	2000		JAN 1978
	MAXIMUM IN 24 HOURS (IN)	56	15.9	11.0	12.1	1.6	T	T	T	T	0.0	2.4	13.0	5.0	15.9
	YEAR OF OCCURRENCE		1994	1966	1968	1973	1989	1993	1994	1999	1993	1966	1961		JAN 1994
	MAXIMUM SNOW DEPTH (IN)	52	19	11	11	2	0	0	0	0	0	T	8	5	19
	YEAR OF OCCURRENCE		1978	1966	1968	1987						1989	1966	1984	JAN 1978
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	1.5	1.1	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.7	4.3	

PRECIPITATION (inches) 2003 LOUISVILLE, KY (SDF)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	4.38	1.64	5.41	2.74	3.86	2.58	2.04	8.79	3.52	2.09	3.03	2.85	42.93
1975	4.87	4.53	9.65	6.47	4.50	3.15	1.91	3.89	2.64	6.12	3.69	4.89	56.31
1976	3.85	3.13	2.87	0.76	5.09	4.71	2.10	3.18	3.10	3.99	0.72	0.65	34.15
1977	2.33	1.45	4.69	3.40	1.37	7.59	3.29	6.12	3.67	4.76	6.11	4.32	49.10
1978	5.90	0.76	3.76	3.33	4.76	2.67	3.77	5.50	0.96	2.26	5.14	7.64	46.45
1979	3.81	4.49	2.71	7.32	3.59	3.03	10.05	2.37	10.49	2.27	5.85	3.82	59.80
1980	1.71	1.09	4.80	2.63	4.58	3.70	5.41	3.76	3.17	3.37	2.42	1.25	37.89
1981	0.45	3.23	1.54	4.44	4.63	3.23	3.98	3.21	3.22	1.60	2.40	2.02	33.95
1982	5.28	1.55	5.89	3.05	2.96	3.86	3.72	3.74	3.46	1.26	5.50	5.11	45.38
1983	1.63	1.52	2.16	7.10	10.58	4.42	0.99	2.39	1.13	6.47	5.03	3.96	47.38
1984	0.92	1.68	4.41	5.53	6.78	0.49	6.94	5.08	3.70	2.12	5.87	5.86	49.38
1985	2.20	2.08	4.43	1.69	3.93	4.37	3.45	4.49	1.48	4.24	4.43	0.96	37.75
1986	0.91	3.90	2.69	1.04	4.28	2.32	7.04	2.19	2.75	3.08	4.62	2.69	37.51
1987	0.81	4.42	3.05	2.35	1.61	3.58	5.31	2.66	1.15	0.39	2.62	4.70	32.65
1988	4.00	3.58	2.97	3.52	2.68	0.87	4.68	3.00	1.48	1.54	5.76	3.45	37.53
1989	3.68	9.02	5.50	4.93	4.39	5.26	6.90	2.20	2.42	2.65	2.57	1.45	50.97
1990	3.90	6.72	2.78	3.46	11.57	6.13	1.96	3.21	2.57	3.97	2.34	8.86	57.47
1991	3.29	3.72	4.79	2.61	4.02	1.23	2.99	3.35	2.74	2.31	1.87	5.23	38.15
1992	1.97	1.74	5.88	2.66	3.51	3.04	6.51	4.71	3.50	0.96	4.71	1.60	40.79
1993	3.50	4.20	5.20	3.57	2.80	4.05	4.58	5.74	3.90	4.03	3.26	2.56	47.39
1994	4.08	2.96	3.90	5.32	2.12	1.85	2.50	1.58	2.90	1.96	3.57	3.24	35.98
1995	3.20	2.00	2.17	2.64	9.48	2.84	3.39	4.07	0.01	5.42	2.39	3.28	40.89
1996	4.44	2.03	4.99	5.65	9.18	3.84	1.31	5.66	2.59	3.35	4.56		
1997	3.35	3.39	12.58	2.01	6.01	8.11	1.74	3.70	1.28	1.41	3.63	2.50	49.71
1998	2.88	2.88	4.07	6.69	4.53	5.73	6.89	2.92	1.00	2.76	2.74	3.24	46.33
1999	7.23	2.20	3.47	3.04	3.12	6.36	0.34	0.97	1.74	2.46	1.61	4.81	37.35
2000	6.22	5.80	3.56	2.95	2.91	3.88	3.50	2.87	5.36	0.89	2.97	4.31	45.22
2001	1.46	3.42	2.27	1.04	5.19	2.61	4.47	3.42	4.08	6.39	5.16	4.48	43.99
2002	4.26	1.47	7.02	6.02	6.74	4.10	1.21	0.68	7.81	4.65	2.40	6.60	52.96
2003	1.13	4.12	2.04	5.99	6.42	3.22	3.44	6.72	6.44	1.90	4.51	3.13	49.06
POR= 131 YRS	3.77	3.38	4.53	3.93	4.13	3.87	3.78	3.30	2.88	2.65	3.52	3.64	43.38

WBAN : 93821

AVERAGE TEMPERATURE (°F) 2003 LOUISVILLE, KY (SDF)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	39.8	39.3	49.8	57.2	65.1	68.7	75.9	75.0	63.2	54.9	47.0	39.1	56.3
1975	38.1	40.2	43.3	54.4	69.0	75.4	77.7	79.3	66.2	59.4	50.6	38.9	57.7
1976	31.3	45.4	52.4	57.5	62.9	72.9	76.8	74.2	66.8	52.5	39.5	33.1	55.4
1977	18.6	36.9	51.7	60.3	71.2	73.9	80.2	77.5	72.5	55.5	49.6	34.6	56.9
1978	22.9	23.8	41.7	58.0	63.8	75.7	78.5	77.1	73.7	55.5	50.0	40.0	55.1
1979	24.6	28.0	48.3	55.0	64.2	73.9	75.3	76.1	69.4	58.2	46.9	39.2	54.9
1980	33.5	29.6	41.8	53.6	66.8	73.4	81.5	81.0	73.5	55.8	46.3	38.3	56.3
1981	30.4	38.8	45.7	62.4	62.9	76.2	78.8	76.1	67.7	56.5	47.4	33.8	56.4
1982	28.6	34.9	47.1	51.3	70.3	69.3	78.0	73.5	66.8	59.0	48.7	44.9	56.0
1983	34.7	37.5	46.7	51.7	62.1	73.4	81.1	81.7	71.0	59.1	47.8	28.4	56.3
1984	28.9	41.5	40.4	55.0	62.6	77.7	75.5	76.0	67.2	63.9	44.0	45.9	56.6
1985	25.4	32.8	50.2	60.3	66.5	72.1	77.2	74.8	69.2	61.4	53.7	30.4	56.2
1986	34.5	39.9	48.3	58.5	67.0	75.7	80.3	74.3	73.1	59.5	45.9	36.7	57.8
1987	33.7	39.5	47.9	55.4	71.5	76.2	78.9	78.2	71.2	52.6	50.8	40.2	58.0
1988	31.0	34.7	46.1	57.0	67.1	75.6	80.3	80.0	70.1	52.3	47.8	38.0	56.7
1989	41.6	34.0	48.4	56.7	62.6	73.5	78.1	76.6	69.4	58.4	46.7	25.3	55.9
1990	43.1	44.3	51.2	55.5	64.2	75.1	78.5	77.5	71.8	58.7	52.0	40.8	59.4
1991	34.1	40.5	49.4	60.3	73.1	78.3	81.3	79.2	71.7	61.5	45.0	41.4	59.7
1992	37.1	43.7	47.9	58.2	63.9	72.1	78.5	73.2	69.1	58.1	47.9	38.6	57.4
1993	38.5	34.0	44.0	54.9	66.8	74.5	82.0	79.0	68.0	55.9	45.8	36.5	56.7
1994	26.8	38.0	45.4	59.9	63.0	77.5	79.0	76.1	68.7	59.4	52.2	42.4	57.4
1995	35.6	36.2	49.5	57.7	65.6	74.9	79.7	82.2	68.7	59.2	41.7	35.2	57.2
1996	32.4	37.7	41.0	53.6	68.5	74.6	74.6	74.6	58.9	58.9	41.8	40.9	
1997	32.3	42.2	49.5	52.6	61.4	72.2	78.7	75.4	70.3	58.8	43.9	37.2	56.2
1998	42.4	43.6	48.1	56.2	70.3	75.0	78.3	78.8	76.2	62.6	51.3	42.0	60.4
1999	36.8	42.6	43.0	59.3	67.6	76.3	83.2	78.5	72.1	58.9	53.5	39.1	59.2
2000	34.4	45.1	51.4	55.8	69.2	75.0	76.8	77.1	68.0	61.4	44.6	26.2	57.1
2001	33.0	41.1	43.0	62.3	68.6	73.8	78.8	79.1	68.8	58.9	53.5	42.6	58.6
2002	40.8	40.6	46.1	60.6	64.7	77.9	81.4	80.9	75.2	58.3	45.3	38.2	59.2
2003	28.9	32.6	49.5	59.5	66.0	71.1	77.5	78.0	68.0	58.5	52.7	39.4	56.8
POR= 131 YRS	34.3	37.0	45.8	56.5	66.0	74.6	77.8	76.2	69.8	58.7	46.9	37.1	56.7

HEATING DEGREE DAYS (base 65°F) 2003 LOUISVILLE, KY (SDF)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0	0	122	314	543	794	830	688	665	333	22	0	4311
1975-76	0	0	73	205	431	801	1040	562	405	266	111	1	3895
1976-77	0	0	29	393	757	982	1435	780	421	183	36	7	5023
1977-78	0	0	6	295	472	935	1294	1145	720	221	142	1	5231
1978-79	0	0	4	293	442	765	1246	1030	514	301	94	5	4694
1979-80	0	0	19	244	534	792	969	1021	713	342	68	8	4710
1980-81	0	0	12	309	555	821	1065	728	595	142	122	0	4349
1981-82	0	0	61	268	523	960	1124	837	549	408	13	3	4746
1982-83	0	1	56	246	495	624	933	763	571	399	121	5	4214
1983-84	0	0	54	196	509	1128	1115	673	757	315	141	0	4888
1984-85	0	0	73	84	623	584	1222	896	458	180	52	16	4188
1985-86	0	0	53	160	347	1067	941	696	516	224	69	0	4073
1986-87	0	12	5	210	570	869	962	706	526	294	21	0	4175
1987-88	0	0	9	377	423	762	1048	872	580	244	38	7	4360
1988-89	0	0	13	398	510	833	720	860	513	291	156	4	4298
1989-90	0	0	49	230	539	1222	672	574	445	320	82	13	4146
1990-91	0	0	34	229	387	745	949	677	482	167	27	0	3697
1991-92	0	0	52	168	590	725	855	610	523	244	124	8	3899
1992-93	0	0	40	219	505	813	819	859	644	299	44	18	4260
1993-94	0	0	48	289	572	875	1180	752	602	189	122	3	4632
1994-95	0	0	20	186	384	696	904	800	471	236	72	0	3769
1995-96	0	0	48	192	693	915	1002	782	738	353	66	2	4791
1996-97	0	0	202	689	741	1005	634	472	366	140	12	12	3901
1997-98	0	0	9	263	621	854	696	594	561	261	27	15	3596
1998-99	0	0	0	119	405	711	866	620	676	183	16	0	3590
1999-00	0	0	20	197	346	796	942	575	416	270	26	2	4572
2000-01	0	0	60	174	608	1198	980	664	674	175	31	8	4572
2001-02	0	0	52	224	339	689	743	677	579	204	114	0	3621
2002-03	0	0	1	252	585	821	1114	898	474	205	48	14	4412
2003-	0	0	37	214	380	788							

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COOLING DEGREE DAYS (base 65°F) 2003 LOUISVILLE, KY (SDF)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1974	0	0	22	31	109	136	345	319	75	8	10	0	1055
1975	0	0	0	24	152	320	402	451	116	36	5	0	1506
1976	0	0	21	47	51	243	372	294	92	10	0	0	1130
1977	0	0	14	50	234	281	479	396	238	5	20	0	1717
1978	0	0	0	20	110	323	425	383	270	6	2	0	1539
1979	0	0	5	10	73	279	326	350	154	39	0	0	1236
1980	0	0	0	8	134	266	519	504	276	31	1	0	1739
1981	0	0	5	68	63	343	435	348	150	10	0	0	1422
1982	0	0	1	2	183	139	408	274	118	68	13	8	1214
1983	0	0	7	8	39	264	504	524	240	19	0	0	1605
1984	0	0	0	20	69	386	333	349	145	56	0	1	1359
1985	0	2	8	48	106	233	387	311	185	55	14	0	1349
1986	0	0	5	37	138	330	481	306	255	46	0	0	1598
1987	0	0	0	14	232	342	439	416	203	1	4	0	1651
1988	0	0	4	10	111	333	481	472	173	10	0	0	1594
1989	0	0	6	48	88	264	412	364	188	30	0	0	1400
1990	0	0	22	44	65	323	427	392	244	42	7	0	1566
1991	0	0	8	31	286	406	514	445	262	68	0	0	2020
1992	0	0	2	48	100	229	424	262	169	14	0	0	1248
1993	0	0	0	4	106	310	534	442	146	12	3	0	1557
1994	0	0	0	42	63	384	443	349	138	21	4	0	1444
1995	0	0	0	29	100	304	466	544	165	21	0	0	1629
1996	0	0	0	18	183	298	298	19	0	0	0	0	1292
1997	0	0	0	2	35	237	435	330	174	79	0	0	1825
1998	0	0	44	4	200	321	416	436	345	52	0	7	1722
1999	0	0	0	18	103	345	573	427	238	12	6	0	1463
2000	0	5	2	0	162	308	375	385	156	68	2	0	1626
2001	0	0	0	103	150	280	433	445	174	40	1	0	1956
2002	0	0	0	77	110	391	514	496	314	51	3	0	1315
2003	0	0	0	46	87	203	398	411	136	17	17	0	

SNOWFALL (inches) 2003 LOUISVILLE, KY (SDF)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1974-75	0.0	0.0	0.0	0.0	1.0	1.2	3.0	1.3	10.0	T	0.0	0.0	16.5
1975-76	0.0	0.0	0.0	0.0	0.1	0.7	2.5	0.1	0.7	0.0	0.0	0.0	4.1
1976-77	0.0	0.0	0.0	0.0	1.6	1.1	19.6	0.8	0.1	0.8	0.0	0.0	24.0
1977-78	0.0	0.0	0.0	0.0	4.8	2.2	28.4	5.3	9.4	T	0.0	0.0	50.1
1978-79	0.0	0.0	0.0	0.0	0.0	T	8.5	10.9	0.9	T	0.0	0.0	20.3
1979-80	0.0	0.0	0.0	0.0	0.1	T	10.7	3.6	3.9	T	0.0	0.0	18.3
1980-81	0.0	0.0	0.0	T	T	T	2.5	0.3	0.1	0.0	0.0	0.0	2.9
1981-82	0.0	0.0	0.0	0.0	0.1	3.6	2.7	2.9	0.3	1.4	0.0	0.0	11.0
1982-83	0.0	0.0	0.0	0.0	T	0.0	0.6	4.5	0.1	T	0.0	0.0	5.2
1983-84	0.0	0.0	0.0	0.0	0.0	0.6	3.1	8.8	1.0	0.0	0.0	0.0	13.5
1984-85	0.0	0.0	0.0	0.0	T	4.8	7.4	6.7	T	T	0.0	0.0	18.9
1985-86	0.0	0.0	0.0	0.0	0.0	1.6	1.1	8.8	0.1	0.0	0.0	0.0	11.6
1986-87	0.0	0.0	0.0	0.0	T	T	2.2	6.7	9.3	T	0.0	0.0	18.2
1987-88	0.0	0.0	0.0	0.0	T	T	3.0	5.0	0.5	0.0	0.0	0.0	8.5
1988-89	0.0	0.0	0.0	0.0	T	0.3	T	0.6	T	0.0	T	0.0	0.9
1989-90	0.0	0.0	0.0	1.4	T	6.5	1.9	0.8	4.1	T	0.0	0.0	14.7
1990-91	0.0	0.0	0.0	0.0	0.0	4.1	0.3	1.5	0.2	0.0	0.0	0.0	6.1
1991-92	0.0	0.0	0.0	0.0	0.5	0.1	0.9	0.1	0.9	0.7	0.0	0.0	3.2
1992-93	0.0	0.0	0.0	0.0	0.9	1.0	T	15.9	1.1	T	0.0	T	18.9
1993-94	0.0	0.0	0.0	2.4	T	3.6	17.7	1.5	4.7	T	0.0	0.0	29.9
1994-95	T	0.0	0.0	0.0	0.0	T	0.1	2.8	1.1	0.0	0.0	0.0	4.0
1995-96	0.0	0.0	0.0	0.0	T	1.1	13.8	1.3	8.0	T	0.0	0.0	
1996-97				0.0	T	0.4	3.0	1.9	T	T	0.0	0.0	
1997-98	0.0	0.0	0.0	0.0	0.4	1.9	T	19.3	1.2	T	T	0.0	22.8
1998-99	0.0	0.0	0.0	0.0	0.0	2.8	5.5	3.7	1.3	0.0	0.0	T	13.3
1999-00	0.0	T	0.0	0.0	0.0	4.9	6.7	0.1	0.3	T	0.0	0.0	12.0
2000-01	0.0	0.0	0.0	0.0	T	9.7	4.8	0.3	T	T	0.0	0.0	14.8
2001-02	0.0	0.0	0.0	T	0.0	0.6	8.1	0.6	0.4	T	0.0	0.0	9.7
2002-03	0.0	0.0	0.0	0.0	0.4	6.1	3.5	6.3	T	T	0.0	0.0	16.3
2003-	0.0	T	0.0	0.0	T	3.6							
POR= 56 YRS	T	0.0	0.0	0.1	T	2.4	5.4	4.3	2.9	T	T	T	15.1

WBAN : 93821

REFERENCE NOTES :

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1971 - 2000). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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2003
LOUISVILLE,
KENTUCKY (SDF)

Louisville is located on the south bank of the Ohio River, 604 miles below Pittsburgh, Pennsylvania, and 377 miles above the mouth of the river at Cairo, Illinois. The city is divided by Beargrass Creek and its south fork into two portions with entirely different types of topography. The eastern portion is rolling, containing several creeks, and consists of plateaus and rolling hillsides. The highest elevation in this area is 565 feet. The western portion is mostly flat with an average elevation about 100 feet lower than the eastern area. Much of the western section lies in the flood plain of the Ohio River. Nearly all of the industries in the city are located in the western portion, while the eastern portion is almost entirely residential. A range of low hills about five miles northwest of Louisville, on the Indiana side of the Ohio River, present a partial barrier to arctic blasts in the winter months. During colder months, snow is frequently observed on the summits of these hills when there is no snow in the city of Louisville or in riverside communities on the Indiana side of the Ohio River.

The climate of Louisville, while continental in type, is of a variable nature because of its position with respect to the paths of high and low pressure systems and the occasional influx of warm moist air from the Gulf of Mexico. In winter and summer there are occasional cold and hot spells of short duration. As a whole, winters are moderately cold and summers are quite warm. Temperatures of 100 degrees or more in summer and zero degrees or less in winter are rare.

Thunderstorms with high rainfall intensities are common during the spring and summer months. The precipitation in Louisville is nonseasonal and varies from year to year. The fall months are usually the driest. Generally, March has the most rainfall and October the least. Snowfall usually occurs from November through March. As with rainfall, amounts vary from year to year and month to month. Some snow has also been recorded in the months of October and April. Mean total amounts for the months of January, February, and March are about the same with January showing a slight edge in total amount. Relative humidity remains rather high throughout the summer months. Cloud cover is about equally distributed throughout the year with the winter months showing somewhat of an increase in amount. The percentage of possible sunshine at Louisville varies from month to month with the greatest amount during the summer months as a result of the decreasing sky cover during that season. Heavy fog is unusual and there is only an average of 10 days during the year with heavy fog and these occur generally in the months of September through March.

The average date for the last occurrence in the spring of temperatures as low as 32 degrees is mid-April, and the first occurrence in the fall is generally in late October.

The prevailing direction of the wind has a southerly component and the velocity averages under 10 mph. The strongest winds are usually associated with thunderstorms.

STATION LOCATION

LOUISVILLE, KENTUCKY

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
						GROUND											
						SEA LEVEL	GROUND	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TRAINING GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE	HYGROMETER		
*NOTE:																	
<u>AIRPORT</u>																	
NWS/FAA Building Standiford Field	7/29/81	08/01/94	0.88 mi. SE	38°11'	85°44'	477	h22	5	5 k5	h20 i7 k15	1	1 k1	1 k1	h6 j4		h. Not moved 7/29/81. i. Moved to new site 8/2/81. j. Effective 10/8/81. k. Moved 8/1/94.	
Standiford Field	08/01/94	Present	NA	38°11'	85°44'	1481									S	ASOS commissioned 08/01/94. l. Ground elevation.	

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* NOTES: For earlier station history see previous editions.