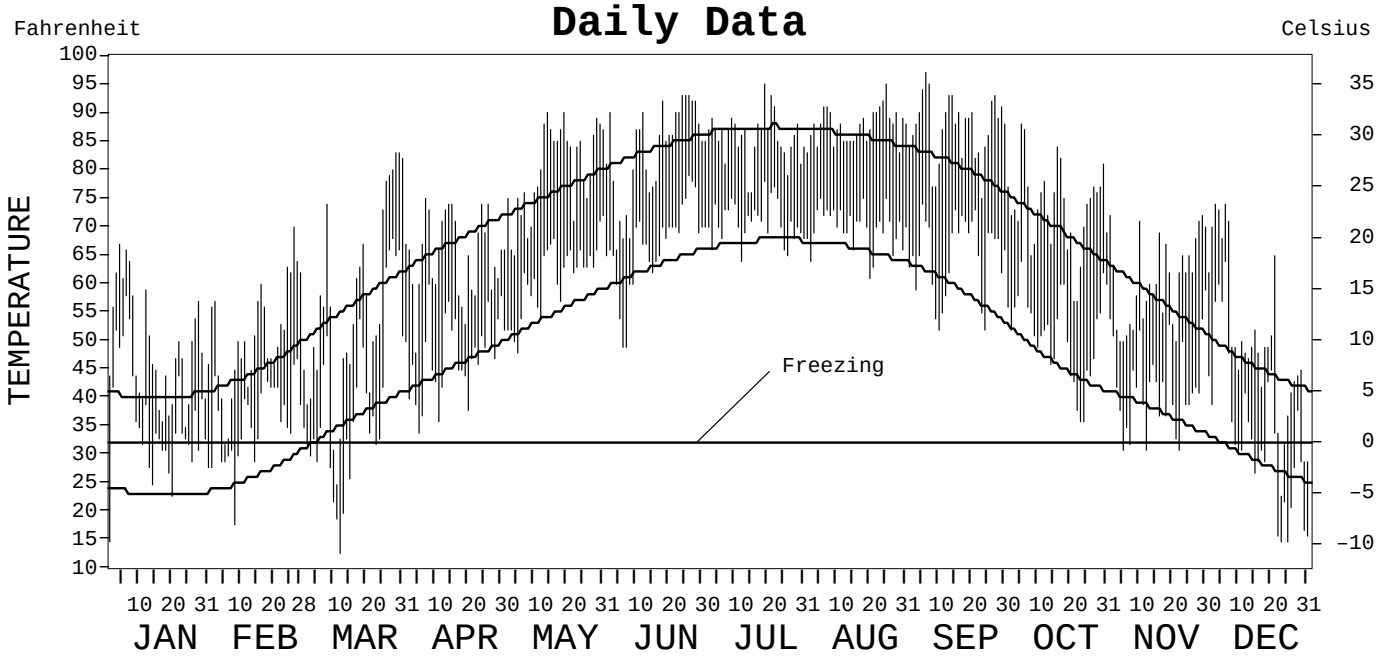
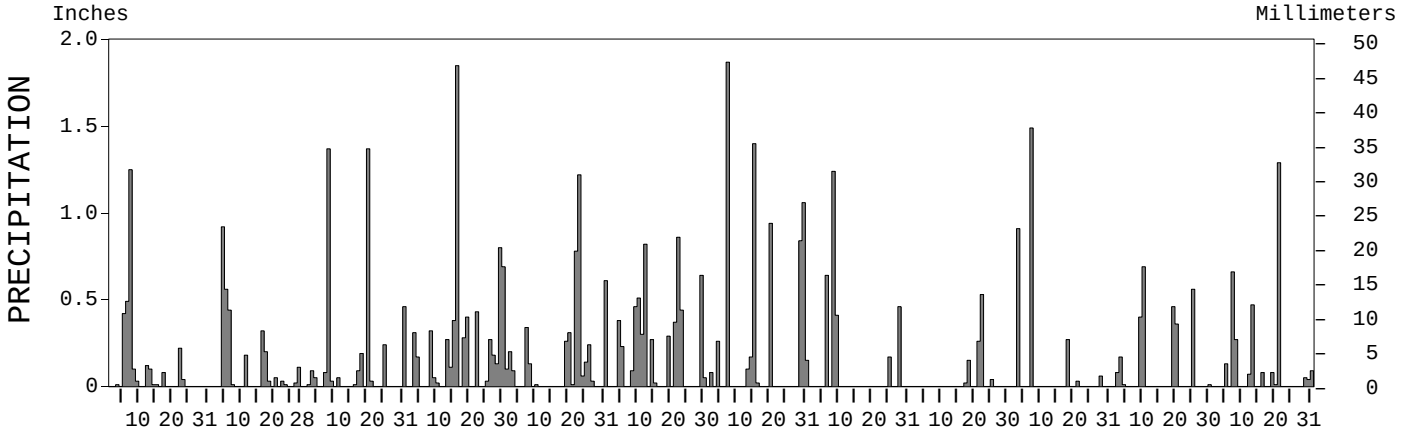
1998 LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

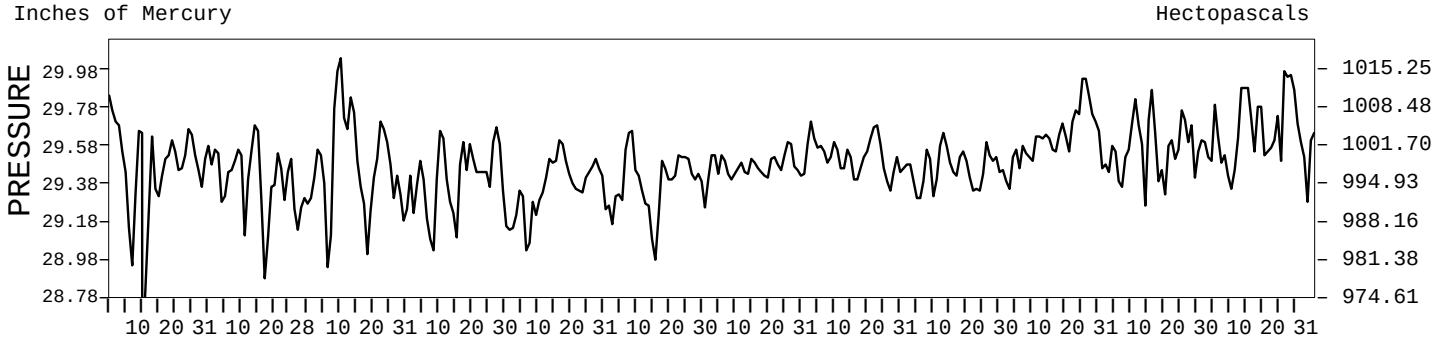
ISSN 0198-2265

LOUISVILLE,
KENTUCKY (SDF)

Daily Data







I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

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

METEOROLOGICAL DATA FOR 1998

LOUISVILLE, KY (SDF)

LATITUDE: 38° 10′ 38″ N LONGITUDE: 85° 43′ 47″ W ELEVATION (FT): GRND: 477 BARO: 485 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	48.7	50.7	56.4	65.0	79.6	83.3	85.6	87.7	87.4	73.3	60.5	49.7	69.0
	HIGHEST DAILY MAXIMUM	67	70	83	75	90	93	95	95	97	88	72	74	97
	DATE OF OCCURRENCE	04	26	30+	07	19+	26+	19	25	06	05	29+	06+	SEP 06
	MEAN DAILY MINIMUM	36.0	36.4	39.7	47.3	61.0	66.6	70.9	69.8	65.0	51.9	42.1	34.3	51.8
	LOWEST DAILY MINIMUM	15	18	13	34	48	49	64	61	52	36	31	15	13
	DATE OF OCCURRENCE	01	08	12	05	05	07+	12	20	24+	24+	22+	25+	MAR 12
	AVERAGE DRY BULB	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
	MEAN WET BULB		40.7	42.6	50.4	63.9	69.1	71.4	70.8	66.6	56.3	46.3	38.8	
	MEAN DEW POINT		37.3	36.5	44.6	59.9	65.7	67.8	66.6	60.9	51.6	40.6	34.2	
	NUMBER OF DAYS WITH:													
	MAXIMUM ≥ 90°	0	0	0	0	2	10	3	9	12	0	0	0	36
	MAXIMUM ≤ 32°	0	1	2	0	0	0	0	0	0	0	0	4	7
	MINIMUM ≤ 32°	12	8	10	0	0	0	0	0	0	0	4	16	50
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	696	594	561	261	27	15	0	0	0	119	405	711	3389
	COOLING DEGREE DAYS	0	0	44	4	200	321	416	436	345	52	0	7	1825
RH	MEAN (PERCENT)	80	81	68	68	72	74	72	69	63	71	69	76	72
	HOUR 01 LST	82	84	72	78	83	81	80	80	74	81	73	79	79
	HOUR 07 LST	87	89	78	80	86	86	84	85	83	87	82	86	84
	HOUR 13 LST	76	74	61	55	58	65	62	56	46	56	58	69	61
	HOUR 19 LST	77	75	61	61	63	67	63	58	51	64	64	69	64
S	PERCENT POSSIBLE SUNSHINE													
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY ≤ 1/4 MI)	1	1	1	0	0	2	0	0	0	1	1	0	7
	THUNDERSTORMS	0	2	2	8	10	13	6	5	4	0	2	0	52
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.)		29.40	29.48	29.41	29.36	29.39	29.49	29.53	29.46	29.64	29.58	29.67	
	MEAN SEA-LEVEL PRESS. (IN.)		29.93	30.01	29.93	29.87	29.90	30.00	30.04			30.11	30.20	
WINDS	RESULTANT SPEED (MPH)		0.2	3.3	1.4	0.6	3.6	0.4	0.7	0.4	0.0	1.5	1.4	
	RES. DIR. (TENS OF DEGS.)		33	22	20	26	22	25	35	17		20	24	
	MEAN SPEED (MPH)	7.9	8.1	10.8	8.6	6.8	8.7	6.3	6.1	5.8	5.9	7.6	7.4	7.5
	PREVAIL.DIR.(TENS OF DEGS.)	20	36	20	14	20	22	20	01	01	01	13	36	20
	MAXIMUM 2-MINUTE WIND:													
	SPEED (MPH)	26	32	38	39	39	54	23	28	23	24	44	28	54
	DIR. (TENS OF DEGS.)	22	17	21	21	25	04	07	17	24	36	23	20	04
	DATE OF OCCURRENCE	08	26	28	08	20+	10	20	08	07	21+	10	06	JUN 10
	MAXIMUM 5-SECOND WIND:													
	SPEED (MPH)	29	34	47	45	51	60	28	31	28	31	49	32	60
	DIR. (TENS OF DEGS.)	22	27	20	22	25	04	07	17	18	36	22	28	04
	DATE OF OCCURRENCE	08+	28+	28	08	20	10	20	08	20+	21+	10	29+	JUN 10
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	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
	GREATEST 24-HOUR (IN.)	1.31	0.92	1.37	1.85	1.22	1.26	1.87	1.57	0.53	1.49	1.09	1.29	1.87
	DATE OF OCCURRENCE	07-08	04	20+	15-16	23	22-23	07	08-09	22	07	09-10	21	JUL 07
	NUMBER OF DAYS WITH:													
	PRECIPITATION ≥ 0.01	13	13	14	18	16	15	11	5	5	5	9	12	136
	PRECIPITATION ≥ 0.10	7	7	5	15	11	12	9	5	3	3	6	5	88
	PRECIPITATION ≥ 1.00	1	0	2	1	1	0	3	1	0	1	0	1	11
SNOWFALL	SNOW,ICE PELLETS,HAIL:													
	TOTAL (IN.)	T	19.3	1.2	T	T	0.0	0.0	0.0	0.0	0.0	0.0	2.8	23.3
	GREATEST 24-HOUR (IN.)	T	9.2	0.5	T	T	0.0	0.0	0.0	0.0	0.0	0.0	1.8	9.2
	DATE OF OCCURRENCE	24+	04	11	15	31+							31	FEB 04
	MAXIMUM SNOW DEPTH (IN.)	0	11	1	0	0	0	0	0	0	0	0	2	11
	DATE OF OCCURRENCE		07	11									31	FEB 07
	NUMBER OF DAYS WITH:													
	SNOWFALL ≥ 1.0	0	3	0	0	0	0	0	0	0	0	0	1	4

NORMALS, MEANS, AND EXTREMES

LOUISVILLE, KY (SDF)

LATITUDE: 38° 10′ 38″ N LONGITUDE: 85° 43′ 47″ W ELEVATION (FT): GRND: 477 BARO: 485 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	40.3	44.8	56.3	67.3	76.0	83.5	87.0	85.7	80.3	69.2	56.8	45.1	66.0
	MEAN DAILY MAXIMUM	48	41.3	45.9	55.8	67.5	76.4	84.5	88.1	86.9	80.5	69.2	55.8	45.5	66.5
	HIGHEST DAILY MAXIMUM	51	77	77	86	91	95	102	105	101	104	92	84	76	105
	YEAR OF OCCURRENCE		1950	1996	1981	1960	1959	1952	1954	1988	1954	1959	1958	1982	JUL 1954
	MEAN OF EXTREME MAXS.	51	64.1	67.6	77.6	84.4	88.6	93.8	93.9	93.6	90.4	84.3	74.7	66.2	81.6
	NORMAL DAILY MINIMUM	30	23.2	26.5	36.2	45.4	54.7	62.9	67.3	65.8	58.7	45.8	37.3	28.6	46.0
	MEAN DAILY MINIMUM	48	24.7	27.7	35.9	45.6	55.0	63.9	66.7	65.1	57.9	46.7	37.2	29.2	46.3
	LOWEST DAILY MINIMUM	51	-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.	51	3.5	8.1	19.1	30.1	39.7	51.1	56.2	54.4	42.8	31.4	20.5	9.8	30.6
	NORMAL DRY BULB	30	31.7	35.7	46.3	56.3	65.3	73.2	77.2	75.8	69.5	57.6	47.1	36.9	56.0
	MEAN DRY BULB	51	33.3	36.9	45.8	56.5	65.8	74.2	78.1	76.7	69.7	58.1	46.4	37.4	56.6
	MEAN WET BULB	46	29.9	33.1	40.3	49.3	58.7	66.8	70.2	69.0	62.8	51.9	41.6	33.9	50.6
	MEAN DEW POINT	46	23.8	26.8	33.2	42.3	53.6	62.7	66.4	65.2	58.6	46.9	35.9	28.2	45.3
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.0	*	0.4	5.9	11.0	9.2	3.0	0.0	0.0	0.0	29.5
	MAXIMUM ≤ 32°	30	9.2	5.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.5	19.7
	MINIMUM ≤ 32°	30	24.4	19.9	11.8	2.3	0.1	0.0	0.0	0.0	0.0	1.6	8.9	20.3	89.3
	MINIMUM ≤ 0°	30	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0
H/C	NORMAL HEATING DEG. DAYS	30	1032	820	580	273	105	6	0	0	36	254	537	871	4514
	NORMAL COOLING DEG. DAYS	30	0	0	0	12	115	252	378	335	171	25	0	0	1288
RH	NORMAL (PERCENT)	30	69	68	64	62	67	69	71	72	73	70	69	70	69
	HOUR 01 LST	30	72	72	69	68	77	80	81	82	83	79	74	73	76
	HOUR 07 LST	30	76	77	75	76	82	83	85	87	88	85	79	77	81
	HOUR 13 LST	30	63	62	56	52	55	56	58	58	58	55	60	64	58
	HOUR 19 LST	30	64	62	56	52	56	58	60	61	63	62	64	67	60
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)	51	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	51	0.9	1.1	3.2	4.5	6.9	7.6	8.4	6.8	3.3	1.7	1.5	0.6	46.5
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			2.0						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)	25	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)	46	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)	46	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)	29	29	30	31	18	18	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	4	38	38	40	39	40	54	36	39	31	37	44	31	54
	DIR. (TENS OF DEGS)		16	24	20	27	23	04	17	31	31	23	23	26	04
	YEAR OF OCCURRENCE		1996	1996	1997	1996	1996	1998	1995	1995	1997	1996	1998	1996	JUN 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	4	43	47	47	45	53	60	44	49	37	41	49	38	60
	DIR. (TENS OF DEGS)		16	24	20	21	22	04	17	29	25	24	22	22	04
	YEAR OF OCCURRENCE		1996	1996	1998	1995	1996	1998	1995	1995	1997	1996	1998	1996	JUN 1998
PRECIPITATION	NORMAL (IN)	30	2.86	3.30	4.66	4.23	4.62	3.46	4.51	3.54	3.16	2.71	3.70	3.64	44.39
	MAXIMUM MONTHLY (IN)	51	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)	51	0.45	0.76	1.02	0.76	1.37	0.49	0.99	0.23	0.01	0.39	0.72	0.65	0.01
	YEAR OF OCCURRENCE		1981	1978	1966	1976	1977	1984	1983	1953	1995	1987	1976	1976	SEP 1995
	MAXIMUM IN 24 HOURS (IN)	51	3.00	3.66	7.22	4.85	4.60	5.14	5.46	3.13	4.97	3.25	3.58	2.79	7.22
	YEAR OF OCCURRENCE		1988	1990	1997	1970	1961	1960	1979	1992	1979	1977	1948	1978	MAR 1997
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	10.3	10.5	13.1	11.4	11.8	9.6	10.7	8.6	8.4	7.7	10.7	11.9	124.7
	PRECIPITATION ≥ 1.00	30	0.5	0.8	1.0	1.0	1.1	0.9	1.0	0.8	0.6	0.6	1.0	0.9	10.2
SNOWFALL	NORMAL (IN)	30	5.9	5.0	3.1	0.2	T	0.0	0.0	0.0	0.0	0.*	1.0	2.2	17.4
	MAXIMUM MONTHLY (IN)	51	28.4	19.3	22.9	1.6	T	T	T	0.0	0.0	2.4	13.2	9.3	28.4
	YEAR OF OCCURRENCE		1978	1998	1960	1973	1989	1993	1994			1993	1966	1961	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	51	15.9	11.0	12.1	1.6	T	T	T	0.0	0.0	2.4	13.0	5.0	15.9
	YEAR OF OCCURRENCE		1994	1966	1968	1973	1989	1993	1994			1993	1966	1961	JAN 1994
	MAXIMUM SNOW DEPTH (IN)	47	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	1.7	1.3	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.*	0.3	0.7	4.8

PRECIPITATION (inches) 1998 LOUISVILLE, KY (SDF)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	5.31	1.65	1.94	3.77	3.91	2.97	4.05	3.65	1.08	1.69	3.08	3.69	36.79
1970	1.40	2.87	4.52	11.10	1.85	5.20	3.33	7.65	3.57	4.79	1.75	4.18	52.21
1971	2.64	6.28	2.12	2.16	6.15	2.64	6.74	1.83	4.72	1.96	2.06	2.98	42.28
1972	2.87	3.94	4.07	8.48	4.46	1.08	3.64	2.45	4.24	2.55	6.31	5.29	49.38
1973	1.96	1.60	6.26	5.77	7.04	6.20	9.38	0.91	2.34	2.28	7.59	2.64	53.97
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
POR= 126 YRS	3.74	3.36	4.54	3.92	4.08	3.83	3.81	3.29	2.78	2.61	3.50	3.58	43.04

WBAN : 93821

AVERAGE TEMPERATURE (°F) 1998 LOUISVILLE, KY (SDF)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	33.1	36.9	39.9	58.0	66.2	73.5	78.7	74.7	67.5	57.3	43.3	33.5	55.2
1970	27.9	33.6	42.3	59.3	67.2	72.9	75.8	76.0	73.4	58.1	45.3	39.6	56.0
1971	30.9	35.0	42.0	54.7	61.5	76.5	74.8	74.1	72.2	64.4	47.0	45.1	56.5
1972	35.2	34.9	44.8	56.2	65.5	70.6	77.1	76.1	72.3	55.3	44.0	39.1	55.9
1973	35.0	36.4	53.7	54.4	61.5	75.6	78.4	77.0	73.6	62.3	49.8	37.1	57.9
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				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
POR= 126 YRS	34.2	36.8	45.8	56.4	66.0	74.6	77.8	76.2	69.8	58.7	46.6	37.2	56.7

HEATING DEGREE DAYS (base 65°F) 1998 LOUISVILLE, KY (SDF)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0	0	42	282	645	971	1141	875	697	200	70	0	4923
1970-71	0	0	23	220	582	781	1052	833	707	303	137	0	4638
1971-72	0	0	13	65	537	610	914	866	623	282	61	19	3990
1972-73	0	0	16	298	628	793	927	796	349	343	129	0	4279
1973-74	0	0	13	144	450	860	772	714	487	257	99	19	3815
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				202	689	741	1005	634	472	366	140	12	
1997-98	0	0	9	263	621	854	696	594	561	261	27	15	3901
1998-	0	0	0	119	405	711							

WBAN : 93821

COOLING DEGREE DAYS (base 65°F) 1998 LOUISVILLE, KY (SDF)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	9	106	277	431	308	127	49	0	0	1307
1970	0	0	0	36	147	244	343	346	283	15	0	0	1414
1971	0	0	0	2	35	351	310	291	237	58	3	0	1287
1972	0	0	3	25	81	193	386	351	242	2	4	0	1287
1973	0	0	7	29	28	325	422	380	280	71	2	0	1544
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				19	0	0	
1997	0	0	0	2	35	237	435	330	174	79	0	0	1292
1998	0	0	44	4	200	321	416	436	345	52	0	7	1825

SNOWFALL (inches) 1998 LOUISVILLE, KY (SDF)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969–70	0.0	0.0	0.0	0.0	0.7	7.7	7.9	7.4	10.7	T	0.0	0.0	34.4
1970–71	0.0	0.0	0.0	0.0	0.3	0.8	3.2	11.9	5.2	0.1	0.0	0.0	21.5
1971–72	0.0	0.0	0.0	0.0	5.4	T	1.6	3.4	1.2	T	0.0	0.0	11.6
1972–73	0.0	0.0	0.0	0.0	2.0	2.2	1.1	1.1	0.5	1.6	0.0	0.0	8.5
1973–74	0.0	0.0	0.0	0.0	0.0	4.5	1.0	0.9	2.8	T	0.0	0.0	9.2
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			
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–	0.0	0.0	0.0	0.0	0.0	2.8							
POR= 51 YRS	T	0.0	0.0	0.1	T	2.1	5.3	4.6	3.2	T	T	T	15.3

WBAN : 93821

REFERENCE NOTES:

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).

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).

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 (1961 – 1990).
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.

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.

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.

1998
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 l00 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 l00 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 l0 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 l0 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 SEA LEVEL GROUND TEMPERATURE SITE	ELEVATION ABOVE GROUND WIND INSTRUMENTS	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	RAIN GAGE TIPPING BUCKET	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROTHERMOMETER	AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
CITY - - NOTE: For period September 10, 1871 through May 1, 1993, refer to previous editions.																
4th Floor, NE Corner 4th & Chestnut Streets	5/1/93	1/21/13	1300 ft. S	38° 15'	85° 45'	459	132	111	111		103		103			
10th Floor, NE Corner 5th & Jefferson Streets	1/21/13	6/29/24	1600 ft. NNW	38° 15'	85° 45'	463	255	219	219		214		214			Equipment on roof. Shelter at base of 40' tower.
10th & 15th Floor, NW Corner 4th & Market Sts	6/29/24	4/29/39	300 ft. NE	38° 15'	85° 45'	466	234	188	188		183		183			
6th Floor, Federal Bldg 6th & 7th Streets and Broadway	4/29/39	1/18/55	3/4 mi.SSW	38° 15'	85° 46'	457	120	106	106		106	6	6			Tipping bucket gage and sunshine switch moved to airport 6/30/45.
AIRPORT Administration Building Bowman Field 5.5 mi. ESE of P.O.	5/7/30	11/20/33		38° 13'	85° 40'	539	a48	6	5							a - 44 ft. to 5/29/31. Temperatures taken over sod.
Administration Building Bowman Field	11/20/33	1/16/39		38° 13'	85° 40'	539	b56	19	18				17			b - 48 ft. to 7/1/37. Temperatures taken over gravel black top roof at 2nd floor level.
Administration Building Bowman Field	1/16/39	12/1/47		38° 13'	85° 40'	539	56	6	5		#5	5	5			Temperatures taken over sod. # Installed 7/1/45.
Wooden Hangar Standiford Field 5 miles SSe of P.O.	11/15/47	9/19/50	4.5 mi. SW	38° 11'	85° 44'	485	59	45	44		42	42	42			Temperatures taken over black top roof.
Lee Terminal Building Standiford Field	9/19/50	7/29/81	0.7 mi. NW	38° 11'	85° 44'	f477	c20	17	17	%20	17 g15	17 g15	e15 g15	d6	NA	Temperatures taken over black gravel roof to 6/1/60. c - 71 feet to 5/7/60. d - Commissioned about 2050 feet SSE of thermometer site 6/1/60. e - Removed 7/1/51; installed again 11/20/69. f - 474 feet to 6/1/60. g - Effective 5/1477. % - Commissioned 9/27/74.
NWS/FAA Building Standiford Field	7/29/81	Present	0.88 mi.SE	38° 11'	85° 44'	477	h22	5	5 k5	h20 i7 k15	1	1 k1	1 k1	h6 j4	NA	h - Not moved 7/29/81. i - Moved to new site 8/2/81. j - Effective 10/8/81. k - Moved 8/1/94.
															S	ASOS commissioned 08/01/94.

* Type
M = AMOS
T = AUTOB
S = ASOS
W = AWOS

SUBSCRIPTION:
Price and ordering information available through: Na ional Climatic Data Center, Federal Building, Asheville, North Carolina 28801.

INQUIRIES/COMMENTS CALL: (828) 271-4800

National Climatic Data Center
151 Patton Avenue, Rm 120
Asheville NC 28801-5001

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300
FORWARD AND ADDRESS CORRECTION