

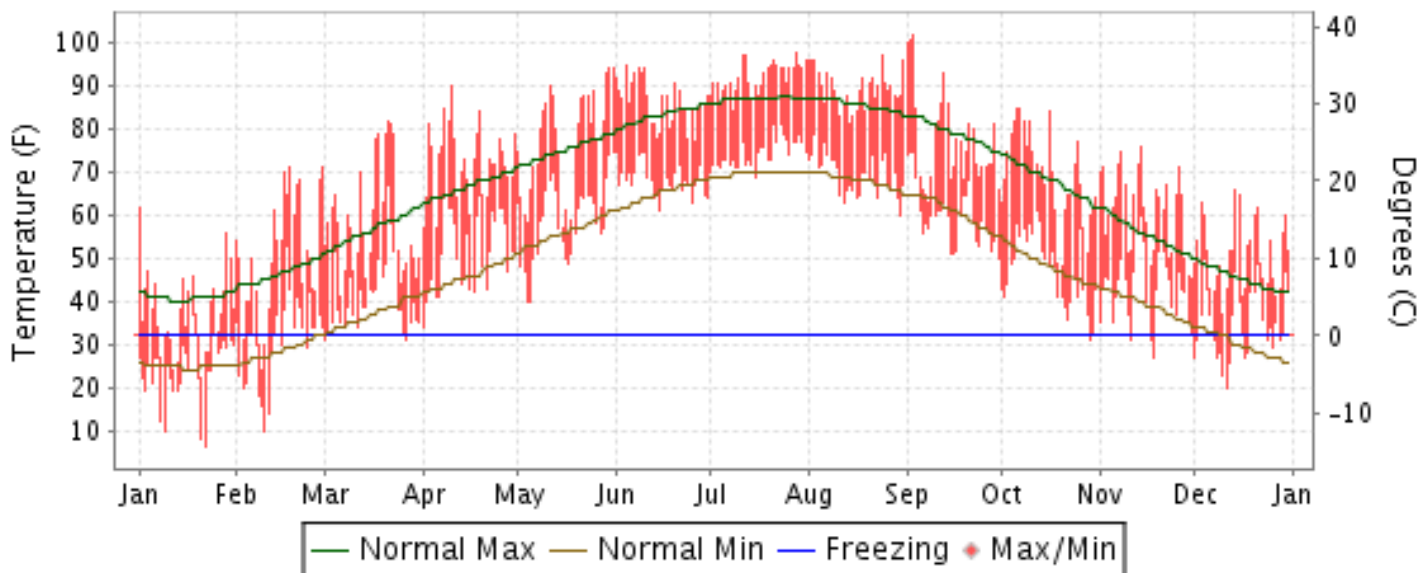


# 2011 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

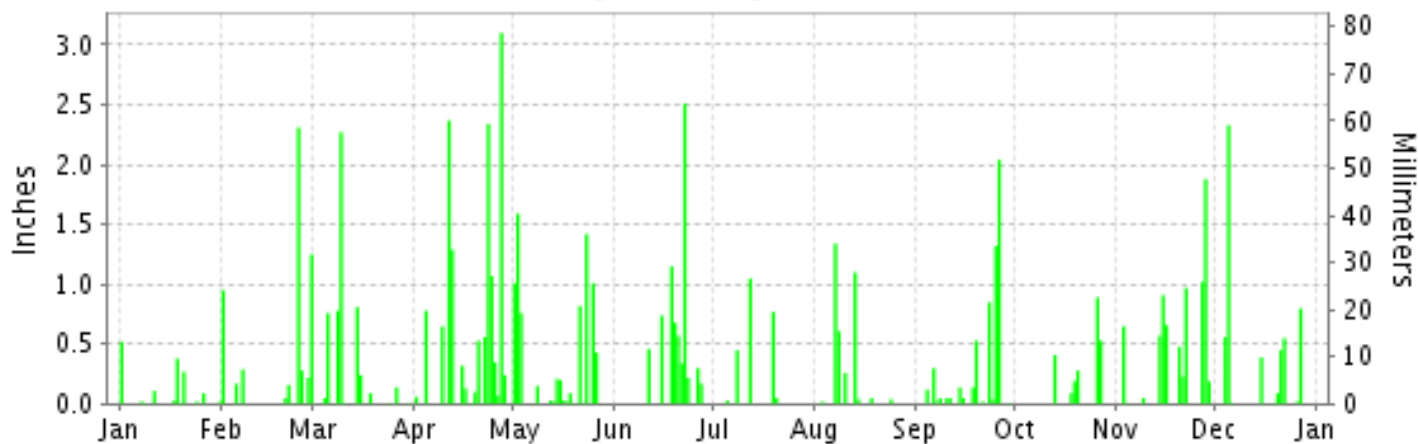
ISSN 0198-2257

## LOUISVILLE, KENTUCKY (KSDF)

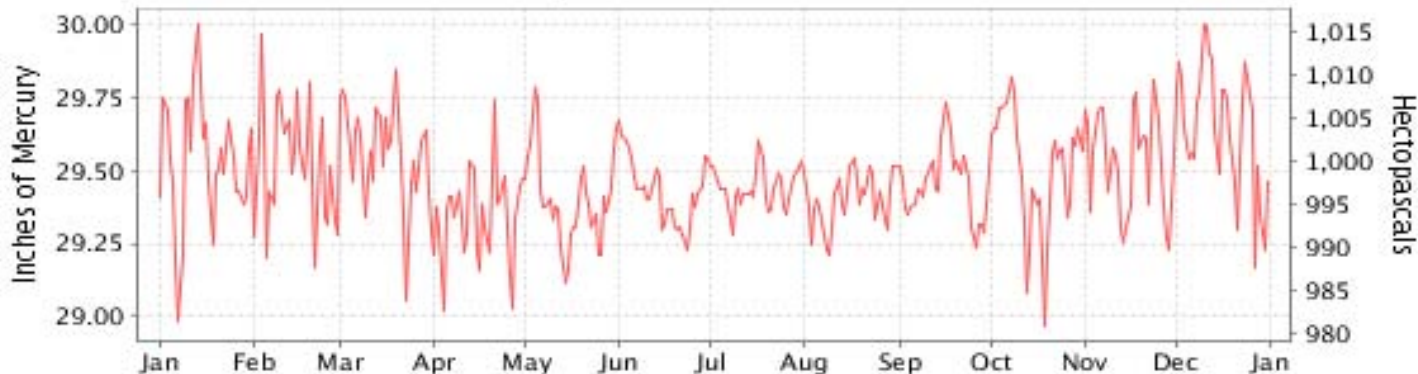
### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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NATIONAL  
CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2011

## LOUISVILLE (KSDF)

LATITUDE: 38° 10'N      LONGITUDE: -85° 44'W      ELEVATION (FT): GRND: 488    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	37.6	50.6	58.5	72.6	76.5	86.4	92.1	89.5	77.3	69.2	61.1	50.8	68.5	
	HIGHEST DAILY MAXIMUM	62	71	82	90	94	95	98	97	102	85	76	66	102	
	DATE OF OCCURRENCE	01	28+	21	10	30+	04	28	24	03	07+	14	14	SEP 03	
	MEAN DAILY MINIMUM	24.0	31.1	40.9	51.4	58.6	68.3	74.5	69.3	59.9	47.2	42.8	35.0	50.3	
	LOWEST DAILY MINIMUM	6	10	31	34	40	61	69	60	50	31	27	20	6	
	DATE OF OCCURRENCE	22	10	27+	01	05+	15	15	30	30	29	18	11	JAN 22	
	AVERAGE DRY BULB	30.8	40.9	49.7	62.0	67.6	77.4	83.3	79.4	68.6	58.2	52.0	42.9	59.4	
	MEAN WET BULB	27.5	35.6	42.7	54.3	60.9	68.6	74.7	69.4	60.8	50.5	46.5	38.8	52.5	
	MEAN DEW POINT	21.2	27.6	34.2	47.1	56.8	63.6	70.6	63.8	55.9	43.3	40.0	33.1	46.4	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	1	4	8	24	15	4	0	0	0	0	56
	MAXIMUM <= 32°	9	4	0	0	0	0	0	0	0	0	0	0	0	13
MINIMUM <= 32°	29	12	4	0	0	0	0	0	0	2	3	14	64		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	1051	669	481	139	102	0	0	0	39	232	387	677	3777	
	COOLING DEGREE DAYS	0	0	16	58	188	379	577	451	153	27	3	0	1852	
RH	MEAN (PERCENT)	70	64	60	62	70	65	68	62	68	62	67	70	66	
	HOUR 01 LST	73	68	64	69	79	75	80	74	78	74	73	75	74	
	HOUR 07 LST	77	72	69	69	78	74	76	74	79	79	77	80	75	
	HOUR 13 LST	60	55	50	52	58	53	53	46	54	44	57	59	53	
	HOUR 19 LST	69	61	55	58	67	58	63	55	65	56	65	68	62	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	1	0	0	0	1	0	0	2	0	0	0	0	4	
	THUNDERSTORMS	0	2	1	13	7	11	6	6	3	0	3	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.)	29.54	29.54	29.56	29.34	29.41	29.42	29.44	29.40	29.46	29.51	29.54	29.65	29.48	
	MEAN SEA-LEVEL PRESS. (IN.)	30.09	30.08	30.09	29.86	29.93	29.94	29.95	29.91	29.98	30.03	30.07	30.19	30.01	
WINDS	RESULTANT SPEED (MPH)	2.6	3.2	0.6	5.4	2.9	2.2	1.5	1.2	1.3	1.9	4.1	2.6	2.1	
	RES. DIR. (TENS OF DEGS.)	28	24	34	21	21	21	23	27	33	27	21	24	24	
	MEAN SPEED (MPH)	7.6	8.8	9.4	10.8	7.4	6.7	5.3	5.6	6.9	6.0	8.9	6.9	7.5	
	PREVAIL.DIR.(TENS OF DEGS.)	29	22	07	20	18	20	21	01	01	27	20	17	20	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	26	36	35	40	46	46	47	44	26	30	37	31	47	
	DIR. (TENS OF DEGS.)	28	29	31	26	27	28	15	30	35	28	29	20	15	
	DATE OF OCCURRENCE	07	21	23	09	25	19	20	13	15	14	14	30	JUL 20	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	32	46	44	55	56	56	61	58	35	40	46	37	61	
DIR. (TENS OF DEGS.)	30	25	33	29	27	28	15	31	32	28	29	20	15		
DATE OF OCCURRENCE	08	02	23	09	25	19	20	13	29	14	14	30	JUL 20		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.48	5.69	5.17	13.97	7.81	7.14	2.35	3.46	5.73	2.39	7.62	5.21	68.02	
	GREATEST 24-HOUR (IN.)	0.52	2.59	3.05	3.66	1.88	2.73	1.05	1.34	3.36	1.42	1.89	2.53	3.66	
	DATE OF OCCURRENCE	01	24-25	08-09	11-12	02-03	22-23	12	07	25-26	26-27	27-28	04-05	APR 11-12	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	11	10	11	17	17	10	5	8	16	6	12	10	133		
PRECIPITATION 0.10	4	8	6	14	10	10	3	4	8	5	10	6	88		
PRECIPITATION 1.00	0	2	1	5	4	2	1	2	2	0	2	1	22		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	10.0	1.1	0.3	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	11.4	
	GREATEST 24-HOUR (IN.)	3.6	1.0	0.3	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	3.6	
	DATE OF OCCURRENCE	20	07	26	09								27+	JAN 20	
	MAXIMUM SNOW DEPTH (IN.)	3	T	T	0	0	0	0	0	0	0	0	0	3	
	DATE OF OCCURRENCE	20+	07	26										JAN 20+	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	3	1	0	0	0	0	0	0	0	0	0	0	4		

# NORMALS, MEANS, AND EXTREMES

## LOUISVILLE (KSDF)

LATITUDE:  
38° 10'N

LONGITUDE:  
-85° 44'W

ELEVATION (FT):  
GRND: 488 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	64	41.7	46.3	56.2	68.0	76.6	84.6	88.1	87.3	80.7	69.4	56.4	45.5	66.7
	HIGHEST DAILY MAXIMUM	64	77	77	86	91	95	102	106	105	104	93	84	76	106
	YEAR OF OCCURRENCE		1950	2000	1981	1960	1959	1952	1999	2007	1954	2007	1958	1982	JUL 1999
	MEAN OF EXTREME MAXS.	64	64.4	68.1	77.7	84.7	88.6	93.6	95.7	95.7	92.5	84.5	75.2	66.2	82.2
	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	64	25.4	28.3	36.4	46.3	55.6	64.4	68.6	67.0	59.5	47.4	37.8	29.3	47.2
	LOWEST DAILY MINIMUM	64	-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.	64	4.5	9.1	19.6	30.7	40.5	52.1	58.2	56.5	44.7	32.0	21.5	10.3	31.6
	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	64	33.6	37.3	46.3	57.2	66.1	74.6	78.4	77.2	70.1	58.4	47.1	37.4	57.0
	MEAN WET BULB	28	29.9	32.7	40.0	49.0	58.6	66.6	69.9	68.7	61.8	51.1	41.9	33.2	50.3
	MEAN DEW POINT	28	26.7	29.3	36.0	44.9	55.8	64.4	67.7	66.7	59.5	48.5	38.9	30.5	47.4
	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	75	75	76
	hour 07 LST	30	78	77	76	76	82	83	85	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)	48	0.9	0.8	0.4	0.2	0.4	0.4	0.3	0.6	0.9	0.9	0.5	0.5	6.8
	THUNDERSTORMS	64	0.9	1.2	3.0	4.6	7.0	7.8	8.3	6.9	3.3	1.6	1.5	0.5	46.6
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH: CLEAR														
	PARTLY CLOUDY CLOUDY	1	1.0	4.0	6.0		3.0	1.0			3.0	4.0		2.0	
PR	MEAN STATION PRESSURE(IN)	28	29.60	29.57	29.52	29.45	29.46	29.46	29.48	29.50	29.53	29.56	29.57	29.61	29.53
	MEAN SEA-LEVEL PRES. (IN)	28	30.14	30.11	30.06	29.97	29.98	29.97	29.99	30.01	30.04	30.08	30.11	30.14	30.05
WINDS	MEAN SPEED (MPH)	28	9.0	9.0	9.1	9.1	7.7	7.1	6.6	6.3	6.4	6.9	8.3	8.4	7.8
	PREVAIL.DIR(TENS OF DEGS)	42	29	30	30	20	22	19	22	01	01	15	19	19	29
	MAXIMUM 2-MINUTE: SPEED (MPH)	17	45	46	47	56	54	54	55	47	53	40	44	40	56
	DIR. (TENS OF DEGS)		26	28	21	22	30	04	36	21	22	29	23	27	22
	YEAR OF OCCURRENCE		2008	2008	2006	1999	2006	1998	2004	1999	2008	2001	1998	2008	APR 1999
	MAXIMUM 3-SECOND SPEED (MPH)	17	58	58	56	67	64	60	64	58	75	49	49	54	75
	DIR. (TENS OF DEGS)		27	25	22	28	30	04	36	31	22	19	22	28	22
	YEAR OF OCCURRENCE		2008	2009	2006	2003	2006	1998	2004	2011	2008	2010	1998	2008	SEP 2008
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)	64	11.38	9.02	14.91	13.97	11.57	10.11	10.05	8.79	10.49	8.86	9.12	8.86	14.91
	YEAR OF OCCURRENCE		1950	1989	1964	2011	1990	1960	1979	1974	1979	2007	1957	1990	MAR 1964
	MINIMUM MONTHLY (IN)	64	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)	64	3.99	3.66	7.22	4.85	4.60	5.14	5.46	4.53	5.28	4.55	3.58	2.79	7.22
	YEAR OF OCCURRENCE		2000	1990	1997	1970	1961	1960	1979	2009	2002	2007	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	0.8	1.2	0.8	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	0.0	0.1	0.6	2.0	14.6
	MAXIMUM MONTHLY (IN)	64	28.4	19.3	22.9	1.6	T	T	T	T	0.0	2.4	13.2	10.0	28.4
	YEAR OF OCCURRENCE		1978	1998	1960	1973	1989	1993	1994	2009		1993	1966	2004	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	64	15.9	11.0	12.1	1.6	T	T	T	T	0.0	2.4	13.0	7.5	15.9
	YEAR OF OCCURRENCE'		1994	1966	1968	1973	1989	1993	1994	2009		1993	1966	2004	JAN 1994
	MAXIMUM SNOW DEPTH (IN)	60	19	11	11	2	0	0	0	0	0	T	8	9	19
	YEAR OF OCCURRENCE		1978	1966	1968	1987						1989	1966	2004	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) 2011 LOUISVILLE (KSDF)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2004	3.81	1.69	3.99	4.33	9.50	1.44	6.38	3.28	0.09	7.33	6.66	3.78	52.28
2005	5.07	2.35	3.85	3.56	4.67	2.46	3.02	7.17	1.32	0.82	3.53	2.04	39.86
2006	4.53	1.82	5.21	5.92	3.44	6.11	4.53	5.14	9.79	4.31	2.91	3.14	56.85
2007	3.63	2.90	2.99	4.55	2.37	1.58	4.13	1.61	1.95	8.86	2.44	7.52	44.53
2008	2.92	4.87	8.97	6.13	5.69	3.16	3.83	0.63	1.31	2.26	1.84	5.18	46.79
2009	3.63	2.20	1.36	4.43	4.59	9.22	6.02	5.88	5.70	7.00	1.05	2.85	53.93
2010	2.86	1.91	1.17	3.97	8.16	4.39	5.21	2.06	0.12	1.04	5.96	1.66	38.51
2011	1.48	5.69	5.17	13.97	7.81	7.14	2.35	3.46	5.73	2.39	7.62	5.21	68.02
POR= 64 YRS	3.45	3.32	4.49	4.22	4.77	3.82	4.08	3.29	3.15	2.88	3.67	3.67	44.81

WBAN : 93821

**AVERAGE TEMPERATURE (°F) 2011 LOUISVILLE (KSDF)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
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
2004	33.1	38.7	51.3	59.1	71.7	76.1	77.6	74.3	71.9	61.4	51.5	36.6	58.6
2005	38.4	41.6	43.5	58.8	64.5	77.0	79.6	80.8	74.2	60.5	49.4	34.0	58.5
2006	44.2	37.9	47.0	61.5	65.0	73.7	79.3	79.3	66.6	55.7	49.1	43.1	58.5
2007	38.9	30.0	55.3	55.6	70.5	77.3	77.6	85.1	76.4	65.9	48.9	42.0	60.3
2008	34.7	37.7	46.5	57.9	64.8	78.6	79.8	78.8	73.9	59.7	45.5	37.5	58.0
2009	29.9	40.2	50.4	58.3	66.9	75.5	73.5	75.7	71.0	55.1	51.2	36.6	57.0
2010	30.1	30.9	49.0	62.7	70.5	81.1	82.9	82.8	75.1	63.1	49.9	30.8	59.1
2011	30.8	40.9	49.7	62.0	67.6	77.4	83.3	79.4	68.6	58.2	52.0	42.9	59.4
POR= 64 YRS	33.6	37.3	46.3	57.2	66.1	74.6	78.4	77.2	70.1	58.4	47.1	37.4	57.0

**HEATING DEGREE DAYS (base 65°F) 2011 LOUISVILLE (KSDF)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
1998-99	0	0	0	119	405	711	866	620	676	183	16	0	3596
1999-00	0	0	20	197	346	796	942	575	416	270	26	2	3590
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
2003-04	0	0	37	214	380	788	982	758	435	209	40	0	3843
2004-05	0	1	8	128	402	873	820	648	656	207	95	0	3838
2005-06	0	0	9	206	469	954	638	756	548	152	98	0	3830
2006-07	0	0	44	311	471	670	805	971	346	329	27	0	3974
2007-08	0	0	3	114	480	712	935	787	569	237	65	0	3902
2008-09	0	0	0	212	578	849	1080	687	449	259	48	7	4169
2009-10	0	0	18	304	407	873	1075	949	489	131	39	0	4285
2010-11	0	0	2	115	450	1053	1051	669	481	139	102	0	4062
2011-	0	0	39	232	387	677							

WBAN : 93821

**COOLING DEGREE DAYS (base 65°F) 2011 LOUISVILLE (KSDF)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
1999	0	0	0	18	103	345	573	427	238	12	6	0	1722
2000	0	5	2	0	162	308	375	385	156	68	2	0	1463
2001	0	0	0	103	150	280	433	445	174	40	1	0	1626
2002	0	0	0	77	110	391	514	496	314	51	3	0	1956
2003	0	0	0	46	87	203	398	411	136	17	17	0	1315
2004	0	0	18	41	255	339	398	296	221	24	2	0	1594
2005	1	0	0	29	89	365	459	494	292	72	5	0	1806
2006	0	0	0	53	106	269	452	452	102	30	2	0	1466
2007	0	0	51	51	202	376	396	629	350	149	2	0	2206
2008	2	0	0	31	68	413	466	436	273	57	0	1	1747
2009	0	0	1	64	113	329	268	339	206	4	0	0	1324
2010	0	0	0	70	218	492	561	560	311	63	5	0	2280
2011	0	0	16	58	188	379	577	451	153	27	3	0	1852

**SNOWFALL (inches) 2011 LOUISVILLE (KSDF)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	T	0.0	0.0
1996-97	0.0	0.0	0.0	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
2003-04	0.0	T	0.0	0.0	T	3.6	3.6	T	T	T	T	0.0	7.2
2004-05	0.0	0.0	0.0	0.0	0.0	10.0	1.7	0.4	2.0	T	0.0	0.0	14.1
2005-06	0.0	0.0	0.0	0.0	T	0.8	1.7	3.1	T	T	0.0	0.0	5.6
2006-07	0.0	0.0	0.0	0.0	T	0.2	0.1	3.1	T	T	0.0	0.0	3.4
2007-08	0.0	0.0	0.0	0.0	T	1.4	2.1	5.8	10.6	0.0	0.0	0.0	19.9
2008-09	0.0	0.0	0.0	0.0	T	1.3	9.5	1.3	T	T	0.0	0.0	12.1
2009-10	0.0	T	0.0	0.0	0.0	0.3	7.1	13.9	T	0.0	0.0	0.0	21.3
2010-11	0.0	0.0	0.0	0.0	0.1	6.2	10.0	1.1	0.3	T	0.0	0.0	17.7
2011-	0.0	0.0	0.0	0.0	0.0	T							
POR= 63 YRS	T	T	0.0	0.1	0.8	2.4	5.2	4.3	2.7	0.1	T	T	15.6

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. 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.</p>	<p>GENERAL CONTINUED: 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. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK MEDADATA SYSTEM", URL IS: <a href="https://mi3.ncdc.noaa.gov/mi3qry/login.cfm">https://mi3.ncdc.noaa.gov/mi3qry/login.cfm</a> SNOWFALL STOPPED MONTH &amp; YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p><b>NOTE:</b> The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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# 2011 LOUISVILLE KENTUCKY (KSDF)

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 History

LOUISVILLE, KY

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
LOUISVILLE STANDIFORD FIELD	1947-11-15	1948-01-01	38° 10'	-85° 43'	485	4.5 MI SE	AIRWAYS
LOUISVILLE STANDIFORD FIELD	1973-01-01	1981-07-29	38° 10'	-85° 43'	474		COOP, WXSVC
LOUISVILLE INTL AP	2003-11-01	2009-02-19	38° 10'	-85° 44'	488		ASOS, COOP, WXSVC
LOUISVILLE STANDIFORD FIELD	1948-01-01	1950-09-19	38° 10'	-85° 43'	485		AIRWAYS, COOP
LOUISVILLE STANDIFORD FIELD	1994-08-01	1996-05-01	38° 10'	-85° 43'	481		ASOS, COOP, WXSVC
LOUISVILLE STANDIFORD FIELD	1950-09-19	1973-01-01	38° 10'	-85° 43'	474	.7 MI NW	AIRWAYS, COOP
LOUISVILLE STANDIFORD FIELD	1996-10-01	2003-11-01	38° 10'	-85° 43'	481		ASOS, COOP, WXSVC
LOUISVILLE BOWMAN FIELD	1930-05-07	1947-11-15	38° 13'	-85° 40'	539		AIRWAYS
LOUISVILLE STANDIFORD FIELD	1996-05-01	1996-10-01	38° 10'	-85° 43'	481		AIRWAYS, ASOS, COOP
LOUISVILLE INTL AP	2009-02-19	Present	38° 10'	-85° 44'	488		ASOS, COOP, WXSVC
LOUISVILLE STANDIFORD FIELD	1981-07-29	1994-08-01	38° 10'	-85° 43'	477	.9 MI SE	COOP, WXSVC

# Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1960-06-01	2003-11-01	DAILY	2400	UNIV	RCRD	
TEMP	2003-11-01	2009-02-19	DAILY	2400	HYGR		
TEMP	1948-01-01	1960-06-01	DAILY	2400	MXMN		
PRECIP	1948-01-01	1960-06-01	DAILY	2400	UNIV	RCRD	
PRECIP	2003-11-01	2009-02-19	HOURLY	2400	UNIV	RCRD	
PRECIP	2003-11-01	2009-02-19	DAILY	2400	UNIV	RCRD	
DEWPNTTEMP	2009-02-19	Present	DAILY	2400	HYGR		
PRECIP	2009-02-19	Present	DAILY	2400	PCPNX		
TEMP	2009-02-19	Present	DAILY	2400	HYGR		
PRECIP	1948-01-01	1960-06-01	HOURLY	2400			
PRECIP	2009-02-19	Present	HOURLY	2400	AWPAG	RCRD;HTD	
TEMP	1960-06-01	2003-11-01	DAILY	2400	HYGR		
PRECIP	1960-06-01	2003-11-01	HOURLY	2400			
WIND	2009-02-19	Present	DAILY	2400	REMOTE		

\* For explanation of codes and abbreviations see Station Metadata link below.

Other Station Information can be found at:

ASOS Implementation by NWS: <http://www.nws.noaa.gov/ops2/Surface/asosimplementation.htm>

Station Metadata website: <http://www.ncdc.noaa.gov/homr>

INQUIRES/COMMENTS CALL: (828) 271-4800, option 2

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Email : [ncdc.info@noaa.gov](mailto:ncdc.info@noaa.gov)

NOAA/National Climatic Data Center

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151 Patton Avenue

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Visit our Web Site for other weather data: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)