

1999

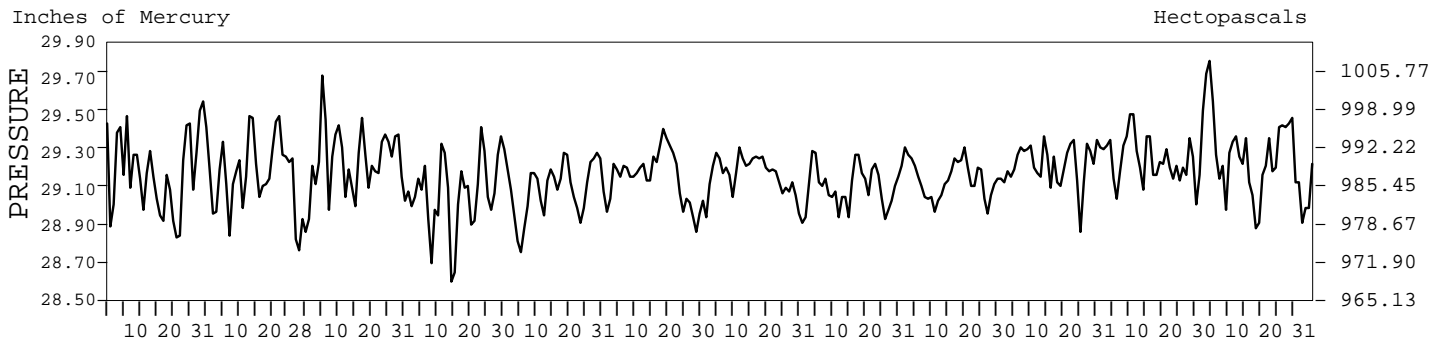
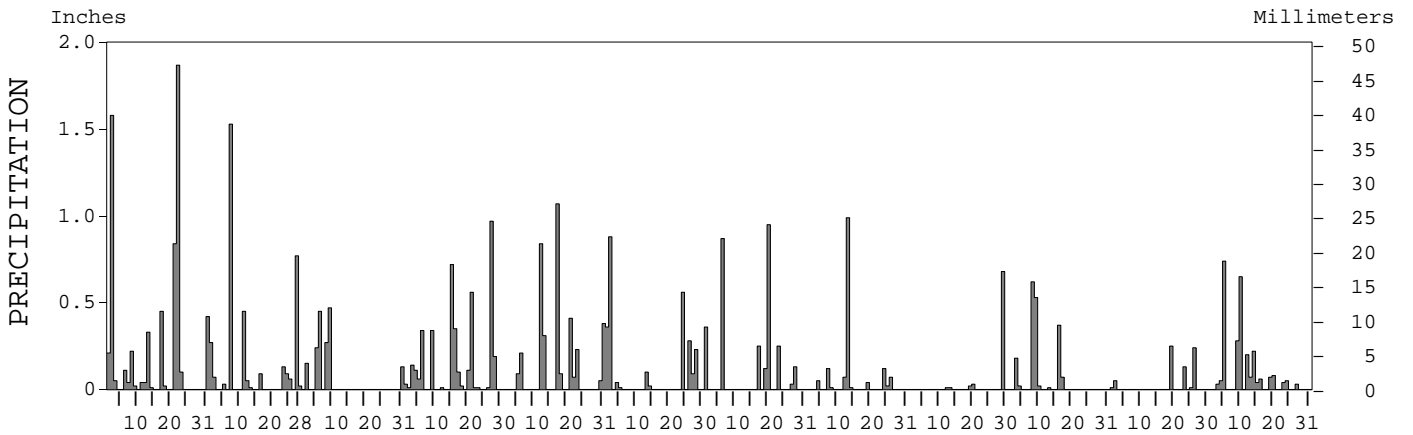
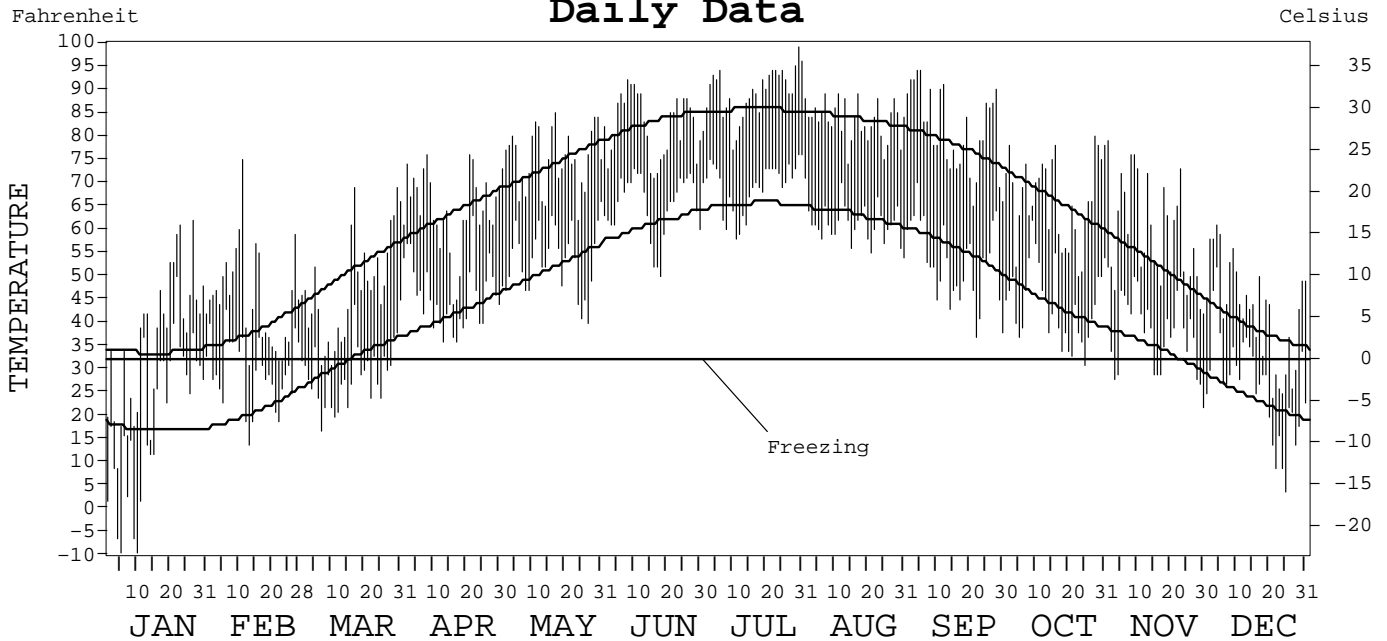
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-1986

INDIANAPOLIS,
INDIANA (IND)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE
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 ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 1999

INDIANAPOLIS, IN (IND)

LATITUDE: 39° 42' 36" N LONGITUDE: 86° 16' 20" W ELEVATION (FT): GRND: 796 BARO: 796 TIME ZONE: EASTERN (UTC + 5) WBAN: 93819

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	36.6	45.3	47.7	64.0	75.1	82.3	89.2	83.3	81.2	66.5	59.3	42.6	64.4	
	HIGHEST DAILY MAXIMUM	62	75	69	76	85	92	99	89	94	80	79	61	99	
	DATE OF OCCURRENCE	27	11	30+	21+	17	08	30	17+	05+	28	01	04	JUL 30	
	MEAN DAILY MINIMUM	20.3	29.6	29.1	45.8	53.5	65.1	69.2	61.4	52.9	43.9	38.2	26.6	44.6	
	LOWEST DAILY MINIMUM	-9	14	17	36	40	50	58	54	37	31	22	4	-9	
	DATE OF OCCURRENCE	10+	13	07	17+	27	18	11	31	22	25	30	25	JAN 10+	
	AVERAGE DRY BULB	28.5	37.5	38.4	54.9	64.3	73.7	79.2	72.4	67.1	55.2	48.8	34.6	54.6	
	MEAN WET BULB	26.7	33.6	33.9	49.6		66.9	72.6	64.7	57.9	48.8	44.4	32.6		
	MEAN DEW POINT	22.8	27.4	26.5	44.3		62.8	69.4	59.8	50.3	42.1	39.1	28.7		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	3	16	0	8	0	0	0	0	27
	MAXIMUM ≤ 32°	10	3	2	0	0	0	0	0	0	0	0	7	0	22
	MINIMUM ≤ 32°	24	18	23	0	0	0	0	0	0	1	8	22	0	96
	MINIMUM ≤ 0°	4	0	0	0	0	0	0	0	0	0	0	0	0	4
H/C	HEATING DEGREE DAYS	1125	767	814	297	81	8	0	0	70	298	481	936	4877	
	COOLING DEGREE DAYS	0	0	0	5	67	278	450	236	138	3	1	0	1178	
RH	MEAN (PERCENT)	79	70	65	70	66	71	74	67	58	65	72	79	70	
	HOUR 01 LST	80	74	71	76	73	80	88	80	70	72	79	84	77	
	HOUR 07 LST	82	78	78	83	80	83	88	85	83	80	84	88	83	
	HOUR 13 LST	74	62	52	63	54	60	59	52	42	50	59	70	58	
	HOUR 19 LST	79	67	58	64	58	63	65	55	43	58	68	77	63	
S	PERCENT POSSIBLE SUNSHINE		40												
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	6	0	1	1	0	0	1	2	0	1	1	0	13	
	THUNDERSTORMS	3	1	2	4	4	8	9	3	2	0	1	0	37	
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.)	29.21	29.18	29.24	29.08	29.11	29.16	29.17	29.14	29.15	29.25	29.29	29.23	29.18	
	MEAN SEA-LEVEL PRESS. (IN.)	30.10	30.07	30.13	29.94		30.01	30.01	29.99	30.00	30.12		30.10		
WINDS	RESULTANT SPEED (MPH)	2.5	2.3	2.2	2.5	2.6	1.3	2.0	1.7	2.1	1.1	3.0	3.4	1.4	
	RES. DIR. (TENS OF DEGS.)	21	23	36	18	20	17	27	35	28	23	25	23	24	
	MEAN SPEED (MPH)	12.1	11.3	10.8	12.2	9.2	8.2	8.3	8.1	8.2	9.1	9.7	10.4	9.8	
	PREVAIL. DIR. (TENS OF DEGS.)	24	19	01	25	18	22	23	32	36	18	23	24	23	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	39	46	31	44	39	30	46	31	25	29	36	37	46	
	DIR. (TENS OF DEGS.)	22	23	04	24	19	25	30	27	18	28	26	23	30	
	DATE OF OCCURRENCE	23	11	14	16	17	28+	06	13	26+	22+	23	15	JUL 06	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	47	56	39	52	48	36	55	34	31	34	41	46	56	
DIR. (TENS OF DEGS.)	22	23	04	22	21	25	29	27	18	28	25	23	23		
DATE OF OCCURRENCE	23	11	14	09	17	28+	06	13	26	22+	23	15	FEB 11		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	6.35	3.57	1.71	4.09	3.75	2.57	2.96	1.50	0.75	1.82	0.69	2.61	32.37	
	GREATEST 24-HOUR (IN.)	2.42	1.53	0.69	1.04	1.16	1.23	1.07	0.99	0.68	0.94	0.25	0.93	2.42	
	DATE OF OCCURRENCE	21-22	7	05-06	27-28	17-18	01-02	19-20	13	29	08-09	25-26+	09-10	JAN 21-22	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	17	13	6	19	11	10	8	10	5	8	6	15	128	
PRECIPITATION ≥ 0.10	10	5	6	11	7	6	7	3	1	4	3	5	68		
PRECIPITATION ≥ 1.00	2	1	0	0	1	0	0	0	0	0	0	0	4		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	18.3	2.9	5.2	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	29.5	
	GREATEST 24-HOUR (IN.)	7.4	1.2	3.3	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	7.4	
	DATE OF OCCURRENCE	02	23	09	16								27-28	JAN 02	
	MAXIMUM SNOW DEPTH (IN.)	10	1	5	0	0	0	0	0	0	0	0	1	10	
	DATE OF OCCURRENCE	11	25+	09									29+	JAN 11	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	6	1	2	0	0	0	0	0	0	0	0	1	10		

NORMALS, MEANS, AND EXTREMES

INDIANAPOLIS, IN (IND)

LATITUDE: 39° 42' 36" N LONGITUDE: 86° 16' 20" W ELEVATION (FT): GRND: 796 BARO: 796 TIME ZONE: EASTERN (UTC + 5) WBAN: 93819

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	33.7	38.3	50.9	63.3	73.8	82.7	85.5	83.6	77.6	65.8	51.9	38.5	62.1
	MEAN DAILY MAXIMUM	52	35.0	39.7	50.1	62.8	73.3	82.4	85.5	83.7	77.7	66.1	51.3	39.4	62.2
	HIGHEST DAILY MAXIMUM	60	71	75	85	89	93	102	104	102	100	90	81	74	104
	YEAR OF OCCURRENCE		1950	1999	1981	1970	1988	1988	1954	1988	1954	1954	1950	1982	JUL 1954
	MEAN OF EXTREME MAXS.	52	57.6	62.2	74.0	81.4	86.8	92.5	94.1	92.4	90.2	82.2	71.1	61.2	78.8
	NORMAL DAILY MINIMUM	30	17.2	20.9	31.9	41.5	51.7	61.0	65.2	62.8	55.6	43.5	34.1	23.2	42.4
	MEAN DAILY MINIMUM	52	18.8	22.4	31.2	41.5	51.6	61.2	65.3	63.0	55.2	43.8	33.5	24.0	42.6
	LOWEST DAILY MINIMUM	60	-27	-21	-7	16	28	37	44	41	28	17	-2	-23	-27
	YEAR OF OCCURRENCE		1994	1982	1980	1940	1966	1992	1942	1965	1942	1942	1958	1989	JAN 1994
	MEAN OF EXTREME MINS.	52	-4.2	1.2	12.5	25.7	36.5	47.5	53.7	51.5	39.3	28.2	16.9	2.2	25.9
	NORMAL DRY BULB	30	25.5	29.6	41.4	52.4	62.8	71.9	75.4	73.2	66.6	54.7	43.0	30.9	52.3
	MEAN DRY BULB	52	27.0	31.0	40.5	52.2	62.5	71.8	75.4	73.3	66.4	54.9	42.3	31.7	52.4
	MEAN WET BULB	15	26.5	30.0	37.1	46.6	56.5	65.2	68.9	67.3	60.2	49.5	39.6	28.3	48.0
	MEAN DEW POINT	15	22.1	24.7	30.7	40.3	51.0	60.6	65.3	63.8	55.8	44.4	34.8	24.3	43.1
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.6	3.9	7.2	4.3	1.6	0.0	0.0	0.0	17.6	
MAXIMUM ≤ 32°	30	14.0	9.0	2.0	*	0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.7	34.6	
MINIMUM ≤ 32°	30	27.8	23.4	16.9	5.5	0.4	0.0	0.0	0.0	0.0	4.2	14.2	24.9	117.3	
MINIMUM ≤ 0°	30	4.4	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	8.6	
H/C	NORMAL HEATING DEG. DAYS	30	1225	991	732	378	165	5	0	6	58	338	660	1057	5615
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	96	212	322	260	106	18	0	0	1014
RH	NORMAL (PERCENT)	30	75	74	70	66	67	68	73	75	74	72	76	78	72
	HOUR 01 LST	30	78	77	75	73	77	79	84	86	85	80	80	81	80
	HOUR 07 LST	30	80	81	80	78	81	82	86	90	90	86	84	83	83
	HOUR 13 LST	30	70	67	62	55	55	56	60	61	58	57	66	72	62
	HOUR 19 LST	30	72	70	65	58	57	58	62	66	67	65	72	76	66
S	PERCENT POSSIBLE SUNSHINE	52	40	49	50	54	60	65	66	68	65	61	41	38	55
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	58	3.3	2.5	1.7	0.6	0.8	0.7	1.1	1.7	1.4	1.2	1.6	2.8	19.4
	THUNDERSTORMS	58	0.7	0.7	2.7	4.4	6.2	7.3	7.6	5.9	3.5	1.8	1.1	0.4	42.3
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	1			1.0		1.0									
PARTLY CLOUDY	1	1.0		2.0		1.0									
CLOUDY	1		2.0	6.0		1.0	1.0								
PR	MEAN STATION PRESSURE (IN)	27	29.20	29.19	29.11	29.10	29.10	29.10	29.20	29.20	29.20	29.20	29.20	29.20	29.17
	MEAN SEA-LEVEL PRES. (IN)	15	30.12	30.10	30.06	29.97	29.98	30.01	30.01	30.04	30.06	30.09	30.09	30.13	30.05
WINDS	MEAN SPEED (MPH)	45	11.2	10.9	12.0	11.6	9.9	8.7	7.7	7.3	8.1	9.1	10.7	10.7	9.8
	PREVAIL. DIR (TENS OF DEGS)	29	24	23	24	24	23	23	23	23	23	24	24	24	23
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	39	46	38	47	40	40	49	32	38	32	44	37	49
	DIR. (TENS OF DEGS)		22	23	28	25	30	28	28	02	25	23	23	23	28
	YEAR OF OCCURRENCE		1999	1999	1998	1997	1997	1998	1998	1997	1997	1998	1998	1999	JUL 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	3	47	56	48	58	48	61	60	39	47	41	52	46	61
DIR. (TENS OF DEGS)		22	23	28	25	21	28	29	01	26	23	22	23	28	
YEAR OF OCCURRENCE		1999	1999	1998	1997	1999	1998	1998	1997	1997	1997	1998	1999	JUN 1998	
PRECIPITATION	NORMAL (IN)	30	2.32	2.46	3.79	3.70	4.00	3.49	4.47	3.64	2.87	2.63	3.23	3.34	39.94
	MAXIMUM MONTHLY (IN)	60	12.69	5.35	10.74	8.09	10.10	10.26	11.79	8.34	8.06	8.36	8.50	7.72	12.69
	YEAR OF OCCURRENCE		1950	1971	1963	1964	1943	1998	1992	1980	1989	1941	1985	1990	JAN 1950
	MINIMUM MONTHLY (IN)	60	0.21	0.36	0.92	0.98	1.06	0.36	0.55	0.68	0.24	0.17	0.69	0.45	0.17
	YEAR OF OCCURRENCE		1944	1978	1994	1976	1988	1988	1997	1964	1963	1963	1999	1976	OCT 1963
	MAXIMUM IN 24 HOURS (IN)	57	3.47	2.50	3.05	2.56	3.53	3.80	5.32	4.72	3.07	3.90	4.15	2.83	5.32
	YEAR OF OCCURRENCE		1950	1977	1963	1961	1961	1963	1987	1976	1961	1959	1993	1990	JUL 1987
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	11.5	10.1	13.4	11.9	11.3	9.3	9.9	8.9	8.1	8.5	10.2	13.2	126.3	
PRECIPITATION ≥ 1.00	30	0.4	0.5	0.8	0.9	1.0	0.8	1.2	1.1	0.7	0.5	0.8	0.6	9.3	
SNOWFALL	NORMAL (IN)	30	8.2	7.8	3.2	0.5	0.*	0.0	0.0	0.0	0.4	1.6	5.8	27.5	
	MAXIMUM MONTHLY (IN)	68	30.6	18.0	12.5	4.0	0.2	T	0.0	T	0.0	9.3	8.3	27.5	30.6
	YEAR OF OCCURRENCE		1978	1979	1996	1940	1989	1995		1989		1989	1966	1973	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	57	12.2	12.5	11.3	3.1	0.2	T	0.0	T	0.0	7.5	8.2	11.5	12.5
	YEAR OF OCCURRENCE		1978	1965	1996	1953	1989	1995		1989		1989	1966	1973	FEB 1965
	MAXIMUM SNOW DEPTH (IN)	51	20	15	9	3	0	0	0	0	0	2	8	13	20
	YEAR OF OCCURRENCE		1978	1978	1960	1953						1989	1966	1973	JAN 1978
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	2.4	2.4	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.9	8.5	

PRECIPITATION (inches) 1999 INDIANAPOLIS, IN (IND)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	1.17	1.86	2.51	6.53	2.43	1.97	4.43	1.82	2.41	3.66	2.12	2.07	32.98
1971	1.98	5.35	1.49	1.16	4.25	3.39	5.68	1.93	3.10	1.84	1.29	6.02	37.48
1972	1.57	1.15	2.48	5.81	1.89	6.04	2.01	2.94	5.65	2.25	5.65	2.83	40.27
1973	2.27	1.11	5.63	2.76	1.79	5.91	6.67	2.74	2.43	3.11	3.62	4.27	42.31
1974	3.39	2.58	3.60	3.45	6.27	5.15	1.20	5.63	3.25	0.99	2.99	2.81	41.31
1975	4.37	4.13	4.16	4.14	2.42	5.73	4.63	4.68	2.32	2.80	3.63	3.71	46.72
1976	2.29	2.90	3.46	0.98	3.10	3.97	3.09	7.95	2.02	2.79	0.82	0.45	33.82
1977	1.50	3.62	3.83	1.91	2.78	3.86	2.57	4.47	3.40	2.79	3.01	4.31	38.05
1978	3.80	0.36	3.54	3.59	4.21	4.43	5.04	6.89	0.85	3.82	2.38	4.03	42.94
1979	3.24	2.86	2.43	3.14	2.23	3.93	11.06	6.09	0.36	2.32	4.37	2.57	44.60
1980	1.67	1.84	4.26	2.10	2.26	4.15	2.87	8.34	3.31	1.87	1.41	0.78	34.86
1981	0.36	2.88	1.22	5.81	9.23	1.64	5.75	1.69	2.04	2.35	1.12	3.40	37.49
1982	5.64	1.62	4.73	2.40	5.94	5.16	3.44	1.00	1.20	0.91	4.16	5.78	41.98
1983	1.05	1.03	2.94	4.47	4.68	4.53	1.58	2.79	1.28	3.87	4.55	3.43	36.20
1984	0.97	3.16	3.14	3.90	4.35	1.51	4.83	3.27	4.69	2.60	5.38	4.33	42.13
1985	1.37	3.73	5.94	2.60	4.60	3.06	4.06	5.29	2.71	1.82	8.50	3.30	46.98
1986	0.73	2.84	3.93	4.34	7.37	3.58	4.88	1.18	5.68	7.84	2.32	1.71	46.40
1987	1.55	1.28	1.84	2.68	1.77	4.11	9.22	0.86	1.41	1.36	2.60	4.77	33.45
1988	2.35	3.04	3.22	4.02	1.06	0.36	4.71	1.46	1.14	3.07	4.39	2.50	31.32
1989	1.75	1.32	3.72	4.32	5.79	3.80	6.15	8.05	8.06	2.92	2.79	1.90	50.57
1990	1.79	5.17	3.93	2.44	7.59	3.11	3.68	4.46	2.68	4.64	3.23	7.72	50.44
1991	1.59	1.94	6.41	4.34	4.64	0.91	2.17	3.54	1.12	5.47	3.95	1.45	37.53
1992	1.40	1.15	2.61	4.17	1.56	4.07	11.79	1.42	3.40	2.84	7.88	1.89	44.18
1993	3.29	2.31	3.72	3.75	2.76	5.15	4.94	6.42	5.69	2.25	8.30	2.18	50.76
1994	2.68	1.39	0.92	5.62	2.03	7.00	1.27	2.59	2.19	0.86	3.40	1.66	31.61
1995	2.44	0.90	2.99	2.79	7.37	3.49	2.61	4.16	1.27	2.08	2.64	2.72	35.46
1996	4.08	1.16	3.51	7.02	8.89	5.16	6.26	2.27	7.61	1.88	6.22	2.75	56.81
1997	4.47	3.92	4.59	1.97	4.93	3.17	0.55	2.96	1.51	1.55	1.94	1.33	32.89
1998	2.51	1.23	5.49	4.84	6.13	10.26	3.97	3.66	0.48	4.89	2.52	1.00	46.98
1999	6.35	3.57	1.71	4.09	3.75	2.57	2.96	1.50	0.75	1.82	0.69	2.61	32.37
POR= 128 YRS	2.89	2.50	3.75	3.71	4.02	4.06	3.88	3.28	3.09	2.69	3.28	2.88	40.03

WBAN : 93819

AVERAGE TEMPERATURE (°F) 1999 INDIANAPOLIS, IN (IND)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	17.9	28.6	38.1	55.1	65.6	71.5	75.2	74.2	69.1	55.2	40.9	34.7	52.2
1971	23.4	28.9	37.3	51.0	58.9	75.6	72.3	71.3	69.4	62.0	43.1	38.4	52.6
1972	26.5	28.4	39.8	52.1	65.0	68.8	74.6	73.1	68.3	51.5	39.9	31.9	51.7
1973	30.7	31.5	49.4	51.3	59.5	73.3	76.0	74.4	69.9	59.4	46.4	30.9	54.4
1974	31.6	32.4	45.3	55.0	62.1	68.6	76.0	71.8	60.6	52.5	42.5	32.9	52.6
1975	32.0	32.0	36.9	48.9	65.5	71.5	73.5	76.1	62.6	55.9	46.4	32.8	52.8
1976	23.9	38.8	46.6	53.4	58.8	71.3	73.9	71.3	63.6	48.7	34.7	24.6	50.8
1977	10.3	28.2	46.5	57.1	70.6	71.2	78.0	74.0	69.6	54.2	45.9	29.2	52.9
1978	18.2	17.8	36.7	55.2	63.5	74.0	77.2	75.0	70.4	52.7	45.7	34.4	51.7
1979	18.0	18.8	43.4	49.8	61.1	71.1	73.0	72.4	64.9	53.1	41.3	34.9	50.2
1980	28.5	22.5	36.0	49.1	64.0	69.1	78.5	76.6	67.9	50.9	40.3	31.8	51.3
1981	23.5	33.0	39.9	57.4	59.9	73.3	75.4	72.8	64.6	53.1	44.2	27.8	52.1
1982	20.1	26.4	42.5	48.6	68.6	67.8	76.2	71.7	64.4	55.7	44.2	40.2	52.2
1983	30.6	35.5	42.9	48.2	58.2	71.8	79.7	80.1	69.4	57.5	44.1	20.2	53.2
1984	22.8	37.3	33.0	50.0	58.8	75.3	72.4	74.3	64.2	61.3	43.0	38.9	52.6
1985	20.4	26.1	44.6	57.1	64.9	70.6	74.3	71.2	66.2	57.6	46.6	22.5	51.8
1986	28.5	31.4	43.9	53.8	63.5	72.8	77.5	70.1	69.8	55.6	39.8	32.3	53.3
1987	27.6	35.5	44.5	52.5	68.1	73.7	75.8	73.6	68.1	48.6	46.3	35.8	54.2
1988	25.9	27.2	41.4	51.9	64.4	73.4	78.3	77.5	67.3	48.2	44.2	31.7	52.6
1989	36.3	27.2	42.5	51.4	59.4	71.4	75.7	71.8	64.4	55.4	40.9	18.8	51.3
1990	37.3	37.6	46.2	51.4	60.1	71.3	73.9	72.5	66.9	53.9	47.5	34.6	54.4
1991	26.9	35.3	43.7	55.3	68.3	74.6	76.7	75.2	67.9	57.5	40.2	35.7	54.8
1992	31.5	38.4	43.2	52.1	60.5	68.1	73.5	69.5	65.1	53.4	43.2	33.3	52.7
1993	31.6	27.4	39.1	50.7	63.5	71.0	77.2	75.3	62.2	51.6	42.2	32.4	52.0
1994	21.8	29.7	41.0	54.1	60.4	75.0	75.5	71.8	66.5	57.0	48.6	38.9	53.4
1995	28.6	30.0	45.0	51.9	61.6	72.8	76.6	79.6	64.7	55.7	37.0	28.6	52.7
1996	25.1	31.2	35.6	49.3	61.9	72.1	73.1	74.9	65.5	55.3	37.3	34.4	51.3
1997	24.3	36.0	43.0	48.3	56.7	69.6	75.4	71.6	66.1	54.6	39.0	33.4	51.5
1998	36.6	40.8	42.0	53.3	67.1	71.5	74.9	75.3	71.4	57.0	45.5	36.5	56.0
1999	28.5	37.5	38.4	54.9	64.3	73.7	79.2	72.4	67.1	55.2	48.8	34.6	54.6
POR= 128 YRS	28.1	30.9	40.4	52.0	62.5	71.7	75.7	73.6	66.8	55.2	42.2	31.8	52.6

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HEATING DEGREE DAYS (base 65°F) 1999 INDIANAPOLIS, IN (IND)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	4	0	51	301	715	930	1281	1006	852	417	198	0	5755
1971-72	3	1	49	129	648	813	1186	1054	774	389	89	35	5170
1972-73	8	4	36	413	746	1018	1059	937	477	416	184	0	5298
1973-74	0	0	20	211	552	1052	1028	905	617	314	158	18	4875
1974-75	0	5	163	380	671	988	1016	918	866	481	78	22	5588
1975-76	8	0	137	288	551	992	1265	754	564	363	203	1	5126
1976-77	0	2	79	503	904	1249	1693	1025	567	276	45	19	6362
1977-78	0	0	30	326	575	1104	1443	1313	873	292	150	4	6110
1978-79	0	0	36	377	571	944	1453	1288	665	455	170	5	5964
1979-80	3	13	87	384	705	929	1123	1224	893	474	93	36	5964
1980-81	0	0	45	438	734	1022	1279	889	769	244	180	1	5601
1981-82	1	0	94	368	621	1146	1388	1075	690	486	26	18	5913
1982-83	0	2	110	325	621	764	1062	819	681	498	211	21	5114
1983-84	1	0	64	246	619	1386	1304	796	987	447	211	1	6062
1984-85	1	0	119	138	653	803	1375	1082	631	269	85	16	5172
1985-86	0	1	97	245	544	1311	1126	935	652	344	114	7	5376
1986-87	0	24	30	312	750	1009	1150	820	627	378	51	0	5151
1987-88	2	5	37	504	553	900	1205	1090	726	390	84	15	5511
1988-89	0	2	37	517	618	1024	882	1052	693	419	226	11	5481
1989-90	0	8	106	313	718	1426	851	760	588	432	153	19	5374
1990-91	4	1	86	348	518	932	1175	824	651	292	71	0	4902
1991-92	0	0	103	254	739	902	1035	766	670	390	185	34	5078
1992-93	2	7	88	353	645	973	1028	1046	796	424	103	35	5500
1993-94	0	1	129	409	680	1005	1332	984	738	336	192	3	5809
1994-95	0	4	61	256	483	805	1118	973	615	392	131	6	4844
1995-96	1	0	94	288	835	1125	1230	971	908	469	162	7	6090
1996-97	0	0	85	296	823	942	1254	807	676	494	261	30	5668
1997-98	3	5	47	366	772	973	876	670	720	344	48	44	4868
1998-99	0	0	14	257	579	878	1125	767	814	297	81	8	4820
1999-	0	0	70	298	481	936							

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COOLING DEGREE DAYS (base 65°F) 1999 INDIANAPOLIS, IN (IND)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	26	122	213	327	292	182	5	0	0	1167
1971	0	0	0	2	17	324	237	202	189	40	0	0	1011
1972	0	0	0	8	95	156	313	266	141	0	0	0	979
1973	0	0	0	11	20	256	349	302	172	44	1	0	1155
1974	0	0	11	19	73	131	346	225	40	3	2	0	850
1975	0	0	0	3	100	222	281	355	71	14	0	0	1046
1976	0	0	0	21	15	198	284	205	43	4	0	0	770
1977	0	0	3	45	226	212	410	286	175	0	6	0	1363
1978	0	0	0	4	110	282	382	318	203	1	0	0	1300
1979	0	0	0	7	57	197	255	250	92	24	0	0	882
1980	0	0	0	3	68	168	425	368	139	6	0	0	1177
1981	0	0	1	23	29	256	332	249	88	5	0	0	983
1982	0	0	0	0	146	109	356	214	98	40	3	1	967
1983	0	0	1	3	9	231	464	474	202	18	0	0	1402
1984	0	0	0	6	25	318	237	291	103	28	0	0	1008
1985	0	0	5	36	90	190	296	199	143	21	0	0	980
1986	0	0	6	12	74	249	395	189	181	24	0	0	1130
1987	0	0	0	6	156	265	343	279	137	0	0	0	1186
1988	0	0	1	3	72	274	422	395	114	2	0	0	1283
1989	0	0	1	20	57	215	338	227	94	21	0	0	973
1990	0	0	13	30	10	215	289	241	147	10	1	0	956
1991	0	0	0	7	178	294	367	323	196	30	0	0	1395
1992	0	0	0	10	53	137	274	152	99	1	0	0	726
1993	0	0	0	0	64	223	389	328	51	0	0	0	1055
1994	0	0	0	16	56	307	330	221	114	13	0	0	1057
1995	0	0	0	4	32	250	371	459	92	6	0	0	1214
1996	0	0	0	7	71	229	261	313	107	3	0	0	991
1997	0	0	0	0	12	178	327	217	87	49	0	0	870
1998	0	0	15	0	120	246	312	331	214	16	0	1	1255
1999	0	0	0	5	67	278	450	236	138	3	1	0	1178

SNOWFALL (inches) 1999 INDIANAPOLIS, IN (IND)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.0	0.2	0.4	1.5	8.2	2.8	T	0.0	0.0	13.1
1971-72	0.0	0.0	0.0	0.0	4.4	0.4	7.9	6.3	0.3	0.6	0.0	0.0	19.9
1972-73	0.0	0.0	0.0	T	1.9	1.1	0.4	1.4	2.0	1.1	0.0	0.0	7.9
1973-74	0.0	0.0	0.0	0.0	0.4	27.5	3.8	8.0	3.0	2.1	0.0	0.0	44.8
1974-75	0.0	0.0	0.0	0.0	3.8	5.8	6.8	4.8	10.5	0.1	0.0	0.0	31.8
1975-76	0.0	0.0	0.0	0.0	4.5	8.1	5.6	0.6	2.3	0.0	0.0	0.0	21.1
1976-77	0.0	0.0	0.0	0.0	0.4	3.1	20.9	3.6	1.6	0.4	0.0	0.0	30.0
1977-78	0.0	0.0	0.0	0.0	2.8	15.2	30.6	3.9	5.4	0.0	0.0	0.0	57.9
1978-79	0.0	0.0	0.0	0.0	T	0.7	19.1	18.0	0.2	0.4	0.0	0.0	38.4
1979-80	0.0	0.0	0.0	0.0	0.8	0.2	5.0	14.5	3.6	0.7	0.0	0.0	24.8
1980-81	0.0	0.0	0.0	T	3.4	2.1	3.9	7.2	0.7	0.0	0.0	0.0	17.3
1981-82	0.0	0.0	0.0	T	0.4	15.6	21.8	13.6	3.5	3.3	0.0	0.0	58.2
1982-83	0.0	0.0	0.0	0.0	0.1	0.4	2.8	2.5	1.3	T	0.0	0.0	7.1
1983-84	0.0	0.0	0.0	0.0	0.1	8.3	7.2	17.1	9.2	T	0.0	0.0	41.9
1984-85	0.0	0.0	0.0	0.0	2.5	3.6	10.6	11.0	T	0.1	0.0	0.0	27.8
1985-86	0.0	0.0	0.0	0.0	T	8.1	1.7	9.5	1.1	T	0.0	0.0	20.4
1986-87	0.0	0.0	0.0	0.0	T	1.6	11.6	5.3	1.4	T	0.0	0.0	19.9
1987-88	0.0	0.0	0.0	0.0	T	1.1	2.9	4.8	2.5	T	0.0	0.0	11.3
1988-89	0.0	0.0	0.0	T	0.4	6.8	0.1	2.4	1.9	1.7	0.2	0.0	13.5
1989-90	0.0	T	0.0	9.3	0.6	8.2	4.1	2.5	1.3	T	0.0	0.0	26.0
1990-91	0.0	0.0	0.0	0.0	0.0	9.6	5.4	2.4	0.1	0.0	T	0.0	17.5
1991-92	0.0	0.0	0.0	0.0	3.0	0.2	7.1	0.2	2.9	1.3	0.0	T	14.7
1992-93	0.0	0.0	0.0	0.1	1.4	3.7	3.1	17.2	3.0	T	0.0	0.0	28.5
1993-94	0.0	0.0	0.0	2.4	1.1	5.6	14.0	3.9	3.7	0.8	0.0	T	31.5
1994-95	0.0	0.0	0.0	0.0	0.0	2.5	13.1	3.6	0.6	0.0	0.0	T	19.8
1995-96	0.0	0.0	0.0	0.0	1.4	11.0	25.2	1.6	12.5	T	0.0	0.0	51.7
1996-97	0.0	0.0	0.0	0.0	0.9	14.6	12.9	3.1	T	T	0.0	0.0	31.5
1997-98	0.0	0.0	0.0	0.0	5.8	2.5	0.8	0.6	0.7	0.0	0.0	0.0	10.4
1998-99	0.0	0.0	0.0	0.0	0.0	3.3	18.3	2.9	5.2	T	0.0	0.0	29.7
1999-	0.0	0.0	0.0	0.0	0.0	3.1							
POR= 67 YRS	0.0	T	0.0	0.2	1.9	5.0	6.7	5.5	3.3	0.5	0.0	T	23.1

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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 (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.</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 EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999
INDIANAPOLIS,
INDIANA (IND)

Indianapolis is located in the central part of the state and is situated on level or slightly rolling terrain. The greater part of the city lies east of the White River which flows in a general north to south direction.

The National Weather Service Forecast Office is located approximately 7 miles southwest of the central part of the city at the Indianapolis International Airport. From a field elevation of 797 feet above sea level at the Indianapolis International Airport the terrain slopes gradually downward to a little below 645 feet at the White River, then upward to just over 910 feet in the northwest corner and eastern sections of the county. The street elevation at the former city office located in the Old Federal Building is 718 feet.

Indianapolis has a temperate climate, with very warm summers and without a dry season. Very cold temperatures may be produced by the invasion of continental polar air in the winter from northern latitudes. The polar air can be quite frigid with very low humidity. The arrival of maritime tropical air from the Gulf in the summer brings warm temperatures and moderate humidity. One of the longest and most severe heat waves brought temperatures of 100 degrees or more for nine consecutive days.

Precipitation is distributed fairly evenly throughout the year, and therefore there is no pronounced wet or dry season. Rainfall in the spring and summer is produced mostly by showers and thunderstorms. A rainfall of about 2 1/2 inches in a 24-hour period can be expected about once a year. Snowfalls of 3 inches or more occur on an average of two or three times in the winter.

Local levees and/or channel improvements now protect some formerly flood-prone areas.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 20 and the average last occurrence in the spring is April 22.

STATION LOCATION

INDIANAPOLIS, INDIANA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUCOMPT	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS	
						SEA LEVEL	GROUND												
							WIND	EMERPH	EMERPH	EMERPH	EMERPH	EMERPH	EMERPH	EMERPH	EMERPH				EMERPH
<u>CITY</u>																			
Blackfords Block, SE Corner Washington and Meridan Streets	2/04/71	4/30/81		39°46'	86°10'		91	47	47			74		74					
Saks Building, SW Corner Washington and Penn	4/30/81	9/01/96	1 block E	39°46'	86°10'		90	52	52			74		74			Thermometers raised to 75 feet 5/1/85 (from window to roof).		
Majestic Building, NE Corner Pennsylvania and Maryland Streets	9/01/96	7/01/15	1 block SSE	39°46'	86°10'		710	167	154	154		146		146					
Consolidated Building 115 N. Pennsylvania St.	7/01/15	10/28/38	2-1/2 blocks N	39°46'	86°10'		715	232	194	194		188		188					
Federal Building	10/28/38	10/01/54	1-1/2 blocks NNW	39°46'	86°10'		718	131	98	98		a96		96			a - This gage moved to Airport 1/1/43.		
<u>AIRPORT</u>																			
Airport Admn. Building Weir Cook Municipal AP 6.7 miles WSW of P.O.	4/01/31	5/01/41		39°44'	86°16'		793	52	A5	A5				B4			A - 46' to 10/19/37. B - 33' to 10/19/37.		
Roscoe Turner Hangar Building, Weir Cook Municipal	5/01/41	6/14/65	500 ft. S	39°44'	86°16'		e792	c20	5	5		a29		4		4	d5	a - Installed 1/1/43. c - 54' to 64' prior to installation on field site 11/9/59. d - Telepsychrometer (6') 12/24/54-9/1/59. Hygro. comm. 9/1/59 15' West of telepsychrometer site. e - 793' to 12/21/62.	
Bldg. #1, Weir Cook ++ Municipal Airport +	6/14/65	01/01/96	2600 ft. NW	39°44'	86°17'		792	20	5	5	NA	28		5		1	5	NA	Wind sensors and hygrometer not moved 6/11/65.
+ International Airport effective 7/23/76.				39°42'	86°16'		792	g20	f5 K5	f5 K5	g9 17	f4 14		f5 j4		f4 j4	g5 H5	NA	f - Station moved 0.6 mile SE within airport 9/28/77. g - Not moved 9/28/77. h - Commissioned 9/28/77. i - Type change 9/24/85. j - Moved about 67' S 6/27/86. k - Moved about 83' S 6/27/86. l - Moved about 60' S 6/27/86.
++ Main Terminal/Admin. Bldg. effective 9/28/77.																			
International Airport	01/01/96	Present	NA	39°43'	86°16'		796											S	ASOS Commissioned 01/01/96

SUBSCRIPTION: Price and ordering information available through: National 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

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