

2004

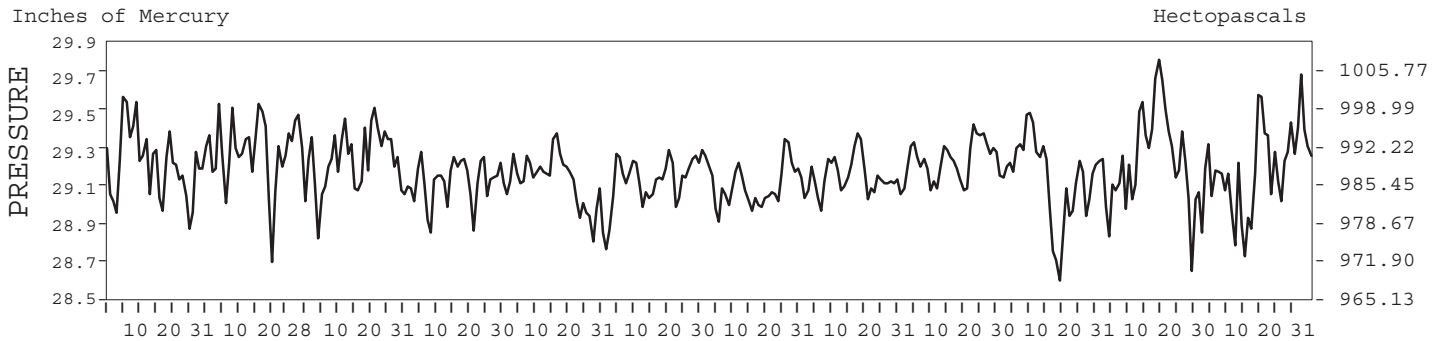
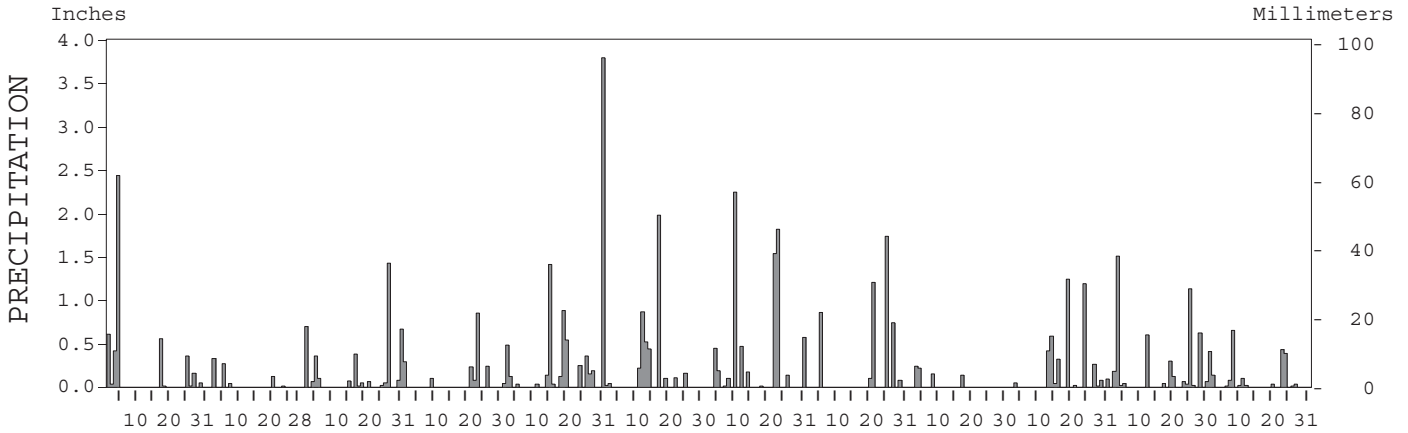
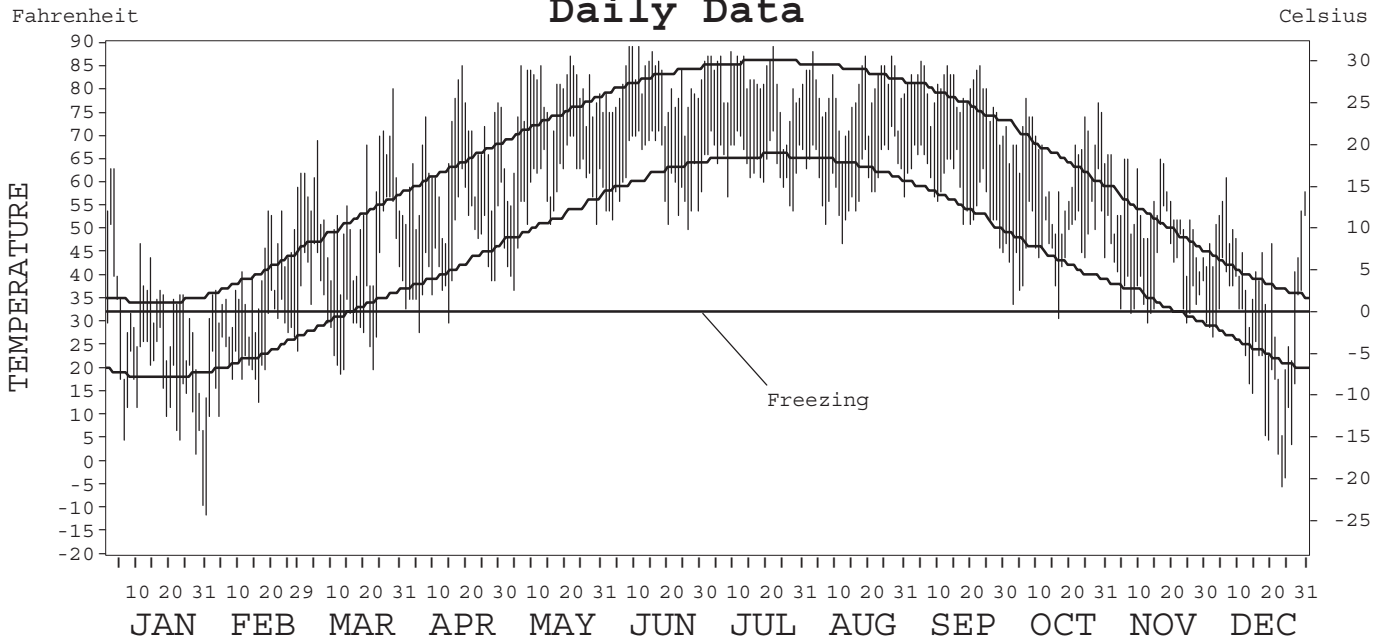
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-1986

## INDIANAPOLIS, INDIANA (IND)

### Daily Data



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# METEOROLOGICAL DATA FOR 2004

## INDIANAPOLIS, IN (IND)

LATITUDE: 39° 42' 36" N      LONGITUDE: 86° 16' 20" W      ELEVATION (FT): GRND: 794      BARO: 797      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	32.8	40.2	54.5	65.5	76.2	80.7	81.6	78.9	79.4	65.1	53.7	39.6	62.4	
	HIGHEST DAILY MAXIMUM	63	62	80	85	87	89	89	88	86	78	66	61	89	
	DATE OF OCCURRENCE	03+	29	28	18	21	11+	22	03	05	07	02+	07	JUL 22	
	MEAN DAILY MINIMUM	17.5	24.0	36.2	44.4	57.6	61.2	64.5	60.6	58.7	46.7	39.9	24.0	44.6	
	LOWEST DAILY MINIMUM	-11	10	19	28	37	50	54	47	45	31	30	-5	-11	
	DATE OF OCCURRENCE	31	04+	12	05	04	26	28	12	30	17	25+	24	JAN 31	
	AVERAGE DRY BULB	25.2	32.1	45.4	55.0	66.9	71.0	73.1	69.8	69.1	55.9	46.8	31.8	53.5	
	MEAN WET BULB	22.9	28.7	40.6	47.9	61.8	65.2	67.5	64.9	62.3	51.5	43.5	29.6	48.9	
	MEAN DEW POINT	17.0	22.6	34.5	39.9	58.3	61.5	64.4	61.8	57.9	47.0	39.4	25.2	44.1	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM ≤ 32°	15	6	0	0	0	0	0	0	0	0	0	8	29	
MINIMUM ≤ 32°	28	25	14	2	0	0	0	0	0	1	5	20	95		
MINIMUM ≤ 0°	2	0	0	0	0	0	0	0	0	0	0	2	4		
H/C	HEATING DEGREE DAYS	1227	949	604	316	77	8	3	20	19	280	538	1024	5065	
	COOLING DEGREE DAYS	0	0	3	21	147	192	258	177	149	5	0	0	952	
RH	MEAN (PERCENT)	72	71	69	59	76	74	76	77	71	76	77	78	73	
	HOUR 01 LST	75	77	74	66	84	86	86	87	81	83	80	79	80	
	HOUR 07 LST	76	79	80	73	88	89	89	93	89	92	84	84	85	
	HOUR 13 LST	66	62	63	50	65	60	62	64	55	63	72	69	63	
	HOUR 19 LST	70	66	63	50	66	65	69	70	60	69	74	74	66	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	3	2	2	0	0	0	2	0	1	3	0	7	20	
	THUNDERSTORMS	0	0	0	1	10	7	8	5	1	4	1	1	38	
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.)	29.23	29.31	29.25	29.14	29.12	29.17	29.11	29.17	29.25	29.13	29.26	29.22	29.20	
	MEAN SEA-LEVEL PRESS. (IN.)	30.13	30.20	30.13	30.00	29.98	30.02	29.96	30.02	30.11	30.00	30.14	30.11	30.07	
WINDS	RESULTANT SPEED (MPH)	3.1	1.6	3.6	2.9	5.2	2.7	1.1	1.8	2.4	1.1	0.9	5.4	1.9	
	RES. DIR. (TENS OF DEGS.)	27	21	24	25	21	23	34	24	07	18	14	24	23	
	MEAN SPEED (MPH)	11.2	10.9	11.3	12.4	10.4	8.3	8.6	7.6	7.7	9.2	9.9	11.1	9.9	
	PREVAIL. DIR. (TENS OF DEGS.)	24	26	14	20	22	23	25	17	02	05	17	22	23	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	30	37	43	38	35	30	43	32	25	44	32	39	44	
	DIR. (TENS OF DEGS.)	27	26	21	22	25	09	28	22	33	25	03	28	25	
	DATE OF OCCURRENCE	27	20	05	19	31	12	21	24	28+	30	24	12	OCT 30	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	39	44	51	49	40	38	49	38	33	51	36	48	51	
DIR. (TENS OF DEGS.)	23	26	23	20	25	25	28	23	02	26	04	29	26		
DATE OF OCCURRENCE	02	20	05	19	31	01	21	24	08	30	24	12	OCT 30		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	4.65	0.77	4.33	1.54	8.55	4.44	7.72	4.73	0.75	4.31	5.14	1.95	48.88	
	GREATEST 24-HOUR (IN.)	2.44	0.33	1.43	0.85	3.80	1.98	3.36	1.74	0.46	1.24	1.59	0.65	3.80	
	DATE OF OCCURRENCE	04	02	26	22	30	16	21-22	24	02-03	18	01-02	07	MAY 30	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	10	5	15	6	16	9	12	6	4	12	15	13	123	
PRECIPITATION ≥ 0.10	6	3	7	4	12	8	10	5	4	6	8	5	78		
PRECIPITATION ≥ 1.00	1	0	1	0	2	1	3	2	0	2	2	0	14		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	10.0	1.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	13.1	28.9	
	GREATEST 24-HOUR (IN.)	4.3	1.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.2	5.2	
	DATE OF OCCURRENCE	25	07	16								25	22	DEC 22	
	MAXIMUM SNOW DEPTH (IN.)	6	5	2	0	0	0	0	0	0	0	0	9	9	
	DATE OF OCCURRENCE	30+	02+	16								27+		DEC 27+	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	3	1	1	0	0	0	0	0	0	0	0	4	9		

# NORMALS, MEANS, AND EXTREMES

## INDIANAPOLIS, IN (IND)

LATITUDE: 39° 42' 36" N      LONGITUDE: 86° 16' 20" W      ELEVATION (FT): GRND: 794      BARO: 797      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	34.5	39.9	51.4	62.9	73.5	82.1	85.6	83.7	77.4	65.6	51.6	39.2	62.3
	MEAN DAILY MAXIMUM	57	35.1	39.9	50.4	62.9	73.2	82.2	85.4	83.7	77.7	66.0	51.4	39.3	62.3
	HIGHEST DAILY MAXIMUM	65	71	76	85	89	93	102	104	102	100	90	81	74	104
	YEAR OF OCCURRENCE		1950	2000	1981	1970	1988	1988	1954	1988	1954	1954	1950	1982	JUL 1954
	MEAN OF EXTREME MAXS.	57	57.7	62.4	74.0	81.6	86.8	92.2	93.8	92.4	90.1	82.1	71.1	61.2	78.8
	NORMAL DAILY MINIMUM	30	18.5	22.5	32.0	41.2	51.8	61.3	65.2	63.3	55.2	43.6	34.1	24.0	42.7
	MEAN DAILY MINIMUM	57	18.8	22.6	31.4	41.7	51.7	61.1	65.4	63.1	55.4	43.9	33.8	24.0	42.7
	LOWEST DAILY MINIMUM	65	-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.	57	-4.2	1.6	12.5	25.7	36.6	47.4	53.8	51.8	39.5	28.4	17.4	2.5	26.1
	NORMAL DRY BULB	30	26.5	31.2	41.7	52.0	62.6	71.7	75.4	73.5	66.3	54.6	42.9	31.6	52.5
	MEAN DRY BULB	57	27.0	31.2	40.7	52.3	62.5	71.7	75.5	73.3	66.5	55.0	42.6	31.6	52.5
	MEAN WET BULB	20	26.3	30.1	37.5	47.1	57.0	65.0	68.8	67.6	60.4	49.8	40.0	28.6	48.2
	MEAN DEW POINT	20	21.8	24.7	31.2	40.8	51.8	60.6	65.3	64.2	56.0	44.8	35.3	24.4	43.4
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.4	3.3	7.3	4.7	1.8	0.0	0.0	0.0	17.5	
MAXIMUM ≤ 32°	30	13.1	8.3	1.7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.9	7.8	31.8	
MINIMUM ≤ 32°	30	27.1	22.0	16.4	5.2	0.2	0.0	0.0	0.0	*	4.0	13.9	24.3	113.1	
MINIMUM ≤ 0°	30	3.5	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	7.0	
H/C	NORMAL HEATING DEG. DAYS	30	1192	957	724	394	141	16	2	4	77	335	659	1020	5521
	NORMAL COOLING DEG. DAYS	30	0	0	2	10	69	221	331	272	122	14	1	0	1042
RH	NORMAL (PERCENT)	30	77	74	70	67	68	70	73	76	74	72	75	79	73
	HOUR 01 LST	30	80	78	75	74	77	81	84	87	85	81	80	81	80
	HOUR 07 LST	30	82	82	80	79	82	83	87	91	90	87	84	84	84
	HOUR 13 LST	30	72	68	61	56	56	57	59	61	58	57	66	72	62
	HOUR 19 LST	30	75	71	65	58	58	59	63	67	66	65	72	77	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)	63	3.3	2.5	1.7	0.6	0.8	0.7	1.1	1.7	1.4	1.2	1.6	2.9	19.5
	THUNDERSTORMS	63	0.7	0.7	2.7	4.3	6.5	7.3	7.6	6.0	3.5	1.8	1.1	0.4	42.6
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)	32	29.20	29.19	29.11	29.10	29.10	29.10	29.20	29.20	29.20	29.20	29.20	29.21	29.17
	MEAN SEA-LEVEL PRES. (IN)	20	30.12	30.11	30.06	29.98	29.98	30.01	30.01	30.04	30.06	30.10	30.09	30.14	30.06
WINDS	MEAN SPEED (MPH)	50	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)	34	24	23	30	23	23	23	23	22	23	24	23	24	23
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	8	39	46	45	47	40	40	49	45	46	44	47	41	49
	DIR. (TENS OF DEGS)		22	28	27	25	25	28	28	29	26	25	28	26	28
	YEAR OF OCCURRENCE		1999	2001	2002	1997	2003	1998	1998	2000	2000	2004	2003	2000	JUL 1998
	MAXIMUM 5-SECOND:														
SPEED (MPH)	8	47	56	62	58	48	61	60	54	55	51	58	49	62	
DIR. (TENS OF DEGS)		22	23	25	25	27	28	30	29	26	26	28	26	25	
YEAR OF OCCURRENCE		1999	1999	2002	1997	2003	1998	2001	2000	2000	2004	2003	2000	MAR 2002	
PRECIPITATION	NORMAL (IN)	30	2.48	2.41	3.44	3.61	4.36	4.13	4.42	3.82	2.88	2.76	3.61	3.03	40.95
	MAXIMUM MONTHLY (IN)	65	12.69	5.35	10.74	8.09	10.10	10.26	11.79	8.34	10.37	8.36	8.50	7.72	12.69
	YEAR OF OCCURRENCE		1950	1971	1963	1964	1943	1998	1992	1980	2003	1941	1985	1990	JAN 1950
	MINIMUM MONTHLY (IN)	65	0.21	0.36	0.64	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	2001	1976	1988	1988	1997	1964	1963	1963	1999	1976	OCT 1963
	MAXIMUM IN 24 HOURS (IN)	62	3.47	2.50	3.05	2.56	3.80	3.80	5.32	4.72	7.31	3.90	4.15	2.83	7.31
	YEAR OF OCCURRENCE		1950	1977	1963	1961	2004	1963	1987	1976	2003	1959	1993	1990	SEP 2003
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	13.1	10.7	13.1	12.6	12.0	10.4	9.8	9.4	8.1	8.8	10.9	12.6	131.5	
PRECIPITATION ≥ 1.00	30	0.3	0.4	0.5	0.7	1.2	1.1	1.3	1.2	0.7	0.6	1.0	0.5	9.5	
SNOWFALL	NORMAL (IN)	30	9.3	6.1	3.1	0.4	0.*	0.0	0.0	0.0	0.4	1.3	6.4	27.0	
	MAXIMUM MONTHLY (IN)	73	30.6	21.7	12.5	4.0	0.2	T	0.0	T	0.0	9.3	8.3	27.5	30.6
	YEAR OF OCCURRENCE		1978	2003	1996	1940	1989	1995		1989		1989	1966	1973	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	62	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)	56	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	2.7	1.9	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.9	8.1	

PRECIPITATION (inches) 2004 INDIANAPOLIS, IN (IND)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2000	2.07	2.86	1.64	3.80	5.00	4.55	2.95	4.26	4.82	3.08	2.67	2.76	40.46
2001	0.74	1.95	0.64	1.82	4.10	4.46	8.34	2.47	4.66	7.01	2.69	3.01	41.89
2002	2.48	1.67	4.22	5.47	7.46	3.11	1.65	1.42	3.70	2.64	2.89	3.02	39.73
2003	1.27	3.45	3.72	2.55	6.39	2.36	8.01	4.64	10.37	2.68	3.64	3.48	52.56
2004	4.65	0.77	4.33	1.54	8.55	4.44	7.72	4.73	0.75	4.31	5.14	1.95	48.88
POR= 133 YRS	2.89	2.51	3.74	3.72	4.13	4.08	3.98	3.32	3.19	2.76	3.31	2.91	40.54

WBAN : 93819

AVERAGE TEMPERATURE (°F) 2004 INDIANAPOLIS, IN (IND)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2000	27.9	38.7	47.0	51.4	64.9	71.0	73.0	73.6	65.2	57.8	40.7	19.8	52.6
2001	28.0	34.6	38.4	58.5	64.4	70.2	74.4	75.4	65.1	54.3	49.5	38.2	54.3
2002	35.1	35.6	40.1	54.8	59.7	73.8	78.3	77.4	71.3	53.3	40.3	33.0	54.4
2003	21.7	25.4	43.3	54.6	61.1	68.2	74.1	74.9	64.6	54.5	47.3	34.4	52.0
2004	25.2	32.1	45.4	55.0	66.9	71.0	73.1	69.8	69.1	55.9	46.8	31.8	53.5
POR= 133 YRS	28.2	31.0	40.5	52.1	62.5	71.7	75.7	73.6	66.8	55.2	42.3	31.8	52.6

HEATING DEGREE DAYS (base 65°F) 2004 INDIANAPOLIS, IN (IND)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
1999-00	0	0	70	298	481	936	1143	755	553	401	83	18	4738
2000-01	0	0	101	237	724	1394	1141	845	816	246	100	31	5635
2001-02	5	0	91	331	457	826	919	819	764	348	211	5	4776
2002-03	0	0	22	389	731	983	1335	1101	666	320	144	45	5736
2003-04	0	0	89	328	528	942	1227	949	604	316	77	8	5068
2004-	3	20	19	280	538	1024							

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COOLING DEGREE DAYS (base 65°F) 2004 INDIANAPOLIS, IN (IND)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2000	0	0	2	0	88	205	256	274	113	22	0	0	960
2001	0	0	0	60	90	194	302	328	101	6	0	0	1081
2002	0	0	0	48	53	274	419	392	218	33	0	0	1437
2003	0	0	0	17	27	149	287	314	83	9	3	0	889
2004	0	0	3	21	147	192	258	177	149	5	0	0	952

SNOWFALL (inches) 2004 INDIANAPOLIS, IN (IND)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
1999-00	0.0	0.0	0.0	0.0	0.0	3.1	11.3	1.6	8.1	T	0.0	0.0	24.1
2000-01	0.0	T	0.0	0.0	0.2	16.3	2.1	0.8	T	0.2	T	0.0	19.6
2001-02	0.0	0.0	0.0	T	T	0.7	4.6	4.8	0.8	T	T	0.0	10.9
2002-03	0.0	0.0	0.0	0.0	0.5	10.6	14.6	21.7	2.6	T	0.0	0.0	50.0
2003-04	0.0	0.0	0.0	0.0	0.4	4.8	10.0	1.8	3.9	0.0	0.0	0.0	20.9
2004-	0.0	0.0	0.0	0.0	0.1	13.1							
POR= 72 YRS	0.0	T	0.0	0.2	1.9	5.3	6.8	5.4	3.4	0.5	0.0	T	23.5

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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 (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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2004  
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										AUTOMATIC OBSERVING EQUIPMENT *	REMARKS	
						SEA LEVEL	GROUND											
							GROUND	WIND	EXTREME	PSYCHROMETER	SUNSHINE	TIPPING GAUGE	WEIGHING	8 INCH	HYGRO			OTHER
TEMPERATURE	INSTRUMENT	THERMOMETER	SWITCH	BUCKET	RAIN	GAUGE	GAUGE	GAUGE	GAUGE	GAUGE	GAUGE	GAUGE	GAUGE					
<b>*Notes</b>																		
<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 hygrothermometer not moved 6/11/65.		
+ International Airport effective 7/23/76.				39°42'	86°16'	792	g20	f5 k5	f5 k5	% i7	f4 i4	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. % - Commissioned 9/28/77. h. Type change 9/24/85. i. Moved about 67' S 6/27/86. j. Moved about 83' S 6/27/86. k. 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'	1794									S	ASOS Commissioned 01/01/96 l. Ground elevation.		

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\* NOTES: For earlier station history see previous edition.