

2004

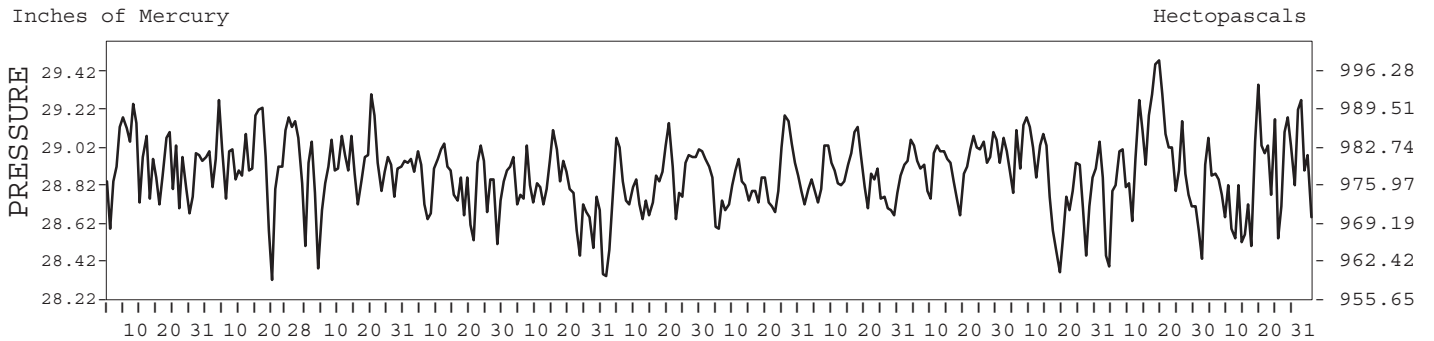
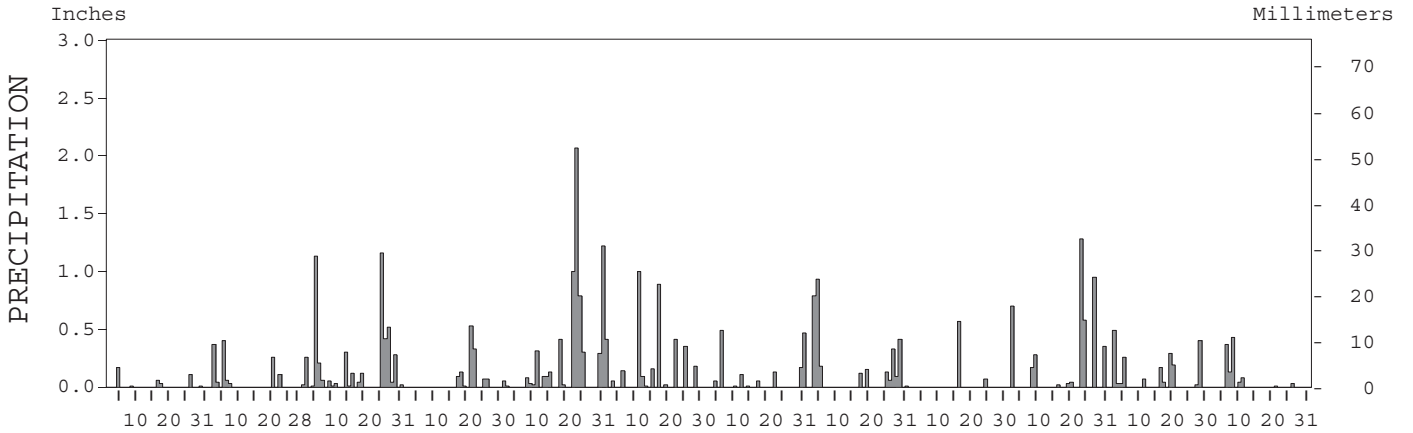
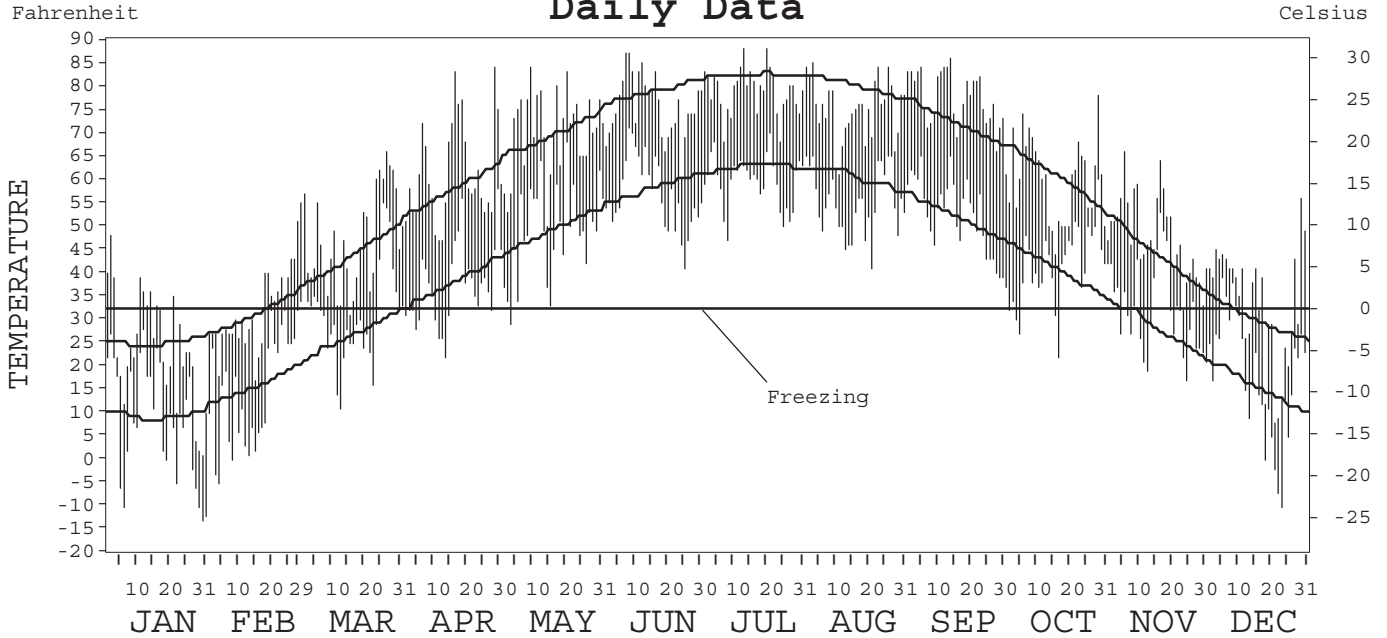
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2079

DUBUQUE,
IOWA (DBQ)

Daily Data



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METEOROLOGICAL DATA FOR 2004

DUBUQUE, IA (DBQ)

LATITUDE: 42° 23' 52" N LONGITUDE: 90° 42' 13" W ELEVATION (FT): GRND: 1069 BARO: 1072 TIME ZONE: CENTRAL (UTC + 6) WBAN: 94908

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	23.9	32.1	46.9	61.4	70.2	75.7	78.9	75.0	77.5	59.9	48.1	33.7	56.9	
	HIGHEST DAILY MAXIMUM	48	55	66	84	84	87	88	85	86	78	66	56	88	
	DATE OF OCCURRENCE	02	29	26	28	09	08+	20+	03	14	29	06	30	JUL 20+	
	MEAN DAILY MINIMUM	8.7	15.2	31.1	37.3	49.1	56.7	59.6	54.9	52.6	41.3	32.6	18.1	38.1	
	LOWEST DAILY MINIMUM	-13	-5	11	22	29	41	47	41	39	22	17	-10	-13	
	DATE OF OCCURRENCE	30	04	12	13	03	25	08	21	30+	17	25	24	JAN 30	
	AVERAGE DRY BULB	16.3	23.7	39.0	49.4	59.7	66.2	69.3	65.0	65.1	50.6	40.4	25.9	47.6	
	MEAN WET BULB		22.5	36.0	43.5	55.3	61.2	64.6		58.3	46.8	37.3	24.2		
	MEAN DEW POINT		18.2	31.6	35.5	51.3	57.6	61.6		53.4	42.1	32.5	19.3		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM ≤ 32°	22	17	1	0	0	0	0	0	0	0	1	13	54	
MINIMUM ≤ 32°	31	28	19	11	1	0	0	0	0	5	16	27	138		
MINIMUM ≤ 0°	9	3	0	0	0	0	0	0	0	0	0	4	16		
H/C	HEATING DEGREE DAYS	1503	1190	796	465	199	59	15	77	75	445	731	1205	6760	
	COOLING DEGREE DAYS	0	0	0	4	40	102	155	81	85	4	0	0	471	
RH	MEAN (PERCENT)	73	77	77	60	75	74	78	77	69	75	76	76	74	
	HOUR 00 LST	71	79	82	68	80	83	88	87	79	81	80	78	80	
	HOUR 06 LST	76	83	84	76	88	87	91	91	87	85	84	82	84	
	HOUR 12 LST	71	70	68	51	66	63	67	65	51	66	67	70	65	
	HOUR 18 LST	71	76	71	50	67	63	67	68	61	71	72	73	68	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	4	4	4	1	3	0	8	3	0	4	5	5	41	
	THUNDERSTORMS	0	0	1	0	6	2	3	1	1	2	0	0	16	
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.)	28.93	28.96	28.90	28.83	28.77	28.85	28.83	28.87	28.95	28.82	28.97	28.87	28.88	
	MEAN SEA-LEVEL PRESS. (IN.)		30.17	30.08	29.99	29.92	29.99		30.02	30.10	29.98	30.15	30.06		
WINDS	RESULTANT SPEED (MPH)	3.4	1.0	3.6	1.5	2.2	3.6	0.8	1.9	4.3	1.2	1.1	3.3	1.6	
	RES. DIR. (TENS OF DEGS.)	32	24	25	28	17	22	31	24	18	22	32	26	24	
	MEAN SPEED (MPH)	11.4	10.5	12.7	11.5	10.8	8.3	7.1	7.7	8.6	10.4	9.2	12.1	10.0	
	PREVAIL. DIR. (TENS OF DEGS.)	32	16	19	03	14	20	20	19	19	20	03	33	19	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	33	35	41	38	44	30	30	26	29	38	31	40	44	
	DIR. (TENS OF DEGS.)	31	25	29	23	33	34	24	02	19	26	33	30	33	
	DATE OF OCCURRENCE	21	09	20	28+	22	11	06	03+	15	30	04	12	MAY 22	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	41	41	51	51	51	36	38	32	33	48	35	54	54	
DIR. (TENS OF DEGS.)	31	26	30	22	33	32	23	23	21	24	33	30	30		
DATE OF OCCURRENCE	21	09	20	18	22	11	06	02	15	30	04	12	DEC 12		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.39	1.29	4.79	1.28	7.27	3.30	1.49	3.20	0.64	4.40	1.99	1.09	31.13	
	GREATEST 24-HOUR (IN.)	0.17	0.40	1.34	0.86	2.10	1.00	0.59	1.11	0.57	1.86	0.52	0.49	2.10	
	DATE OF OCCURRENCE	04	05	04-05	20-21	22-23	10	29-30	03-04	15	22-23	01-02	05-06	MAY 22-23	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	6	8	19	8	17	11	9	11	2	10	11	7	119	
PRECIPITATION ≥ 0.10	2	4	10	3	10	7	5	8	1	7	6	3	66		
PRECIPITATION ≥ 1.00	0	0	2	0	3	1	0	0	0	1	0	0	7		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	6.7	14.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	25.7	
	GREATEST 24-HOUR (IN.)	3.3	6.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	6.6	
	DATE OF OCCURRENCE	26	05	15								29	25	FEB 05	
	MAXIMUM SNOW DEPTH (IN.)														
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	2	3	1	0	0	0	0	0	0	0	0	0	6		

NORMALS, MEANS, AND EXTREMES

DUBUQUE, IA (DBQ)

LATITUDE: 42° 23' 52" N LONGITUDE: 90° 42' 13" W ELEVATION (FT): GRND: 1069 BARO: 1072 TIME ZONE: CENTRAL (UTC + 6) WBAN: 94908

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	24.8	30.8	43.3	57.4	69.3	78.6	82.1	79.8	71.9	60.3	43.6	29.7	56.0
	MEAN DAILY MAXIMUM	52	25.3	30.2	42.1	57.7	68.9	78.3	82.0	79.9	72.2	60.6	44.1	30.5	56.0
	HIGHEST DAILY MAXIMUM	52	60	66	85	93	91	100	101	100	97	90	75	67	101
	YEAR OF OCCURRENCE		2002	2000	1986	1980	1991	1988	1988	1988	1955	1997	2000	1998	JUL 1988
	MEAN OF EXTREME MAXS.	52	45.0	48.1	66.5	78.6	84.6	90.1	92.2	90.8	87.2	79.1	64.3	50.7	73.1
	NORMAL DAILY MINIMUM	30	9.2	15.4	26.2	37.5	48.8	57.9	62.4	60.2	51.7	40.5	27.8	15.2	37.7
	MEAN DAILY MINIMUM	52	9.4	14.3	24.8	37.4	48.1	57.4	61.9	59.9	51.1	40.5	27.7	15.4	37.3
	LOWEST DAILY MINIMUM	52	-28	-27	-20	11	24	36	44	40	28	13	-17	-25	-28
	YEAR OF OCCURRENCE		1970	1996	1962	1973	1966	1972	1984	1986	1984	1952	1977	1983	JAN 1970
	MEAN OF EXTREME MINS.	52	-14.2	-7.0	5.1	22.0	33.3	44.7	50.4	48.5	35.7	24.8	9.2	-7.6	20.4
	NORMAL DRY BULB	30	17.0	23.1	34.8	47.5	59.1	68.3	72.3	70.0	61.8	50.4	35.7	22.5	46.9
	MEAN DRY BULB	52	17.4	22.2	33.4	47.4	58.4	68.0	71.9	69.9	61.9	50.5	36.0	23.0	46.7
	MEAN WET BULB	18	18.4	22.9	32.3	42.8	53.7	62.3	66.6	65.3	56.8	43.3	33.2	22.3	43.3
	MEAN DEW POINT	18	13.7	17.7	26.0	35.4	47.9	54.8	63.0	61.8	52.6	38.2	28.5	18.3	38.2
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.0	*	*	1.5	3.9	2.2	0.6	*	0.0	0.0	8.2
MAXIMUM ≤ 32°	30	21.9	15.2	5.8	0.5	0.0	0.0	0.0	0.0	0.0	*	5.3	17.3	66.0	
MINIMUM ≤ 32°	30	30.5	26.2	22.9	8.6	0.5	0.0	0.0	0.0	0.5	6.1	20.9	29.5	145.7	
MINIMUM ≤ 0°	30	9.1	4.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.0	19.9	
H/C	NORMAL HEATING DEG. DAYS	30	1492	1189	949	536	226	40	8	21	158	465	879	1307	7270
	NORMAL COOLING DEG. DAYS	30	0	0	0	6	37	138	233	175	61	6	0	0	656
RH	NORMAL (PERCENT)														
	HOUR 00 LST	30	78	79	80	77	80	82	86	89	87	82	82	82	82
	HOUR 06 LST	30	70	68	63	56	58	59	61	63	61	58	67	73	63
	HOUR 12 LST														
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	36	4.2	3.3	3.2	2.1	1.9	1.6	2.1	3.0	1.7	2.2	3.2	4.3	32.8
	THUNDERSTORMS	36	0.1	0.1	1.5	2.5	4.4	5.2	5.1	4.6	2.8	1.9	0.9	0.2	29.3
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR	1			1.0		2.0								
	PARTLY CLOUDY														
	CLOUDY	1	1.0		2.0										
PR	MEAN STATION PRESSURE (IN)	14	28.90	28.89	28.83	28.80	28.79	28.80	28.89	28.91	28.88	28.89	28.89	28.89	28.86
	MEAN SEA-LEVEL PRES. (IN)	18	30.10	30.10	30.05	29.95	29.97	30.01	30.00	30.05	30.05	30.07	30.06	30.11	30.04
WINDS	MEAN SPEED (MPH)	9	10.8	11.5	11.9	11.7	10.4	8.6	7.3	7.2	8.3	10.0	10.7	10.5	9.9
	PREVAIL. DIR (TENS OF DEGS)	11	29	19	32	18	18	18	20	20	19	19	19	19	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	9	37	45	46	47	46	43	38	66	39	43	49	41	66
	DIR. (TENS OF DEGS)		28	26	28	25	19	32	31	32	33	28	23	24	32
	YEAR OF OCCURRENCE		1996	2001	2002	2001	2002	1998	2003	1998	2000	1996	1998	2001	AUG 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	9	44	54	58	69	54	59	48	78	60	52	63	54	78
DIR. (TENS OF DEGS)		28	26	28	25	19	26	34	31	22	29	23	30	31	
YEAR OF OCCURRENCE		1996	2001	2002	2001	2002	1998	2003	1998	1997	1996	1998	2004	AUG 1998	
PRECIPITATION	NORMAL (IN)	30	1.28	1.42	2.57	3.49	4.12	4.08	3.73	4.59	3.56	2.50	2.49	1.69	35.52
	MAXIMUM MONTHLY (IN)	52	6.04	3.61	6.50	7.69	9.43	10.49	12.23	9.90	15.46	8.58	10.63	4.14	15.46
	YEAR OF OCCURRENCE		1960	1953	1959	1964	1962	1969	1961	1987	1965	1967	1961	1982	SEP 1965
	MINIMUM MONTHLY (IN)	52	0.31	0.07	0.36	0.81	0.69	0.70	0.87	0.08	0.07	0.00	0.17	0.08	0.00
	YEAR OF OCCURRENCE		1964	1995	1958	1985	1992	1988	1991	1969	1979	1996	2002	1995	OCT 1996
	MAXIMUM IN 24 HOURS (IN)	52	3.75	2.24	2.57	2.65	4.60	5.90	6.28	8.95	8.85	2.58	5.09	2.31	8.95
	YEAR OF OCCURRENCE		1960	1953	1998	1964	1962	2002	1961	2002	1967	1959	1961	1971	AUG 2002
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	9.7	8.0	10.5	11.7	12.2	11.0	9.6	9.6	8.9	9.3	10.1	10.0	120.6	
PRECIPITATION ≥ 1.00	30	0.2	0.1	0.3	0.7	0.8	1.0	0.7	1.2	0.9	0.5	0.4	0.2	7.0	
SNOWFALL	NORMAL (IN)	30	10.6	8.7	7.6	3.2	0.*	0.0	0.0	0.0	0.0	0.1	4.5	10.5	45.2
	MAXIMUM MONTHLY (IN)	51	29.3	25.1	30.2	19.8	3.1	T	0.0	0.0	T	1.5	13.9	37.6	37.6
	YEAR OF OCCURRENCE		1979	1975	1959	1973	1966	1993			1986	1976	1986	2000	DEC 2000
	MAXIMUM IN 24 HOURS (IN)	51	11.8	11.9	15.5	14.6	3.1	T	0.0	0.0	T	1.5	10.4	15.0	15.5
	YEAR OF OCCURRENCE		1971	1962	1959	1973	1966	1993			1986	1976	1992	1990	MAR 1959
	MAXIMUM SNOW DEPTH (IN)	43	25	22	23	17	3	0	0	0	0	1	9	20	25
	YEAR OF OCCURRENCE		1979	1962	1962	1973	1994					1962	1986	2000	JAN 1979
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	3.4	2.7	2.2	0.9	0.0	0.0	0.0	0.0	0.0	0.1	1.4	3.0	13.7	

PRECIPITATION (inches) 2004 DUBUQUE, IA (DBQ)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0.90	2.53	3.33	3.78	2.79	3.75	1.15	7.44	1.91	0.41	4.22	0.30	32.51
1976	0.57	2.58	3.71	3.74	1.73	1.48	1.97	3.67	0.88	2.43	0.37	0.45	23.58
1977	0.78	1.10	4.82	2.93	3.31	2.22	6.48	6.02	3.45	2.38	3.05	2.49	39.03
1978	0.81	0.66	1.30	4.14	5.50	2.50	3.51	1.10	4.51	1.68	2.93	2.36	31.00
1979	2.61	1.12	2.54	2.37	2.18	4.33	6.72	7.47	0.07	2.80	1.92	1.34	35.47
1980	1.80	1.23	1.12	1.78	4.31	5.62	1.80	9.11	6.48	2.77	0.99	1.61	38.62
1981	0.34	2.38	0.41	5.72	1.05	6.67	1.69	9.65					
1982											5.30	4.14	
1983	0.70	2.17	2.91	3.39	6.42	1.56	3.38	2.23	3.54	1.78	3.88	2.44	34.40
1984	0.81	1.05	1.68	4.08	4.20	6.19	2.31	1.37	2.22	6.55	1.77	2.77	35.00
1985	1.17	2.51	4.35	0.81	4.51	1.09	2.19	3.44	4.89	4.94	4.22	2.20	36.32
1986	0.82	2.26	1.96	2.74	5.92	5.72	2.75	4.29	13.06	3.60	1.61	0.68	45.41
1987	0.79	0.80	2.11	1.53	5.19	2.05	5.55	9.90	3.31	1.03	3.41	3.16	38.83
1988	1.32	0.74	2.31	2.21	0.97	0.70	1.97	3.73	2.72	1.73	2.69	1.48	22.57
1989	0.90	0.45	1.85	2.32	2.25	1.85	3.01	4.35	2.38	2.18	0.81	0.39	22.74
1990	1.27	1.06	4.63	2.27	4.91	5.68	4.28	8.01	0.57	1.35	2.66	2.86	39.55
1991	1.16	0.45	5.81	3.88	4.24	3.34	0.87	3.90	3.76	3.86	4.28	1.59	37.14
1992	1.49	1.87	1.55	3.82	0.69	1.02	7.52	1.63	4.57	1.09	6.84	2.12	34.21
1993	1.37	0.99	3.10	4.61	5.40	8.04	8.50	8.05	4.50	1.64	1.03	0.98	48.21
1994	1.37	2.42	0.48	3.10	1.10	5.77	6.70	6.67	4.51	0.53	2.71	1.73	37.09
1995	1.00	0.07	2.32	5.14	5.33	2.90	2.48	0.29	1.40	2.73	2.40	0.08	26.14
1996	2.65	0.35	1.05	2.09	7.56	5.24	2.37	1.98	1.97	4.14	1.68	0.77	31.85
1997	0.86	1.86	1.20	3.12	2.93	5.35	2.75	3.41	4.11	0.95	0.77	0.90	28.21
1998	1.05	2.93	5.43	5.10	3.27	7.84	1.61	6.38	3.75	4.48	1.31	0.14	43.29
1999	2.18	0.94	0.91	6.65	4.41	4.98	7.65	2.87	1.70	1.33	0.57	0.86	35.05
2000	1.39	1.44	0.94	3.35	5.55	8.01	2.52	2.36	3.43	1.00	1.26	2.15	33.40
2001	1.36	3.12	1.01	2.80	5.69	3.66	1.16	3.81	5.59	3.40	1.89	1.31	34.80
2002	0.37	1.09	1.55	4.00	4.40	8.42	4.12	9.71	3.47	3.49	0.17	0.73	41.52
2003	0.39	0.42	0.90	2.84	4.01	2.75	4.46	0.25	3.74	1.33	5.85	1.81	28.75
2004	0.39	1.29	4.79	1.28	7.27	3.30	1.49	3.20	0.64	4.40	1.99	1.09	31.13
POR= 129 YRS	1.41	1.33	2.39	3.21	4.17	4.53	3.87	3.73	3.86	2.54	2.08	1.50	34.62

WBAN : 94908

AVERAGE TEMPERATURE (°F) 2004 DUBUQUE, IA (DBQ)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	20.4	19.6	24.6	41.3	61.8	68.5	72.0	71.1	57.3	52.5	40.6	26.2	46.3
1976	16.4	30.0	36.5	49.7	55.4	67.9	73.3	68.9	59.7	45.3	27.8	14.7	45.5
1977	3.4	23.6	41.5	54.2	65.1	67.6	74.4	66.5	61.7	48.7	34.0	17.5	46.5
1978	7.7	11.5	28.6	47.5	57.8	67.3	71.4	71.0	66.2	48.6	35.8	19.2	44.4
1979	4.5	10.8	30.8	43.7	57.9	67.6	71.1	69.7	63.3	50.6	35.7	29.6	44.6
1980	20.1	18.1	29.7	47.9	61.7	68.4	75.9	73.0	63.6	47.8	37.9	23.9	47.3
1981	21.7	25.6	38.4	51.2	57.1	69.3	72.2	69.9					
1982											35.7	30.5	
1983	23.1	28.2	35.3	43.4	54.9	69.8	75.9	76.6	62.9	51.2	39.0	9.6	47.5
1984	15.7	30.7	28.4	47.7	55.1	68.9	70.6	72.4	60.6	53.9	37.4	27.4	47.4
1985	11.9	19.3	39.8	54.0	61.3	65.8	71.3	67.1	61.8	49.8	30.4	8.7	45.1
1986	18.4	19.2	37.3	50.9	59.5	67.2	73.6	65.0	63.3	50.8	30.9	25.7	46.8
1987	23.1	31.9	38.4	51.5	62.4	71.0	75.0	69.1	61.7	44.7	40.8	27.8	49.8
1988	13.9	17.9	36.0	47.5	62.6	71.3	76.1	74.7	64.2	45.1	37.7	25.3	47.7
1989	27.4	14.4	32.3	46.5	58.1	67.0	73.5	67.9	58.5	52.3	34.2	13.3	45.5
1990	28.7	26.8	38.8	47.6	55.1	68.3	71.1	70.8	64.2	49.2	41.2	20.0	48.5
1991	14.5	26.9	37.9	50.9	64.1	72.2	73.2	71.3	61.3	49.6	30.3	26.3	48.2
1992	24.7	30.4	36.8	45.3	59.4	66.7	66.7	64.4	59.4	48.8	32.9	23.5	46.6
1993	20.8	20.3	31.7	44.4	59.3	66.2	71.4	71.1	57.3	48.3	34.7	26.2	46.0
1994	9.7	16.7	36.1	48.3	59.2	70.2	69.7	66.4	64.8	52.9	39.9	29.0	46.9
1995	18.7	23.1	37.3	43.6	57.4	70.7	73.3	76.9	60.2	49.7	28.8	21.9	46.8
1996	16.3	23.0	29.3	44.4	54.7	68.0	68.8	70.4	61.2	50.2	29.2	20.7	44.7
1997	15.1	24.5	35.5	43.9	53.0	68.9	70.9	67.5	62.3	51.5	32.2	26.5	46.0
1998	24.2	35.6	34.7	48.8	63.9	67.0	71.9	72.0	66.1	52.0	40.4	29.7	50.5
1999	16.2	31.7	34.3	50.1	60.3	68.4	75.5	68.1	60.3	50.2	43.0	25.8	48.7
2000	20.1	30.3	42.3	47.3	60.8	66.3	70.6	71.1	62.6	54.3	33.5	10.4	47.5
2001	19.6	18.6	30.7	52.2	60.3	66.8	73.4	71.2	59.6	48.5	46.6	29.8	48.1
2002	28.5	29.4	31.3	47.7	55.1	69.7	74.0	69.9	64.3	45.7	34.4	27.4	48.1
2003	17.9	18.9	33.7	47.8	55.8	65.6	70.6	72.9	60.6	50.0	36.6	27.5	46.5
2004	16.3	23.7	39.0	49.4	59.7	66.2	69.3	65.0	65.1	50.6	40.4	25.9	47.6
POR= 128 YRS	18.8	22.9	34.1	48.3	59.6	68.9	73.7	71.3	63.2	51.7	36.7	24.2	47.8

HEATING DEGREE DAYS (base 65°F) 2004 DUBUQUE, IA (DBQ)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	24	0	245	393	724	1198	1502	1009	877	461	294	16	6743
1976-77	0	14	180	614	1106	1554	1909	1155	722	343	93	40	7730
1977-78	1	43	121	500	924	1472	1770	1491	1122	521	268	41	8274
1978-79	3	12	90	505	869	1414	1877	1511	1053	632	247	25	8238
1979-80	6	27	110	449	873	1087	1383	1356	1086	516	173	28	7094
1980-81	0	3	113	527	806	1266	1337	1097	819	408	262	9	6647
1981-82	15	13											
1982-83					871	1063	1294	1021	913	641	306	25	
1983-84	5	0	144	429	773	1716	1523	988	1126	513	307	11	7535
1984-85	9	8	198	339	824	1158	1642	1275	776	362	135	64	6790
1985-86	4	23	198	465	1032	1744	1438	1276	856	433	180	45	7694
1986-87	3	56	112	428	1013	1210	1292	922	816	410	149	16	6427
1987-88	3	46	127	619	718	1146	1581	1361	892	519	113	20	7145
1988-89	1	14	87	611	813	1226	1160	1416	1010	549	247	41	7175
1989-90	2	15	208	394	917	1602	1120	1063	805	547	301	38	7012
1990-91	7	1	139	490	707	1388	1561	1063	833	425	159	10	6783
1991-92	3	6	197	477	1033	1191	1241	994	865	585	212	46	6850
1992-93	33	75	201	495	958	1281	1362	1246	1026	610	194	74	7555
1993-94	0	10	241	516	901	1199	1712	1348	893	509	207	22	7558
1994-95	6	44	91	370	746	1109	1432	1168	850	636	232	24	6708
1995-96	10	0	187	468	1078	1331	1507	1167	1101	612	342	53	7856
1996-97	7	0	164	457	1065	1366	1540	1128	908	627	367	16	7645
1997-98	15	28	112	457	975	1186	1259	820	931	479	100	78	6440
1998-99	0	0	64	396	729	1087	1508	926	947	441	166	51	6315
1999-00	0	11	186	450	652	1206	1384	1002	697	526	166	50	6330
2000-01	2	3	157	330	941	1685	1399	1292	1057	380	195	75	7516
2001-02	9	7	180	505	545	1085	1124	990	1039	540	319	32	6375
2002-03	0	6	101	597	911	1160	1452	1284	966	522	283	76	7358
2003-04	1	4	183	455	844	1152	1503	1190	796	465	199	59	6851
2004-	15	77	75	445	731	1205							

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COOLING DEGREE DAYS (base 65°F) 2004 DUBUQUE, IA (DBQ)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0	0	0	0	57	159	247	198	19	12	0	0	692
1976	0	0	0	9	3	112	266	144	29	8	0	0	571
1977	0	0	0	26	103	126	302	98	30	0	0	0	685
1978	0	0	0	0	52	117	210	202	131	1	0	0	713
1979	0	0	0	0	36	106	203	181	66	8	0	0	600
1980	0	0	0	11	76	136	347	257	78	0	0	0	905
1981	0	0	0	1	23	144	247	170					
1982											0	0	
1983	0	0	0	0	0	176	349	367	90	9	0	0	991
1984	0	0	0	1	9	138	190	243	72	1	0	0	654
1985	0	0	0	41	28	93	206	94	112	0	0	0	574
1986	0	0	2	15	15	116	276	64	67	0	0	0	555
1987	0	0	0	11	76	203	322	182	34	0	0	0	828
1988	0	0	0	0	49	216	351	325	68	0	0	0	1009
1989	0	0	1	1	41	110	272	112	21	9	0	0	567
1990	0	0	0	29	1	143	203	191	120	6	0	0	693
1991	0	0	0	8	136	234	264	207	91	4	0	0	944
1992	0	0	0	0	44	105	94	63	39	1	0	0	346
1993	0	0	0	0	27	117	204	209	17	5	0	0	579
1994	0	0	0	15	36	185	158	97	91	2	0	0	584
1995	0	0	0	0	1	203	273	377	49	3	0	0	906
1996	0	0	0	0	28	149	130	175	58	0	0	0	540
1997	0	0	0	0	1	142	205	110	36	45	0	0	539
1998	0	0	1	0	75	148	222	224	105	0	0	0	775
1999	0	0	0	0	28	157	333	115	51	0	0	0	684
2000	0	0	0	0	41	96	183	200	93	7	1	0	621
2001	0	0	0	5	54	138	278	209	27	0	0	0	711
2002	0	0	0	26	20	177	286	166	88	4	0	0	767
2003	0	0	0	9	1	101	180	255	57	0	0	0	603
2004	0	0	0	4	40	102	155	81	85	4	0	0	471

SNOWFALL (inches) 2004 DUBUQUE, IA (DBQ)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	0.0	7.1	1.0	6.2	12.4	0.7	T	0.0	0.0	27.4
1976-77	0.0	0.0	0.0	1.5	3.7	5.7	9.6	1.3	9.5	3.5	0.0	0.0	34.8
1977-78	0.0	0.0	0.0	0.0	11.6	26.4	10.6	9.7	13.0	T	0.0	0.0	71.3
1978-79	0.0	0.0	0.0	0.0	8.0	17.0	29.3	8.7	3.3	4.1	0.0	0.0	70.4
1979-80	0.0	0.0	0.0	0.0	1.9	1.5	7.1	12.3	7.9	5.3	0.0	0.0	36.0
1980-81	0.0	0.0	0.0	1.4	2.1	7.0	3.7	6.5	1.0	0.0	0.0	0.0	21.7
1981-82	0.0	0.0											
1982-83					0.0	0.0	5.9	15.6	18.4	12.3	0.0	0.0	
1983-84	0.0	0.0	0.0	0.0	1.3	18.4	11.5	0.9	10.7	3.1	0.0	0.0	45.9
1984-85	0.0	0.0	0.0	0.0	1.0	14.2	13.7	6.4	8.1	0.1	0.0	0.0	43.5
1985-86	0.0	0.0	0.0	0.0	10.4	18.7	15.8	12.8	0.8	1.3	0.0	0.0	59.8
1986-87	0.0	0.0	T	T	13.9	3.3	8.7	T	8.0	T	0.0	0.0	33.9
1987-88	0.0	0.0	0.0	0.0	1.1	20.9	8.4	8.3	1.5	1.7	0.0	0.0	41.9
1988-89					1.0	4.4	2.4	8.3	7.7	0.2	T	0.0	
1989-90	0.0	0.0	0.0	T	1.8	8.3	7.1	9.7	0.5	0.3	0.0	0.0	27.7
1990-91	0.0	0.0	0.0	0.0	5.3	18.8	12.5	2.6	12.7	0.1	T	0.0	52.0
1991-92	0.0	0.0	0.0	T	3.7	6.5	9.1	10.7	6.0	0.2	0.0	0.0	36.2
1992-93	0.0	0.0	0.0	0.4	12.6	7.4	8.6	8.6	14.9	11.3	0.0	T	63.8
1993-94	0.0	0.0	0.0	T	1.0	5.6	15.0	23.7	0.6	6.0	0.0	0.0	51.9
1994-95	0.0	0.0	0.0	0.0	T	16.0	13.2	0.5	6.5	0.4	0.0	0.0	36.6
1995-96	0.0	0.0	0.0		4.6	0.5	17.2			1.8	0.0	0.0	
1996-97				0.0	5.2								
1997-98							7.1	0.2	10.1	T	0.0	0.0	
1998-99	0.0	0.0	0.0	0.0	1.1	1.8	18.8	2.4	8.8	0.0	0.0	0.0	32.9
1999-00	0.0	0.0	0.0	0.0	0.0	7.3	19.3	9.4	2.0	2.8	0.0	0.0	40.8
2000-01	0.0	0.0	0.0	0.0	0.7	37.6	3.5	7.8	3.1	T	0.0	0.0	52.7
2001-02	0.0	0.0	0.0	0.0	T	0.6	4.8	2.9	8.7	1.2	0.0	0.0	18.2
2002-03	0.0	0.0	0.0	T	T	1.1	4.1	8.1	7.4	2.7	0.0	0.0	23.4
2003-04	0.0	0.0	0.0	T	T	6.2	6.7	14.5	2.5	0.0	0.0	0.0	29.9
2004-	0.0	0.0	0.0	0.0	0.9	1.1							
POR= 49 YRS	0.0	0.0	T	0.2	3.0	10.0	9.3	7.5	8.7	2.2	0.2	T	41.1

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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 (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 DUBUQUE, IOWA (DBQ)

The terrain around Dubuque varies from gently rolling, 10 to 15 miles to the south and west, to steep hills and bluffs around the city and along the Mississippi River.

The principal feature of the climate in Dubuque is its variety. The Dubuque area is subject to weather ranging from the cold, dry, arctic air masses in the winter, with readings as low as 32 degrees below zero, to the hot, dry weather of the desert southwest in the summer when the temperatures reach about 110. More often the area is covered by mild Pacific air that has lost considerable moisture in crossing the mountains far to the west, or by cool, dry Canadian air, or by warm, moist air from the Gulf regions. Most of the year the latter three types of air masses dominate Dubuque weather, with the invasions of Gulf air rarely occurring in the winter.

The seasons vary widely from year to year at Dubuque. For example, successive invasions of cold air from the north may bring a long, cold winter with snow-covered ground from mid November until March and many days of sub-zero temperatures. Another winter can be mild with bare ground most of the season and only a few sub-zero temperature readings. The summers, too, may vary from hot and humid with considerable thunderstorm activity when the Gulf air prevails, to relatively cool, dry weather when air of northerly origin dominates the season.

All seasons are marked by storms that accompany the changes from one type of air mass to another. In winter, rain changes to sleet and snow, and occasionally a peal of thunder is heard at the height of a snowstorm. In summer, thunderstorms are frequently heavy. They are occasionally accompanied by hail and on rare occasions by tornadoes. Thunderstorms have been sufficiently intense at times to raise the Mississippi River, which is about one-fourth mile wide at Debuque, nearly 5 feet overnight. Flash floods have drowned many people.

Most of the precipitation occurs during the spring and fall seasons. The last occurrence of snow and freezing rain can be in late May, and the first occurrence in late September.

While the climate of Dubuque does not lack for variety, there are times when a particular weather condition may persist for an extended period. Cold weather has lasted as long as 20 days in succession with sub-zero readings. Heat waves have persisted for 10 or more days with readings around 100 degrees each day. Hot, dry spells occasionally plague the crops and livestock in summer, but there are frequent periods of mild, dry weather in the spring and frequently in the autumn.

STATION LOCATION

DUBUQUE, IOWA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE		ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS REMARKS
				NORTH	WEST	GROUND											
						SEA LEVEL	GROUND	WIND INSTRUMENT	EXTREME THERMOMETER S	PSYCHROMETER	SUNSHINE SWITCH	TIPPING GAUGE BUCKET	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROMETER		
*NOTE: <u>AIRPORT</u> Administration Bldg * Municipal Airport * or Terminal Bldg. + + Cresent Aviation Bldg. eff. 1987. Municipal Airport	1/26/51	09/01/95	6.8 mi. SW	42°24'	90°42'	1065 e1056	31 e23	5 g5	c5 g5					3 i4	3 h3	d5 f5	c. Effective 9/9/51. Evaporation records began 8/14/62. d. Commissioned 1800' WSW of thermometer site 6/1/65. e. Effective 6/1/65. f. Type change 6/19/85. g. Moved 140' S 9/1987. h. Moved 165' S 9/28/87. i. Moved 165' S 10/5/87. j. ASOS Commissioned 09/01/95 Ground elevation.
	09/01/95	Present	NA	42°24'	90°42'	j1069										S	

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* NOTES: For earlier station history see previous editions. Station inactive 9/4/81 - 11/1/82.