

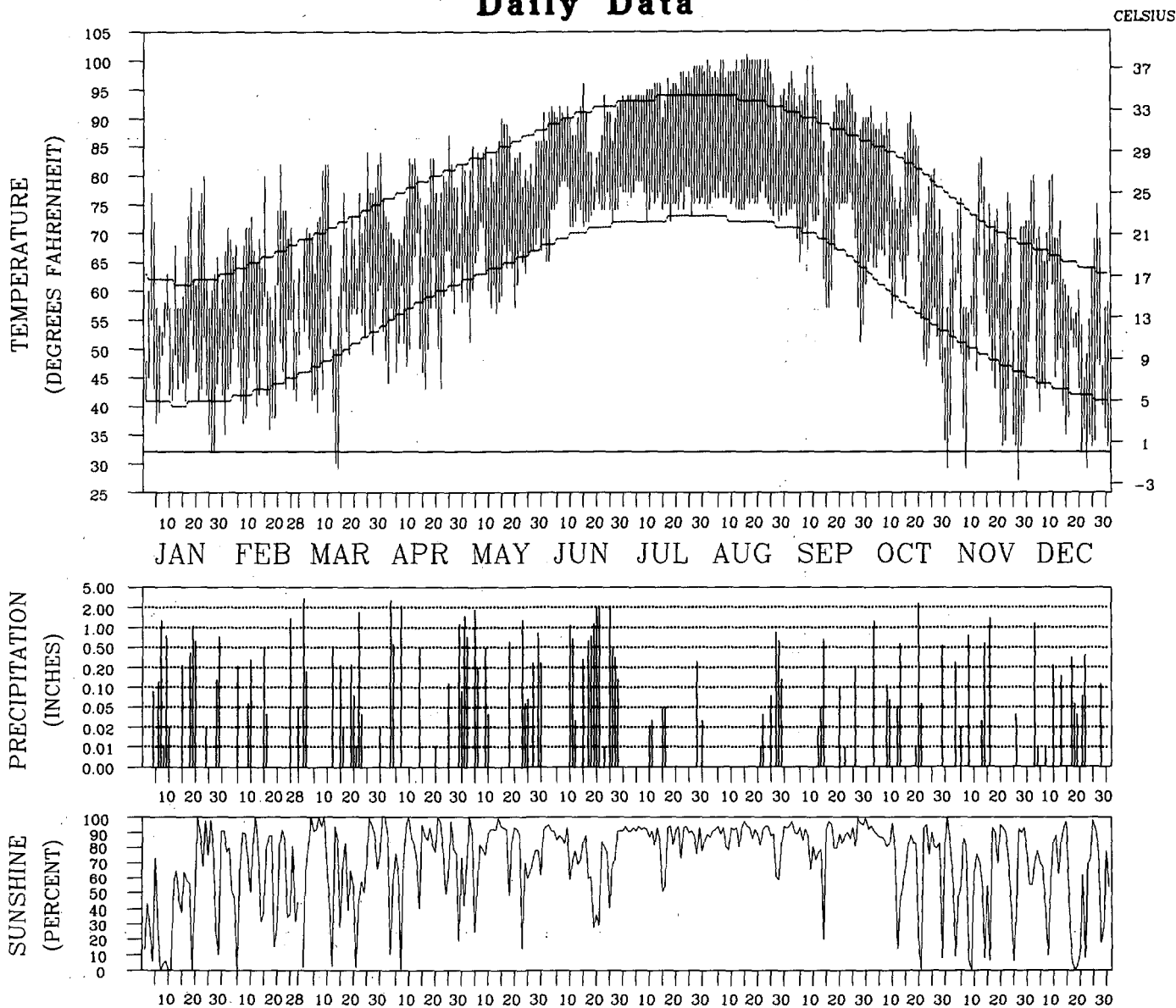
1993 LOCAL CLIMATOLOGICAL DATA

ANNUAL SUMMARY WITH COMPARATIVE DATA

HOUSTON, TEXAS



Daily Data



TEMPERATURE DEPICTS NORMAL MAXIMUM, NORMAL MINIMUM AND ACTUAL DAILY HIGH AND LOW VALUES (FAHRENHEIT)
 PRECIPITATION IS MEASURED IN INCHES. SCALE IS NON-LINEAR
 SUNSHINE IS PERCENT OF THE POSSIBLE SUNSHINE

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE NORTH CAROLINA

Kenneth D. Walden
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 1993

HOUSTON, TEXAS

LATITUDE: 29°58' N LONGITUDE: 95°21' W ELEVATION: FT. GRND 96 BARO 122 TIME ZONE: CENTRAL WBAN: 12960

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F:													
Averages													
-Daily Maximum	63.1	67.0	71.5	76.2	83.0	89.3	95.7	97.8	91.8	80.0	67.6	64.3	78.9
-Daily Minimum	44.1	46.3	50.6	55.5	63.7	73.9	75.8	75.2	68.5	59.0	46.1	44.8	58.6
-Monthly	53.6	56.7	61.1	65.9	73.4	81.6	85.8	86.5	80.2	69.5	56.9	54.6	68.8
-Monthly Dewpt.	44.9	46.2	50.1	55.1	63.5	72.6	72.9	72.1	66.9	60.2	48.3	45.9	58.2
Extremes													
-Highest	80	82	84	87	91	96	99	101	99	92	83	80	101
-Date	23	21	30	25	31	15	30	16	10	2	13	10	AUG 16
-Lowest	32	36	29	43	51	65	72	72	51	29	27	29	27
-Date	27	17	14	22	3	2	18	28	28	31	27	23	NOV 27
DEGREE DAYS BASE 65 °F:													
Heating	351	235	157	62	0	0	0	0	0	76	269	343	1493
Cooling	4	10	42	92	267	506	652	674	463	221	31	27	2989
% OF POSSIBLE SUNSHINE													
	47	62	68	73	76	75	87	88	86	74	60	56	72
AVG. SKY COVER (tenths)													
Sunrise - Sunset	7.7	7.1	5.9	6.0	6.1	7.0	4.8	5.6	4.3	6.3	6.9	7.3	6.3
Midnight - Midnight	7.5	6.8	5.7	5.8	5.7	6.8	3.8	4.4	3.9	5.2	6.4	6.7	5.7
NUMBER OF DAYS:													
Sunrise to Sunset													
-Clear	5	4	10	9	8	5	8	4	11	6	8	6	84
-Partly Cloudy	4	7	7	5	9	8	21	22	14	13	6	4	120
-Cloudy	22	17	14	16	14	17	2	5	5	12	16	21	161
Precipitation													
.01 inches or more	13	7	11	8	13	14	6	6	6	9	7	11	111
Snow, Ice pellets, hail													
1.0 inches or more	0	0	0	0	0	0	0	0	0	0	0	0	0
Thunderstorms													
	7	2	5	6	11	12	5	8	6	6	2	2	72
Heavy Fog, visibility													
1/4 mile or less	1	1	2	1	0	0	0	0	2	1	4	1	13
Temperature °F													
-Maximum													
90° and above	0	0	0	0	2	20	31	30	23	4	0	0	110
32° and below	0	0	0	0	0	0	0	0	0	0	0	0	0
-Minimum													
32° and below	2	0	2	0	0	0	0	0	0	1	2	2	9
0° and below	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG. STATION PRESS. (mb)													
	1016.6	1014.9	1013.2	1009.8	1009.5	1010.3	1012.2	1012.2	1012.2	1013.0	1016.8	1016.3	1013.2
RELATIVE HUMIDITY (%)													
Hour 00													
	84	81	82	83	85	88	83	80	83	86	86	84	84
Hour 06 (Local Time)													
	88	86	89	87	91	92	91	92	89	92	90	90	90
Hour 12													
	69	60	58	56	60	66	51	47	52	62	63	61	59
Hour 18													
	68	58	57	60	65	69	58	52	55	69	72	67	63
PRECIPITATION (inches):													
Water Equivalent													
-Total	5.79	2.67	6.41	7.88	8.50	12.08	0.47	1.82	1.10	5.32	3.27	2.68	57.99
-Greatest (24 hrs)	1.74	1.46	3.49	3.68	2.33	2.54	0.29	1.51	0.77	2.60	1.47	1.23	3.68
-Date	19-20	24-25	1- 2	3- 4	1- 2	19-20	28	27-28	13-14	20-21	16	3- 4	APR 3- 4
Snow, Ice pellets, hail													
-Total	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
-Greatest (24 hrs)	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
-Date				3	9								MAY 9
WIND:													
Resultant													
-Direction (!!!)	030	075	057	142	133	147	177	175	113	051	066	053	129
-Speed (mph)	3.2	1.5	1.5	3.2	2.5	6.1	7.0	4.1	1.4	2.0	2.2	1.2	1.9
Average Speed (mph)	7.5	8.2	8.8	10.6	9.4	9.6	8.4	6.8	6.6	7.7	8.6	8.3	8.4
Fastest Obs. 1 Min.													
-Direction (!!!)	33	33	04	01	36	10	18	12	04	31	32	27	01
-Speed (mph)	32	32	30	35	30	30	22	30	26	25	30	26	35
-Date	24	25	12	7	2	18	6	25	20	3	14	13	APR 7
Peak Gust													
-Direction (!!!)	NW	NW	SE	NE	W	SE	SE	E	NE	W	NW	NW	W
-Speed (mph)	41	44	37	47	52	40	32	38	33	38	43	35	52
-Date	23	25	15	7	9	18	30	25	20	3	14	13	MAY 9

NORMALS, MEANS, AND EXTREMES

HOUSTON, TEXAS

LATITUDE: 29°58'N	LONGITUDE: 95°21'W	ELEVATION: FT. GRND		96 BARO		122		TIME ZONE: CENTRAL				WBAN: 12960		
	(a)	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F:														
Normals														
-Daily Maximum		61.0	65.3	71.1	78.4	84.6	90.1	92.7	92.5	88.4	81.6	72.4	64.7	78.6
-Daily Minimum		39.7	42.6	50.0	58.1	64.4	70.6	72.4	72.0	67.9	57.6	49.6	42.2	57.3
-Monthly		50.4	53.9	60.6	68.3	74.5	80.4	82.6	82.3	78.2	69.6	61.0	53.5	67.9
Extremes														
-Record Highest	24	84	91	91	95	97	103	104	107	102	96	89	83	107
-Year		1975	1986	1989	1987	1990	1980	1980	1980	1985	1991	1989	1978	AUG 1980
-Record Lowest	24	12	20	22	31	44	52	62	60	48	29	19	7	7
-Year		1982	1985	1980	1987	1978	1970	1990	1992	1975	1993	1976	1989	DEC 1989
NORMAL DEGREE DAYS:														
Heating (base 65°F)		468	322	187	36	0	0	0	0	0	31	181	374	1599
Cooling (base 65°F)		16	11	50	135	295	462	546	536	396	174	61	18	2700
% OF POSSIBLE SUNSHINE	24	43	49	52	56	60	66	68	67	65	63	51	50	58
MEAN SKY COVER (tenths)														
Sunrise - Sunset	24	7.0	6.5	6.6	6.6	6.4	5.8	5.7	5.6	5.6	5.2	5.9	6.8	6.1
MEAN NUMBER OF DAYS:														
Sunrise to Sunset														
-Clear	24	7.2	7.3	7.1	7.2	6.1	7.3	7.0	6.1	8.3	11.0	9.1	7.5	91.0
-Partly Cloudy	24	5.3	5.6	6.5	7.1	10.7	13.3	15.7	17.0	11.6	9.1	7.1	5.3	114.5
-Cloudy	24	18.5	15.4	17.4	15.7	14.2	9.4	8.3	7.8	10.1	10.9	13.8	18.2	159.7
Precipitation														
0.01 inches or more	24	10.7	8.5	9.2	7.3	8.5	9.3	9.4	8.8	9.3	7.4	8.5	9.2	105.8
Snow, Ice pellets, hail														
1.0 inches or more	24	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Thunderstorms	24	2.2	2.0	3.8	3.9	7.2	8.1	10.6	10.2	7.5	3.9	2.8	1.8	63.9
Heavy Fog Visibility														
1/4 mile or less	24	5.0	3.6	3.0	2.8	1.7	0.6	0.2	0.4	1.3	2.9	3.6	4.3	29.5
Temperature °F														
-Maximum														
90° and above	24	0.0	0.0	0.1	0.8	5.1	19.8	26.6	25.6	15.0	2.9	0.0	0.0	96.0
32° and below	24	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7
-Minimum														
32° and below	24	7.2	4.3	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.7	5.1	19.7
0° and below	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG. STATION PRESS. (mb)	21	1017.1	1015.7	1012.1	1011.1	1009.7	1010.4	1012.3	1011.9	1011.7	1014.0	1015.0	1016.6	1013.1
RELATIVE HUMIDITY (%)														
Hour 00	24	82	83	83	85	87	87	86	87	89	88	85	84	86
Hour 06	24	86	86	87	89	92	92	93	93	93	91	89	87	90
Hour 12 (Local Time)	24	64	61	59	58	60	60	57	57	60	56	60	62	60
Hour 18	24	67	61	60	61	63	63	62	62	66	68	71	71	65
PRECIPITATION (inches):														
Water Equivalent														
-Normal		3.29	2.96	2.92	3.21	5.24	4.96	3.60	3.49	4.89	4.27	3.79	3.45	46.07
-Maximum Monthly	24	9.78	5.99	8.52	10.92	14.39	16.28	8.10	9.42	11.35	16.05	8.91	9.34	16.28
-Year		1991	1992	1972	1976	1970	1989	1979	1983	1976	1984	1982	1991	JUN 1989
-Minimum Monthly	24	0.36	0.38	0.88	0.43	0.79	0.26	0.47	0.31	0.80	0.05	0.41	0.64	0.05
-Year		1971	1976	1987	1983	1977	1970	1993	1990	1975	1978	1988	1973	OCT 1978
-Maximum in 24 hrs	24	2.66	2.22	7.47	8.16	10.36	10.35	3.99	6.83	7.98	9.31	4.19	4.04	10.36
-Year		1992	1985	1972	1976	1989	1989	1973	1981	1976	1984	1986	1991	MAY 1989
Snow, Ice pellets, hail														
-Maximum Monthly	24	2.0	2.8	T	T	T	T	0.0	0.0	0.0	0.0	T	1.7	2.8
-Year		1973	1973	1992	1993	1993	1990					1979	1989	FEB 1973
-Maximum in 24 hrs	24	2.0	1.4	T	T	T	T	0.0	0.0	0.0	0.0	T	1.7	2.0
-Year		1973	1980	1992	1993	1993	1990					1979	1989	JAN 1973
WIND:														
Mean Speed (mph)	24	8.2	8.8	9.3	9.2	8.2	7.8	7.0	6.3	6.9	7.0	8.0	8.0	7.9
Prevailing Direction through 1963		NNW	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	ESE	SSE	SSE	SSE
Fastest Obs. 1 Min.														
-Direction (!!!)	24	33	26	22	14	23	30	10	08	05	27	33	31	08
-Speed (MPH)	24	32	46	35	45	46	45	46	51	37	41	37	35	51
-Year		1993	1984	1989	1978	1983	1973	1969	1983	1982	1988	1972	1973	AUG 1983
Peak Gust														
-Direction (!!!)	10	W	W	W	W	W	NE	SE	E	E	W	NW	NW	E
-Speed (mph)	10	44	61	51	56	52	68	52	78	44	58	45	56	78
-Date		1992	1984	1990	1990	1993	1990	1990	1983	1990	1988	1988	1990	AUG 1983

PRECIPITATION (inches)

HOUSTON, TEXAS

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
1964	2.89	4.97	2.24	1.63	2.25	1.89	1.68	2.61	6.76	2.35	4.28	5.57	39.12
1965	1.87	3.27	0.81	0.95	6.53	3.06	1.57	2.29	3.56	3.09	4.82	6.15	37.97
1966	4.46	7.75	2.20	7.98	11.21	4.42	1.45	7.11	4.01	5.45	1.56	1.53	59.13
1967	2.41	2.17	1.83	4.42	2.54	0.17	7.77	1.60	4.84	3.18	0.50	5.02	36.45
1968	8.02	1.99	2.92	3.02	13.24	11.18	6.49	2.90	3.87	3.91	2.71	1.19	61.44
#1969	2.74	5.31	3.18	3.34	4.73	1.51	3.89	2.67	6.08	3.30	2.13	4.38	43.26
1970	1.93	2.52	5.08	2.21	14.39	0.26	2.23	2.03	6.22	9.09	1.54	0.64	48.19
1971	0.36	2.11	1.21	2.14	3.41	2.42	1.42	6.95	5.17	3.49	1.82	7.33	37.83
1972	3.30	1.20	8.52	2.85	6.99	3.02	2.76	3.90	6.23	3.34	6.49	2.20	50.80
1973	5.00	3.40	3.68	7.15	4.22	13.46	6.77	3.73	9.38	9.31	1.59	2.47	70.16
1974	7.68	0.55	4.20	1.68	5.61	0.59	1.75	6.94	4.51	4.53	7.90	3.35	49.29
1975	1.97	2.63	3.19	4.80	7.57	7.50	5.48	5.72	0.80	5.62	2.08	3.61	50.97
1976	1.39	0.38	1.53	10.92	5.80	2.63	3.93	1.59	11.35	5.83	3.05	6.22	54.62
1977	2.67	1.70	1.95	4.34	0.79	3.55	2.69	4.45	3.92	0.82	5.17	2.89	34.94
1978	7.15	3.07	1.70	0.57	4.15	9.37	2.35	3.66	4.27	0.05	5.99	2.60	44.93
1979	6.30	5.23	2.88	7.79	3.78	1.88	8.10	4.57	9.83	2.80	1.78	4.03	58.97
1980	6.09	2.54	5.39	2.05	5.63	0.92	1.57	1.40	6.00	4.03	2.12	1.25	38.99
1981	2.32	2.21	1.74	2.69	8.75	9.65	4.43	7.01	2.91	6.96	5.26	2.05	55.98
1982	1.82	1.59	1.55	2.28	6.87	1.10	4.32	1.90	0.98	6.64	8.91	4.91	42.87
1983	2.00	3.97	3.85	0.43	7.29	5.37	5.23	9.42	7.23	1.56	3.17	3.69	53.21
1984	3.99	4.37	2.41	0.56	3.13	1.99	3.43	3.52	3.87	16.05	2.28	2.59	48.19
1985	2.10	5.38	4.52	4.31	1.57	5.29	4.93	1.14	4.67	6.54	4.84	3.85	49.14
1986	0.71	2.74	1.44	2.63	4.29	6.34	0.61	3.27	3.70	6.83	6.66	5.71	44.93
1987	2.42	4.26	0.88	0.47	5.39	9.31	4.79	1.48	3.46	0.17	3.41	4.56	40.60
1988	1.27	1.29	4.88	1.26	1.32	2.00	3.23	3.52	1.20	1.29	0.41	1.26	22.93
1989	4.80	0.90	3.96	1.48	13.56	16.28	1.92	2.74	2.69	1.76	1.84	0.80	52.73
1990	3.96	4.54	5.11	6.21	2.23	2.98	4.85	0.31	1.57	3.79	3.01	1.81	40.37
1991	9.78	5.79	1.77	8.06	4.02	7.69	1.31	2.97	2.76	2.57	5.03	9.34	61.09
1992	7.70	5.99	6.28	3.74	7.05	3.38	3.85	2.78	1.08	1.03	5.99	3.46	52.33
1993	5.79	2.67	6.41	7.88	8.50	12.08	0.47	1.82	1.10	5.32	3.27	2.68	57.99
Record Mean	3.79	3.16	2.86	3.48	4.92	4.81	3.96	3.91	4.40	3.91	4.01	4.00	47.20

See Reference Notes on Page 6B.
Page 4A

AVERAGE TEMPERATURE (deg. F)

HOUSTON, TEXAS

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
1964	51.6	49.4	60.4	70.2	75.8	80.4	83.7	84.4	79.3	67.8	65.0	55.9	68.7
1965	56.0	55.1	58.7	73.5	77.1	83.0	85.1	83.5	81.2	69.4	69.1	58.9	70.9
1966	48.4	52.8	61.5	70.6	75.9	80.0	84.3	82.4	79.6	69.7	64.7	54.2	68.7
1967	54.9	54.5	67.6	75.7	75.9	82.6	82.1	81.1	77.6	70.5	64.1	55.4	70.2
1968	52.7	50.4	59.0	71.1	76.3	80.5	82.5	84.0	78.6	73.5	59.7	55.7	68.7
#1969	56.7	56.9	56.1	70.3	75.4	80.0	84.4	83.2	78.2	71.0	58.5	55.2	68.8
1970	46.7	53.9	56.9	69.3	72.1	78.4	81.4	83.1	78.9	66.7	56.9	60.5	67.1
1971	56.7	55.7	59.4	66.6	74.1	80.3	83.9	80.4	78.3	72.0	60.0	59.9	68.9
1972	56.5	55.2	64.3	71.2	73.7	80.8	80.3	80.3	79.6	69.8	54.7	52.0	68.2
1973	47.4	51.4	63.7	64.6	72.8	79.2	83.0	79.5	78.1	71.8	67.3	53.5	67.7
1974	55.0	56.2	66.8	67.2	76.9	79.9	82.8	81.6	74.6	70.6	60.2	54.6	68.9
1975	56.9	55.4	61.1	68.3	75.9	80.0	81.5	81.1	74.9	69.5	59.7	52.7	68.1
1976	50.6	60.1	62.2	67.7	70.5	78.4	80.5	81.4	76.2	60.6	51.8	49.2	65.8
1977	42.7	53.8	60.9	66.9	74.5	81.0	82.4	83.1	80.0	69.2	61.8	53.7	67.5
1978	40.8	45.1	57.3	67.6	76.0	80.4	83.7	83.1	79.3	68.9	64.7	52.9	66.7
1979	44.1	51.7	62.4	68.7	73.1	79.8	82.6	81.5	75.6	70.7	55.7	52.4	66.5
1980	55.0	53.7	60.9	66.2	77.3	85.1	87.5	86.6	83.2	67.8	58.0	55.2	69.7
1981	51.4	55.4	60.9	74.3	75.3	82.7	84.4	84.4	78.6	72.3	64.4	54.5	69.9
1982	52.9	52.1	64.9	67.8	75.3	83.0	85.4	84.1	79.3	69.5	60.9	55.4	69.2
1983	50.1	52.5	58.3	64.0	73.4	79.0	82.2	82.6	76.6	70.1	63.1	45.7	66.5
1984	47.0	54.0	61.9	67.8	74.9	78.6	81.8	82.9	77.4	74.2	60.0	63.4	68.7
1985	45.7	49.6	64.7	70.0	75.6	81.0	81.6	84.2	79.8	72.5	67.0	51.0	68.6
1986	54.4	59.9	63.3	71.7	75.8	82.0	85.9	82.6	81.8	68.9	62.0	51.7	70.0
1987	51.4	56.1	58.9	67.2	77.1	81.3	83.5	86.2	78.9	68.7	60.5	55.6	68.8
1988	48.1	54.1	61.3	67.6	73.6	80.5	84.4	85.3	80.8	72.0	65.7	55.4	69.1
1989	57.5	52.7	61.3	69.4	77.8	79.9	82.4	81.7	77.0	70.2	62.9	44.4	68.1
1990	57.0	59.1	62.9	69.4	78.1	84.8	82.1	85.1	80.1	68.7	63.4	53.6	70.4
1991	50.4	57.4	63.5	72.2	78.0	82.0	84.0	83.0	77.4	72.3	56.7	56.2	69.4
1992	51.0	58.5	64.0	68.7	73.7	81.7	83.6	80.1	79.3	71.4	56.8	56.7	68.8
1993	53.6	56.7	61.1	65.9	73.4	81.6	85.8	86.5	80.2	69.5	56.9	54.6	68.8
Record Mean	50.9	54.6	61.8	68.3	74.9	80.8	83.2	82.9	78.5	70.0	60.4	54.0	68.3
Max	61.0	65.5	72.7	78.9	84.8	90.7	93.4	93.3	88.6	81.5	71.5	64.7	78.9
Min	40.8	43.7	50.8	57.8	65.0	71.0	73.0	72.5	68.4	58.4	49.3	43.3	57.8

See Reference Notes on Page 6B.
Page 4B

HEATING DEGREE DAYS Base 65 deg. F

HOUSTON, TEXAS

SEASON	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR.	APR	MAY	JUNE	TOTAL
1964-65	0	0	0	31	114	315	300	284	250	0	0	0	1294
1965-66	0	0	2	20	23	212	516	334	144	12	0	0	1263
1966-67	0	0	0	27	99	359	342	298	68	0	0	0	1193
1967-68	0	0	3	18	99	312	390	415	229	17	0	0	1483
# 1968-69	0	0	0	5	199	297	284	234	281	1	0	2	1303
1969-70	0	0	0	29	238	304	579	309	252	51	12	0	1774
1970-71	0	0	0	72	274	209	298	273	219	72	33	0	1420
1971-72	0	0	2	6	195	194	315	295	85	17	0	0	1109
1972-73	0	0	2	50	320	410	540	379	75	117	0	0	1898
1973-74	0	0	0	8	74	364	330	273	95	60	0	0	1204
1974-75	0	0	0	15	196	336	290	270	179	48	0	0	1334
1975-76	0	0	0	126	217	399	441	178	155	26	7	0	1449
1976-77	0	0	0	173	398	484	687	312	166	25	0	0	2245
1977-78	0	0	0	34	150	365	752	553	250	33	17	0	2134
1978-79	0	0	0	22	111	393	646	376	135	23	2	0	1708
1979-80	0	0	0	27	297	389	308	350	169	45	0	0	1585
1980-81	0	0	0	67	255	323	416	291	144	6	0	0	1503
1981-82	0	0	0	50	82	326	409	363	143	79	1	0	1503
1982-83	0	0	0	53	175	328	457	346	219	96	0	0	1674
1983-84	0	0	6	27	138	606	549	325	150	45	2	0	1848
1984-85	0	0	0	12	204	144	591	432	91	22	0	0	1502
1985-86	0	0	5	17	76	434	326	209	99	11	0	0	1177
1986-87	0	0	0	28	175	411	421	245	196	82	0	0	1558
1987-88	0	0	0	16	185	301	525	331	171	35	0	0	1564
1988-89	0	0	0	5	120	309	260	379	210	56	0	0	1339
1989-90	0	0	0	47	160	637	264	177	122	34	0	0	1441
1990-91	0	0	0	61	129	395	448	222	115	8	0	0	1378
1991-92	0	0	0	15	289	303	428	197	95	37	4	0	1368
1992-93	0	0	0	1	270	268	351	235	157	62	0	0	1344
1993-94	0	0	0	76	269	343							

See Reference Notes on Page 6B.
Page 5A

COOLING DEGREE DAYS Base 65 deg. F

HOUSTON, TEXAS

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
# 1969	35	13	11	167	328	456	608	569	402	222	48	9	2868
1970	18	3	7	188	238	409	513	567	423	131	38	76	2611
1971	48	18	55	126	292	466	594	485	409	229	52	44	2818
1972	58	20	71	208	275	480	480	482	447	206	17	12	2756
1973	1	4	41	111	253	434	564	458	401	225	151	12	2655
1974	24	33	158	132	374	454	558	519	295	196	60	18	2821
1975	47	8	61	155	342	455	514	505	303	174	68	24	2656
1976	5	43	75	110	182	408	490	520	341	42	9	0	2225
1977	0	0	44	91	302	487	547	565	456	173	58	23	2551
1978	10	5	19	120	369	471	584	568	437	150	108	25	2666
1979	7	13	62	142	261	454	552	519	324	211	26	6	2577
1980	4	31	49	86	388	610	705	677	553	162	52	26	3343
1981	1	28	23	295	330	538	606	609	413	285	71	7	3200
1982	39	11	147	170	329	547	641	599	437	199	60	40	3219
1983	0	0	18	76	268	427	541	554	362	196	87	18	2547
1984	0	13	64	135	315	415	527	562	384	302	62	100	2879
1985	0	6	87	180	335	487	521	602	456	257	143	9	3083
1986	4	71	52	220	341	518	654	553	510	157	92	4	3172
1987	4	4	14	154	383	497	580	661	423	137	54	15	2926
1988	7	20	65	121	274	472	609	637	478	229	144	20	3076
1989	33	44	105	194	405	454	547	526	363	218	105	5	2999
1990	20	19	65	174	413	603	536	630	456	181	87	47	3231
1991	0	14	76	231	408	514	593	565	376	248	47	37	3109
1992	0	17	74	155	281	508	584	476	437	210	32	20	2794
1993	4	10	42	92	267	506	652	674	463	221	31	27	2989

See Reference Notes on Page 6B.
Page 5B

SNOWFALL (inches)

HOUSTON, TEXAS

SEASON	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1970-71	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1971-72	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1972-73	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.8	0.0	0.0	0.0	0.0	4.8
1973-74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974-75	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1975-76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976-77	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
1977-78	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1979-80	0.0	0.0	0.0	0.0	T	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
1980-81	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983-84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.3	0.0	0.0	0.0	0.0	1.7
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1988-89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1989-90	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	T	1.7
1990-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	T
1993-94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	T
Record Mean	0.0	0.0	0.0	0.0	T	T	0.2	0.2	T	T	T	T	0.4

See Reference Notes on Page 6B.
Page 6A

REFERENCE NOTES

HOUSTON, TEXAS

<p>GENERAL T - TRACE AMOUNT. BLANK ENTRIES DENOTE MISSING/UNREPORTED DATA. # INDICATES A STATION OR INSTRUMENT RELOCATION. SEE STATION LOCATION TABLE ON PAGE 8.</p> <p>SPECIFIC PAGE 2 PM - INCLUDES LAST DAY OF PREVIOUS MONTH ASOS - AUTOMATED SURFACE OBSERVING SYSTEM IN OPERATION DURING THESE MONTHS.</p> <p>PAGE 3 (a) - LENGTH OF RECORD IN YEARS, ALTHOUGH INDIVIDUAL MONTHS MAY BE MISSING. 0.* OR * - THE VALUE IS BETWEEN 0.0 AND 0.05. NORMALS - BASED ON THE 1961-1990 RECORD PERIOD. EXTREMES - DATES ARE THE MOST RECENT OCCURRENCE WIND DIR. - NUMERALS SHOW TENS OF DEGREES CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. RESULTANT DIRECTIONS ARE GIVEN TO WHOLE DEGREES. BOLD VALUES INDICATE EXTREME VALUES WHICH OCCURRED AFTER THE ASOS SYSTEM WAS COMMISSIONED.</p> <p>PAGE 4B RECORD = PERIOD OF RECORD RECORD MEAN PRECIPITATION IS THE MEAN OF ALL DAILY PRECIPITATION AMOUNTS DURING THE PERIOD OF RECORD. RECORD MAX(MIN) TEMPERATURE IS THE MEAN OF ALL DAILY MAX(MIN) TEMPERATURES DURING THE PERIOD OF RECORD. RECORD MEAN TEMPERATURE IS THE SUM OF THE RECORD MAX AND RECORD MIN DIVIDED BY 2. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAX AND MIN TEMPERATURE DIVIDED BY 2.</p>	<p>EXCEPTIONS PAGES 4A, 4B, 6A RECORD MEANS ARE THROUGH THE CURRENT YEAR, BEGINNING IN 1969 FOR TEMPERATURE 1933 FOR PRECIPITATION 1935 FOR SNOWFALL</p>
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HOUSTON, TEXAS

Houston, the largest city in Texas, is located in the flat Coastal Plains, about 50 miles from the Gulf of Mexico and about 25 miles from Galveston Bay. The climate is predominantly marine. The terrain includes numerous small streams and bayous which, together with the nearness to Galveston Bay, favor the development of both ground and advective fogs. Prevailing winds are from the southeast and south, except in January, when frequent passages of high pressure areas bring invasions of polar air and prevailing northerly winds.

Temperatures are moderated by the influence of winds from the Gulf, which result in mild winters. Another effect of the nearness of the Gulf is abundant rainfall, except for rare extended dry periods. Polar air penetrates the area frequently enough to provide variability in the weather.

Records of sky cover for daylight hours indicate about one-fourth of the days per year as clear, with a high number of clear days in October and November. Cloudy days are relatively frequent from December to May and partly cloudy days are the more frequent for June through September. Sunshine averages nearly 60 percent of the possible amount for the year ranging from 42 percent in January to 67 percent in June.

Heavy fog occurs on an average of 16 days a year and light fog occurs about 62 days a year in the city. The frequency of heavy fog is considerably higher at William P. Hobby Airport and at Intercontinental Airport.

Destructive windstorms are fairly infrequent, but both thundersqualls and tropical storms occasionally pass through the area.

Notice of Correction

Any previously received edition of the "Local Climatological Data Annual Summary for 1993" should be discarded. This revised edition contains updates to the "Normals" based upon the 1961-1990 record period as noted in the "Reference Notes" on Page 6B.

STATION LOCATION

HOUSTON, TEXAS

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING * EQUIPMENT	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS	
						SEA LEVEL		GROUND											HYGRO THERMOMETER
						GROUND THERMOMETER SITE	WIND INSTRUMENTS	EXTIMUM THERMOMETER	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	RAIN GAGE	WEIGHTING RAIN GAGE	8 INCH RAIN GAGE					
Cotton Station	7/14/81	9/15/09															Location of cotton station not available.		
CITY 4th Floor, Stewart Bldg Preston & Fannin Sts.	9/16/09	12/13/09		29° 46'	95° 22'	51	122	111	111		104		104						
8th Floor, Stewart Bldg Preston & Fannin Sts.	12/14/09	2/28/26		29° 46'	95° 22'	51	122	111	111		104		104						
19th Floor, Shell Bldg Texas & Fannin Sts.	3/01/26	12/22/32	1/8 mi. SW	29° 46'	95° 22'	52	314	293	293		287		287						
22nd Floor, Shell Bldg Texas & Fannin Sts.	12/23/32	6/21/35		29° 46'	95° 22'	52	314	293	293		287		287						
14th Floor, Shell Bldg Texas & Fannin Sts.	6/22/35	8/25/38		29° 46'	95° 22'	52	314	293	293		287		287						
10th Floor, Federal Building Franklin & Fannin Sts.	8/26/38	Present	1/4 mi. NE	29° 46'	95° 22'	41	190	162	158		160		159				Temperature and precipitation data telemetered to airport office 3/31/61 to 6/14/67. Summary published through August 1967.		
COOPERATIVE HARTSBURG, Texas	11/01/23	2/29/32		29° 42'	95° 17'	38		4					4				Suburb of the City of Houston.		
AIRPORT HOUSTON Municipal AP	7/16/30	8/01/40		29° 39'	95° 17'	50	37	30	30				25						
Houston International Airport	8/01/40	7/29/60	1000 ft. S	29° 39'	95° 17'	50	87	28	28				21				Known as Houston Municipal Airport until 4/15/55.		
Houston International Airport+ William P. Hobby Air- port effective 9/1/67.	7/29/60	5/31/69		29° 39'	95° 17'	50	20	23	23		a23		22	4			Moved from third to ground floor of same building and hygrothermometer installed 1500 feet E of thermometer site. a - Added 9/1/68.		
Trailer, NW corner of Houston Intercontinental AP	6/01/69	8/15/72	23 mi. NNW	29° 59'	95° 22'	96	20	5	5		c4		3	b4			b - Commissioned 11/14/69. c - Commissioned 1/1/70.		
Qualitron Building Intercontinental AP 17795 J.F. Kennedy Blvd	8/15/72	Present	1.6 mi. Se	29° 58'	95° 21'	96	d20	NA	NA	46	e45	45	45	f5	NA		d - Same site as prior to 8/15/72. e - Added 10/15/74. f - Type change and move 1250 ft. NNW 7/28/82.		

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801. INQUIRIES/COMMENTS CALL: (704) 271-4800 USCOMM-NOAA-ASHEVILLE, N.C. - 675

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