

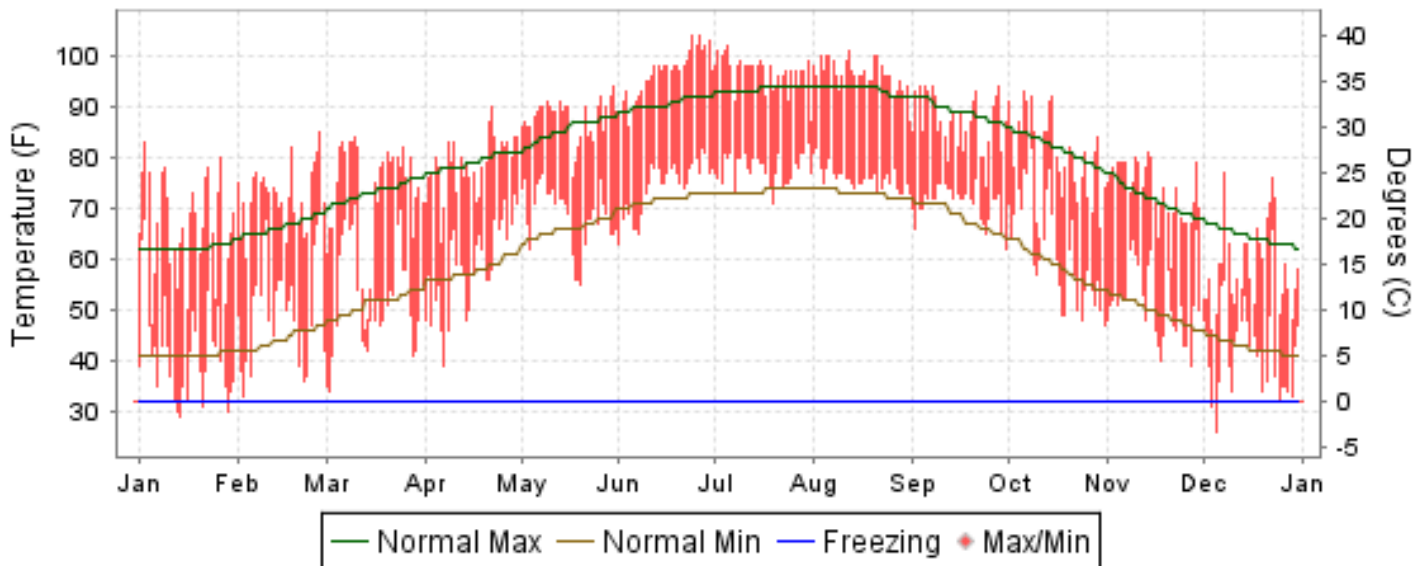


2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

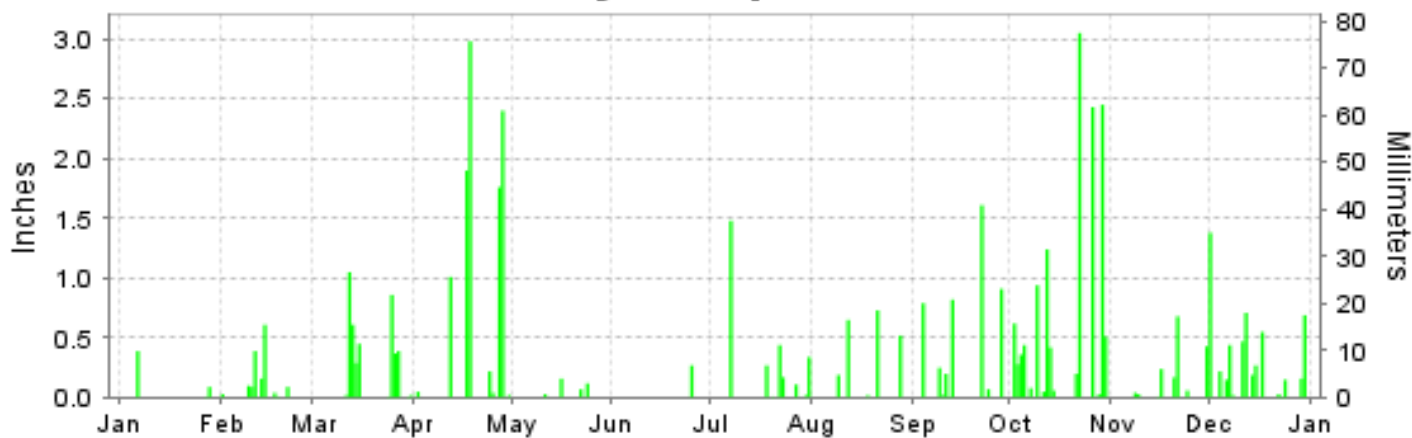
ISSN 0198-5086

HOUSTON, TEXAS (KIAH)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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NATIONAL
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ENVIRONMENTAL SATELLITE, DATA
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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2009

HOUSTON (KIAH)

LATITUDE: 29 ° 59'N LONGITUDE: -95 ° 21'W ELEVATION (FT): GRND: 94 BARO: 107 TIME ZONE: CENTRAL (UTC -6) WBAN: 12960

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	66.5	72.4	73.2	78.6	87.6	96.7	96.8	96.4	87.0	80.3	73.5	58.4	80.6	
	HIGHEST DAILY MAXIMUM	83	85	84	90	94	104	102	101	94	93	81	77	104	
	DATE OF OCCURRENCE	03	27	10	22	30	26+	05	12	28+	06	14	08	JUN 26+	
	MEAN DAILY MINIMUM	41.4	50.0	52.5	58.6	68.7	74.6	77.9	76.1	71.0	61.7	51.5	42.0	60.5	
	LOWEST DAILY MINIMUM	29	33	34	39	55	63	71	73	62	47	39	26	26	
	DATE OF OCCURRENCE	14	03	02	07	20	01	19	31+	30	31	27	05	DEC 05	
	AVERAGE DRY BULB	54.0	61.2	62.9	68.6	78.2	85.7	87.4	86.3	79.0	71.0	62.5	50.2	70.6	
	MEAN WET BULB	48.2	54.7	56.9	61.7	70.2	74.6	77.2	76.5	72.4	66.3	56.8	46.3	63.5	
	MEAN DEW POINT	40.9	48.5	52.3	55.8	65.9	69.9	73.3	73.0	70.0	63.4	52.9	41.8	59.0	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	1	13	28	30	30	11	6	0	0	0	119
	MAXIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM <= 32°	6	0	0	0	0	0	0	0	0	0	0	3	9	
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	355	145	152	31	0	0	0	0	0	32	108	459	1282	
	COOLING DEGREE DAYS	19	44	92	150	418	627	699	665	430	227	40	8	3419	
RH	MEAN (PERCENT)	65	67	73	67	70	64	68	70	79	80	76	77	71	
	HOUR 00 LST	74	77	83	77	84	78	81	82	88	89	87	82	82	
	HOUR 06 LST	81	79	87	83	88	87	90	91	91	90	91	85	87	
	HOUR 12 LST	51	54	59	53	54	46	51	51	66	67	58	66	56	
	HOUR 18 LST	53	54	63	56	56	50	53	60	71	75	72	74	61	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	1	7	1	0	0	0	1	0	1	0	9	20	
	THUNDERSTORMS	0	2	4	8	4	3	8	11	6	7	1	2	56	
CLOUDNESS	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.)	30.02	30.03	29.93	29.86	29.82	29.78	29.85	29.87	29.83	29.83	29.98	29.99	29.90	
	MEAN SEA-LEVEL PRESS. (IN.)	30.14	30.14	30.05	29.98	29.93	29.89	29.96	29.98	29.94	29.95	30.09	30.11	30.01	
WINDS	RESULTANT SPEED (MPH)	1.0	3.2	3.6	3.8	3.4	4.8	4.4	3.0	1.4	2.1	1.7	2.8	1.9	
	RES. DIR. (TENS OF DEGS.)	29	14	14	14	15	17	18	16	02	11	06	01	15	
	MEAN SPEED (MPH)	7.5	9.5	8.8	10.7	6.5	7.2	6.7	5.5	5.6	8.0	5.8	7.7	7.5	
	PREVAIL.DIR.(TENS OF DEGS.)	34	16	16	14	16	17	17	17	05	17	35	02	17	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	24	31	30	37	24	29	38	48	31	32	28	30	48	
	DIR. (TENS OF DEGS.)	34	33	15	31	33	16	35	31	14	04	13	31	31	
	DATE OF OCCURRENCE	19	28	23	27	16	27	23	12	21	02	20	24	AUG 12	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	35	43	36	48	31	36	44	70	38	39	36	46	70	
DIR. (TENS OF DEGS.)	33	27	28	31	31	16	35	32	22	17	33	23	32		
DATE OF OCCURRENCE	13	11	31	27	16	27	23	12	28	29	16	24	AUG 12		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.49	1.52	4.08	10.38	0.38	0.27	2.84	2.11	4.68	13.16	1.66	5.44	47.01	
	GREATEST 24-HOUR (IN.)	0.39	0.61	1.40	4.67	0.16	0.27	1.48	0.73	1.61	3.25	0.69	1.38	4.67	
	DATE OF OCCURRENCE	06	14	12-13	17-18	16	25	07	21	22	21-22	20-21	01	APR 17-18	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	3	9	11	9	4	1	8	5	9	16	8	15	98	
PRECIPITATION 0.10	1	4	7	6	2	1	6	4	6	12	4	12	65		
PRECIPITATION 1.00	0	0	1	5	0	0	1	0	1	4	0	1	13		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	
	GREATEST 24-HOUR (IN.)	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	
	DATE OF OCCURRENCE			27									04	DEC 04	
	MAXIMUM SNOW DEPTH (IN.)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	0	0	0	0	0	0	0	0	0	0	0	1	1		

NORMALS, MEANS, AND EXTREMES HOUSTON (KIAH)

LATITUDE:
29 ° 59'N

LONGITUDE:
-95 ° 21'W

ELEVATION (FT):
GRND: 94 BARO: 107

TIME ZONE:
CENTRAL (UTC -6)

WBAN: 12960

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	62.3	66.5	73.3	79.1	85.5	90.7	93.6	93.5	89.3	82.0	72.0	64.6	79.4
	MEAN DAILY MAXIMUM	40	62.2	66.3	72.9	79.2	85.7	91.0	93.7	93.7	89.1	81.6	71.9	64.6	79.3
	HIGHEST DAILY MAXIMUM	40	84	91	91	95	99	104	104	107	109	96	89	85	109
	YEAR OF OCCURRENCE		1975	1986	1989	1987	1996	2009	1980	2000	2000	1991	1989	1995	SEP 2000
	MEAN OF EXTREME MAXS.	43	78.5	81.2	85.2	88.4	92.9	97.0	98.6	99.4	96.4	91.3	85.0	80.1	89.5
	NORMAL DAILY MINIMUM	30	41.2	44.3	51.3	57.9	66.1	71.8	73.5	73.0	68.4	58.8	49.8	42.8	58.2
	MEAN DAILY MINIMUM	40	41.9	44.9	51.5	58.3	66.1	71.5	73.6	73.3	68.8	59.3	50.1	43.5	58.6
	LOWEST DAILY MINIMUM	40	12	20	22	31	44	52	62	60	48	29	19	7	7
	YEAR OF OCCURRENCE		1982	1997	2002	1987	1978	1970	1990	1992	1975	1993	1976	1989	DEC 1989
	MEAN OF EXTREME MINS.	43	25.6	28.4	33.4	40.8	52.6	63.0	68.8	67.9	55.7	42.6	32.9	27.1	44.9
	NORMAL DRY BULB	30	51.8	55.4	62.3	68.5	75.8	81.3	83.6	83.3	78.9	70.4	60.9	53.7	68.8
	MEAN DRY BULB	43	52.3	55.5	62.1	69.0	75.9	81.4	83.6	83.5	78.9	70.5	61.1	54.2	69.0
	MEAN WET BULB	26	47.4	50.6	56.0	62.0	69.3	73.8	75.4	75.2	71.1	63.9	55.8	49.1	62.5
	MEAN DEW POINT	26	44.1	47.5	52.7	59.1	67.1	72.0	73.3	72.9	68.6	61.3	53.0	46.1	59.8
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.1	0.1	0.9	6.4	20.1	27.3	25.7	15.9	3.1	0.0	0.0	99.6
	MAXIMUM <= 32	30	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
MINIMUM <= 32	30	6.3	3.8	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.3	5.1	18.0	
MINIMUM <= 0	30	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	
H/C	NORMAL HEATING DEG. DAYS	30	427	298	156	48	2	0	0	0	1	37	189	367	1525
	NORMAL COOLING DEG. DAYS	30	15	21	63	147	328	485	573	563	412	196	65	25	2893
RH	NORMAL (PERCENT)	30	75	74	73	74	76	76	74	75	76	75	77	76	75
	HOURLY 00 LST	30	82	83	83	85	87	88	86	87	88	88	86	84	86
	HOURLY 06 LST	30	86	87	88	89	92	93	93	94	93	91	89	87	90
	HOURLY 12 LST	30	64	61	59	58	60	60	57	57	59	57	61	62	60
	HOURLY 18 LST	30	67	62	60	60	64	64	62	62	66	68	72	71	65
S	PERCENT POSSIBLE SUNSHINE	27	45	50	54	58	62	68	70	68	66	64	52	51	59
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	40	4.2	3.2	2.9	2.1	1.5	0.6	0.3	0.4	1.1	2.5	3.4	3.9	26.1
	THUNDERSTORMS	40	2.0	2.5	3.6	3.9	6.6	8.7	10.6	10.6	7.0	4.1	3.0	2.1	64.7
CLOUDNESS	MEAN: SUNRISE-SUNSET (OKTAS)	27	5.5	5.3	5.4	5.3	5.2	4.6	4.4	4.4	4.2	4.0	4.6	5.3	4.9
	MIDNIGHT-MIDNIGHT (OKTAS)	26	5.3	5.0	5.1	5.0	4.9	3.9	3.8	3.7	3.6	3.5	4.3	5.0	4.4
	MEAN NO. DAYS WITH: CLEAR	27	7.2	7.0	7.0	7.2	5.6	7.3	6.9	6.1	8.6	11.2	9.0	7.2	90.3
	PARTLY CLOUDY	27	5.4	5.6	6.4	7.1	11.0	13.3	15.9	16.9	11.5	8.9	7.0	5.5	114.5
	CLOUDY	27	18.4	15.6	17.6	15.7	14.3	9.3	8.2	8.0	10.0	10.9	14.0	18.3	160.3
PR	MEAN STATION PRESSURE(IN)	26	30.03	29.98	29.91	29.86	29.83	29.83	29.88	29.87	29.85	29.92	29.98	30.02	29.91
	MEAN SEA-LEVEL PRES. (IN)	26	30.15	30.10	30.02	29.97	29.94	29.94	29.99	29.98	29.97	30.03	30.09	30.14	30.03
WINDS	MEAN SPEED (MPH)	26	8.0	8.4	8.7	8.8	8.1	7.1	6.3	5.9	6.4	7.0	7.4	7.6	7.5
	PREVAIL.DIR.(TENS OF DEGS)	37	36	17	17	17	17	17	17	17	01	14	36	36	17
	MAXIMUM 2-MINUTE: SPEED (MPH)	13	43	40	35	39	47	45	39	48	47	36	36	46	48
	DIR. (TENS OF DEGS)		34	10	14	14	31	13	03	31	01	35	29	14	31
	YEAR OF OCCURRENCE		2006	2000	2004	2007	2006	2004	2005	2009	2008	2007	2006	2002	AUG 2009
	MAXIMUM 3-SECOND SPEED (MPH)	13	49	44	43	48	58	66	49	70	61	47	47	52	70
	DIR. (TENS OF DEGS)		33	10	34	31	31	15	33	32	34	13	29	13	32
YEAR OF OCCURRENCE		2006	2000	2008	2009	2006	2000	1998	2009	2005	1998	2006	2002	AUG 2009	
PRECIPITATION	NORMAL (IN)	30	3.68	2.98	3.36	3.60	5.15	5.35	3.18	3.83	4.33	4.50	4.19	3.69	47.84
	MAXIMUM MONTHLY (IN)	40	9.78	6.10	8.52	10.92	14.39	19.21	9.94	10.58	12.07	16.05	11.73	9.34	19.21
	YEAR OF OCCURRENCE		1991	2005	1972	1976	1970	2001	2007	1996	2008	1984	2004	1991	JUN 2001
	MINIMUM MONTHLY (IN)	40	0.36	0.38	0.12	0.43	0.04	.08	0.47	0.31	0.80	0.05	0.41	0.64	0.04
	YEAR OF OCCURRENCE		1971	1976	1996	1983	1998	2005	1993	1990	1975	1978	1988	1973	MAY 1998
	MAXIMUM IN 24 HOURS (IN)	40	2.73	2.22	7.47	8.16	10.36	11.02	5.40	6.83	7.98	9.31	6.33	5.64	11.02
	YEAR OF OCCURRENCE		1995	1985	1972	1976	1989	2001	2002	1981	1976	1984	1998	2005	JUN 2001
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	10.5	8.5	9.1	7.0	8.2	9.7	8.9	8.9	8.9	7.5	8.6	9.4	105.2
PRECIPITATION >= 1.00	30	1.1	0.9	0.8	1.2	1.7	1.7	0.9	1.1	1.2	1.5	1.2	1.2	14.5	
SNOWFALL	NORMAL (IN)	30	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
	MAXIMUM MONTHLY (IN)	40	2.0	2.8	T	T	T	T	T	0.0	0.0	0.0	T	1.7	2.8
	YEAR OF OCCURRENCE		1973	1973	2009	1993	1993	1996	1996	1996	1996	1996	1979	1989	FEB 1973
	MAXIMUM IN 24 HOURS (IN)	40	2.0	1.4	T	T	T	T	0.0	0.0	0.0	0.0	T	1.7	2.0
	YEAR OF OCCURRENCE		1973	1980	2009	1993	1993	1996	1996	1996	1996	1996	1979	1989	JAN 1973
	MAXIMUM SNOW DEPTH (IN)	39	1	1	0	0	0	0	0	0	0	0	0	0	1
	YEAR OF OCCURRENCE		1973	1973											FEB 1973
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	

PRECIPITATION (inches) 2009 HOUSTON (KIAH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
1994	2.08	2.79	2.39	2.11	5.02	3.40	1.60	5.45	1.12	10.62	1.67	4.90	43.15
1995	5.95	2.55	4.11	2.59	3.83	4.11	2.68	4.90	2.52	2.77	3.63	4.99	44.63
1996	0.88	1.29	0.12	2.05	0.56	8.37	1.11	10.58	6.96	2.60	4.55	3.74	42.81
1997	3.26	5.35	7.96	7.17	6.69	4.46	2.30	2.26	4.86	7.11	3.38	5.42	60.22
1998	4.35	5.85	2.32	1.21	0.04	2.87	1.65	4.38	10.16	7.79	10.21	4.01	54.84
1999	2.12	0.80	3.44	1.06	4.10	5.26	5.11	0.50	1.36	0.56	1.53	2.20	28.04
2000	1.25	2.32	1.35	5.52	12.35	3.29	0.64	2.11	4.34	3.27	8.50	2.69	47.63
2001	4.25	0.82	7.97	2.00	3.53	19.21	2.05	4.83	8.82	8.95	2.58	6.18	71.19
2002	1.24	0.89	2.36	3.79	1.79	4.54	7.11	5.47	8.02	14.65	4.20	5.65	59.71
2003	2.09	4.08	2.04	1.46	0.06	3.62	5.35	4.47	6.79	4.99	7.80	2.99	45.74
2004	6.01	5.58	2.23	5.56	7.33	18.33	0.79	2.49	1.01	2.05	11.73	1.95	65.06
2005	3.41	6.10	4.05	1.28	6.06	0.08	5.30	1.52	2.63	1.69	2.72	6.37	41.21
2006	2.50	1.46	2.36	2.93	8.78	7.84	7.85	3.40	3.22	14.53	0.92	2.07	57.86
2007	5.72	1.15	6.40	3.86	9.88	3.07	9.94	8.05	3.05	6.85	5.49	2.06	65.52
2008	4.62	4.00	2.41	1.46	4.57	2.06	1.09	7.45	12.07	8.67	2.92	1.68	53.00
2009	0.49	1.52	4.08	10.38	0.38	0.27	2.84	2.11	4.68	13.16	1.66	5.44	47.01
POR= 43 YRS	3.63	2.95	3.43	3.57	5.39	5.41	3.68	3.81	4.68	5.35	4.01	3.63	49.54

WBAN : 12960

AVERAGE TEMPERATURE (°F) 2009 HOUSTON (KIAH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
1994	52.6	55.2	62.7	69.6	76.0	83.5	85.5	83.1	78.3	71.9	65.7	57.2	70.1
1995	54.3	58.7	62.9	68.6	77.9	80.6	84.8	84.9	81.6	70.4	61.4	57.1	70.3
1996	52.0	58.7	58.1	69.4	81.4	80.7	83.8	82.0	77.5	70.6	62.0	57.4	69.5
1997	50.8	55.3	65.3	64.2	73.6	79.2	83.1	83.2	79.1	68.9	55.7	50.1	67.4
1998	57.1	55.1	60.1	65.9	78.7	85.5	86.6	84.7	82.2	72.6	64.3	55.1	70.7
1999	57.1	61.5	63.7	73.0	76.6	81.9	83.1	86.8	78.0	69.0	62.2	53.7	70.6
2000	56.5	61.7	66.4	67.9	78.1	81.4	85.2	84.8	79.4	70.9	57.6	47.6	69.8
2001	49.3	59.3	56.4	71.7	75.9	80.5	83.6	83.5	77.0	66.9	63.4	56.0	68.6
2002	54.6	50.7	61.3	73.5	77.0	81.7	84.5	83.9	79.7	71.6	58.8	54.6	69.3
2003	50.1	53.8	61.4	70.5	80.8	82.7	83.4	84.7	77.7	71.7	65.0	53.8	69.6
2004	54.7	53.5	67.3	69.5	77.0	81.1	84.6	83.2	81.2	77.5	62.0	53.8	70.5
2005	56.3	58.8	61.7	67.7	75.3	83.3	84.5	84.6	83.4	71.1	64.5	53.1	70.4
2006	58.9	55.5	65.6	73.7	76.7	81.4	83.3	84.9	79.4	72.4	62.7	55.7	70.9
2007	50.5	55.2	65.9	66.7	76.4	82.5	82.2	85.4	81.9	73.0	63.7	57.7	70.1
2008	52.2	60.1	63.6	69.4	77.8	84.6	84.9	84.0	78.2	69.6	62.5	55.7	70.2
2009	54.0	61.2	62.9	68.6	78.2	85.7	87.4	86.3	79.0	71.0	62.5	50.2	70.6
POR= 43 YRS	52.3	55.5	62.1	69.0	75.9	81.4	83.6	83.5	78.9	70.5	61.1	54.2	69.0

HEATING DEGREE DAYS (base 65°F) 2009 HOUSTON (KIAH)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0	0	0	67	255	323	416	291	144	6	1	0	1503
1981-82	0	0	0	50	82	326	409	363	143	79	1	0	1453
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	6	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	391	291	136	40	1	0	1547
1994-95	0	0	0	21	75	268	347	192	155	28	0	0	1086
1995-96	0	0	4	8	145	303	408	267	259	54	0	0	1448
1996-97	0	0	1	29	159	280	458	287	77	70	0	0	1361
1997-98	0	0	0	58	282	454	254	276	212	57	0	0	1593
1998-99	0	0	0	8	92	349	276	153	106	25	0	0	1009
1999-00	0	0	0	51	114	355	298	152	72	50	0	0	1092
2000-01	0	0	5	51	267	532	480	207	262	19	0	0	1823
2001-02	0	0	0	57	111	311	343	395	181	11	1	0	1410
2002-03	0	0	0	13	201	332	461	314	135	24	0	0	1480
2003-04	0	0	0	12	105	342	328	328	29	33	0	0	1177
2004-05	0	0	0	3	121	350	303	210	144	19	3	0	1153
2005-06	0	0	0	36	138	375	203	278	90	1	0	0	1121
2006-07	0	0	0	14	132	316	451	288	75	65	0	0	1341
2007-08	0	0	0	23	137	267	407	170	129	28	0	0	1161
2008-09	0	0	0	35	122	319	355	145	152	31	0	0	1159
2009-	0	0	0	32	108	459							

WBAN : 12960

COOLING DEGREE DAYS (base 65°F) 2009 HOUSTON (KIAH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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	3206
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	3176
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
1994	15	25	74	186	347	561	644	569	406	243	102	33	3205
1995	24	22	98	142	406	476	622	622	508	183	42	65	3210
1996	15	89	53	192	513	475	587	532	384	205	78	51	3174
1997	23	21	94	52	274	432	567	570	426	187	9	0	2655
1998	16	6	64	90	429	621	678	616	524	250	75	50	3419
1999	37	60	73	270	365	515	568	685	395	182	35	11	3196
2000	41	64	126	143	413	495	632	622	443	242	51	0	3272
2001	2	51	3	230	344	474	585	581	370	123	70	40	2873
2002	27	2	72	272	380	507	611	590	449	223	24	17	3174
2003	6	6	31	196	495	538	575	617	387	228	111	3	3193
2004	17	1	108	176	379	491	616	570	495	398	37	11	3299
2005	41	42	51	109	329	558	611	615	558	233	131	14	3292
2006	23	17	116	265	370	499	574	625	441	252	70	34	3286
2007	9	19	108	125	360	530	539	640	513	280	106	48	3277
2008	17	32	93	166	403	594	625	594	403	184	54	38	3203
2009	19	44	92	150	418	627	699	665	430	227	40	8	3419

SNOWFALL (inches) 2009 HOUSTON (KIAH)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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	0.1	0.0	0.0	0.0	0.0	0.1
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T	T
1996-97	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1997-98	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
1998-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
1999-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T
2000-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
2001-02	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
2002-03	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
2003-04	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
2004-05	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
2005-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
2006-07	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
2007-08	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
2008-09	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	T	0.0	0.0	0.0	1.4
2009-	0.0	0.0	0.0	0.0	0.0	1.0							
POR= 41 YRS	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	T	T	T	T	0.3

WBAN : 12960

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> <p>NOTE: The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2009 HOUSTON TEXAS (KIAH)

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.

Station Location

HOUSTON

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	Latitude		Longitude		ELEVATION ABOVE								REMARKS
				NORTH	WEST	SEA LEVEL	GROUND							AUTOMATIC OBSERVING EQUIPMENT *		
						GROUND TEMPERATURE SITE	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET RAIN GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE		HYGROTHERMOMETER	
*NOTES:																
<u>AIRPORT</u>																
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	06/01/96	1.6 mi. SE	29° 58'	95° 21'	96	d20			46	e45	45	45	d4 f5	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.	
Intercontinental Airport	06/01/96	Present	NA	30° 00'	95° 22'	g118								s	ASOS Commissioned 06/01/96 g. Ground elevation.	

* NOTES: For previous station history see previous editions.

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