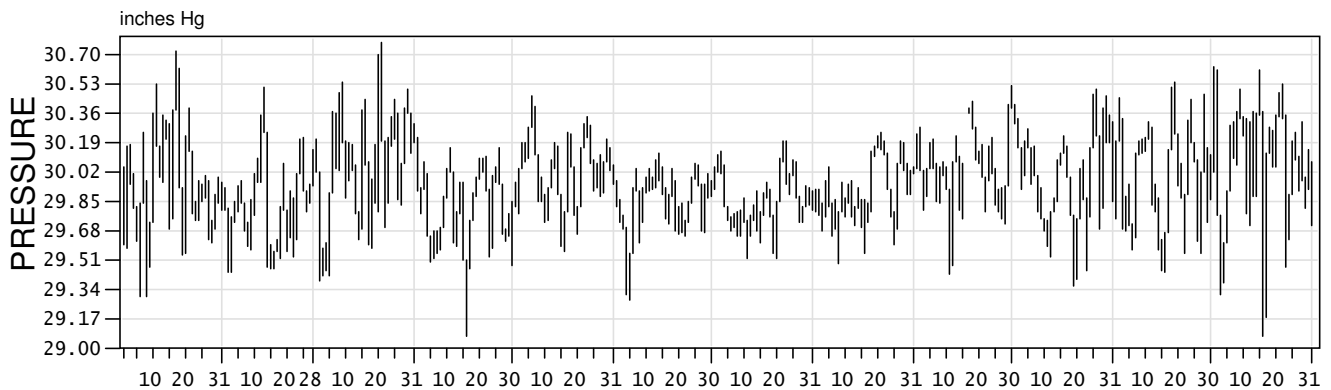
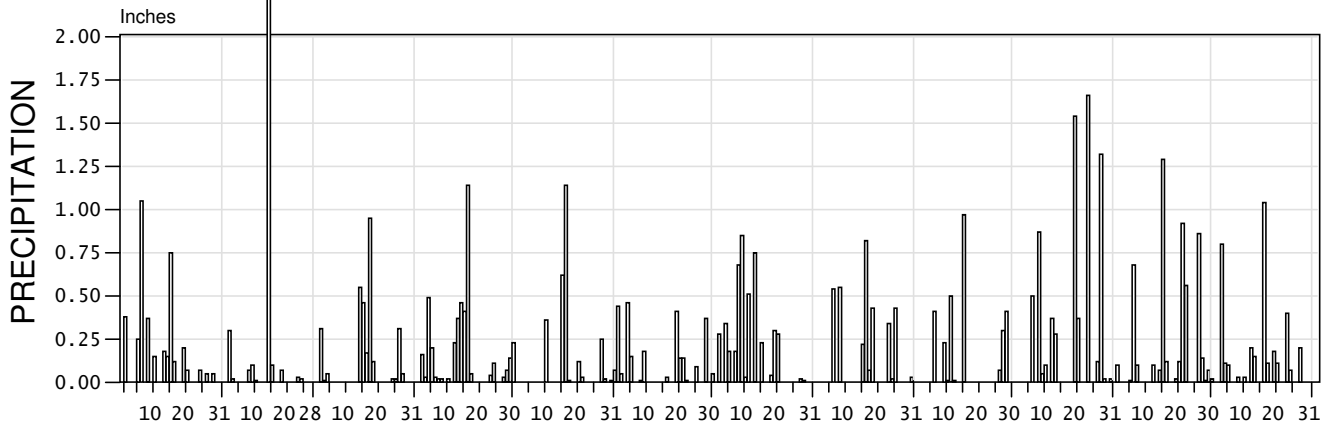
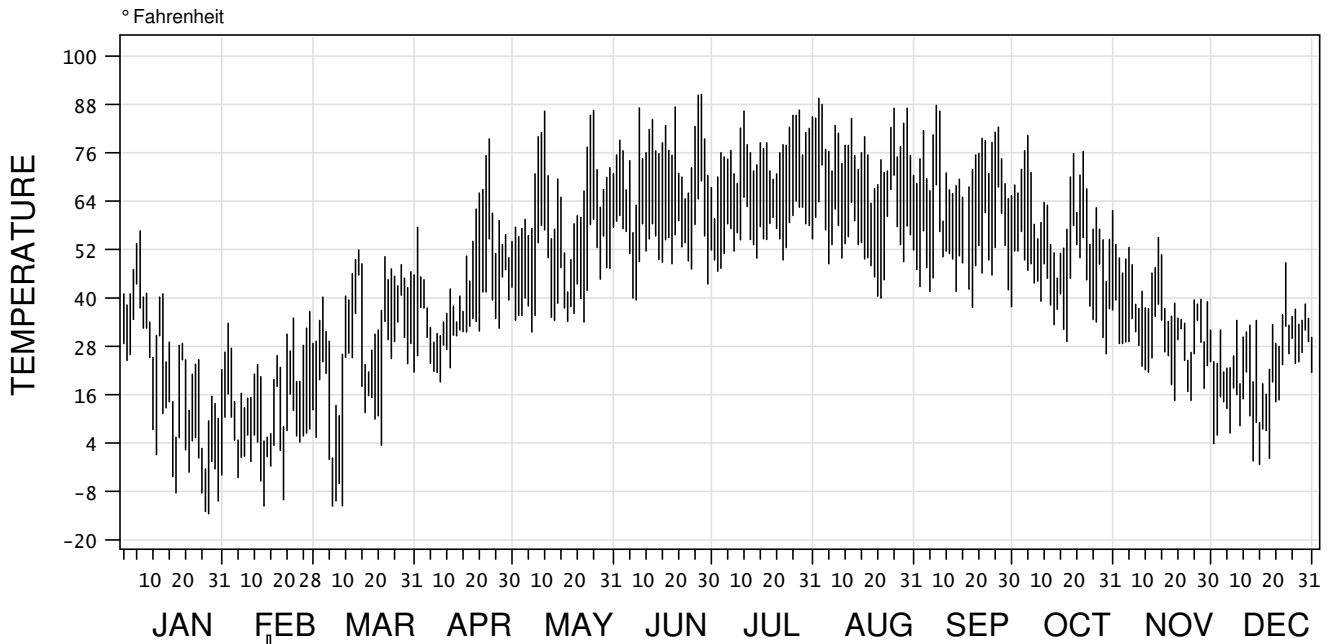


# 2007

# LOCAL CLIMATOLOGICAL DATA

## Annual Summary with Comparative Data

### Westford Daily Data



# METEOROLOGICAL DATA FOR 2007

## Westford

Latitude: 44° 37' 39" N Longitude: 73° 02' 29" W Elevation (Ground): 850 feet Time Zone: Eastern

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
<b>TEMPERATURE</b>													
Average													
-Daily Maximum	27.0	20.8	36.2	48.4	65.5	75.8	76.8	77.3	73.0	61.5	40.4	28.8	52.6
-Daily Minimum	10.9	4.6	18.5	33.6	43.7	53.6	56.0	55.0	49.9	42.9	27.0	15.8	34.3
-Monthly	19.0	12.7	27.4	41.0	54.6	64.7	66.4	66.2	61.4	52.2	33.7	22.3	43.5
-Monthly Dew Point	11.3	1.2	14.6	29.7	40.0	56.0	59.0	57.6	52.3	44.9	25.8	17.4	34.1
<b>Extremes</b>													
-Highest	56.7	36.8	51.9	79.4	86.5	90.5	86.7	89.5	87.8	80.3	55.1	48.7	90.5
-Date	6	27	14	23	25	27	27	2	7	5	14	23	JUN 27
-Lowest	-13.5	-11.7	-11.7	19.2	31.6	39.6	46.7	40.0	37.8	26.3	14.6	-1.4	-13.5
-Date	27	13	6	8	6	7	2	21	18	29	19	15	JAN 27
<b>DEGREE DAYS</b>													
Heating Base 65°F	1419	1457	1159	711	342	75	34	58	140	395	929	1316	8035
Cooling Base 65°F	0	0	0	2	30	74	88	104	45	3	0	0	346
<b>SOLAR RADIATION (W/m2)</b>													
<b>NUMBER OF DAYS</b>													
<b>Sunrise to Sunset</b>													
-Clear	4	6	6	5	14	8	12	11	8	6	3	3	86
-Partly Cloudy	13	13	12	5	8	17	13	14	14	12	11	8	140
-Cloudy	14	9	13	20	9	5	6	6	7	13	16	20	138
<b>Precipitation</b>													
.01 inches or more	16	11	14	21	12	16	17	11	9	16	22	14	179
<b>Snow, Ice pellets</b>													
1.0 inches or more	7	5	5	6	0	0	0	0	0	0	4	12	39
Thunderstorms	0	0	0	1	2	10	5	6	3	1	0	0	28
<b>Heavy Fog, visibility</b>													
¼ mile or less	1	0	1	0	2	0	0	2	3	1	0	0	10
<b>TEMPERATURE:</b>													
<b>-Maximum</b>													
90°F and above	0	0	0	0	0	2	0	1	0	0	0	0	3
32°F and below	20	24	12	3	0	0	0	0	0	0	4	18	81
<b>-Minimum</b>													
32°F and below	26	28	26	15	1	0	0	0	0	4	24	30	154
0°F and below	11	6	5	0	0	0	0	0	0	0	0	3	25
<b>PRESSURE</b>													
<b>Average</b>													
-Monthly	29.950	29.840	30.056	29.817	30.031	29.850	29.860	29.912	30.045	30.014	30.006	30.073	29.954
<b>Extremes</b>													
-Highest	30.73	30.52	30.77	30.23	30.47	30.14	30.21	30.25	30.53	30.50	30.55	30.63	30.77
-Date	17	13	21	1	6	14	22	21	30	26	19	1	MAR 21
-Lowest	29.30	29.44	29.40	29.07	29.56	29.28	29.52	29.49	29.43	29.37	29.44	29.08	29.07
-Date	8	2	2	16	16	5	20	8	11	19	16	16	APR 16
<b>RELATIVE HUMIDITY (%)</b>													
<b>Average</b>													
-Monthly	71.9	60.1	61.1	70.0	62.3	75.9	81.1	77.3	75.2	78.9	75.7	80.2	72.5
<b>-Local Time</b>													
Hour 01	75	66	66	78	69	86	90	86	83	85	79	83	79
Hour 07	76	67	70	79	73	89	92	89	87	88	83	83	81
Hour 13	64	48	53	59	50	63	70	65	61	67	66	74	62
Hour 19	72	61	58	65	58	69	71	69	75	78	76	80	69
<b>PRECIPITATION</b>													
<b>Water Equivalent</b>													
-Total	3.93	3.13	3.11	4.42	2.72	2.64	4.81	3.50	2.96	7.33	5.35	3.62	47.52
-Greatest (24 hrs)	0.00	0.00	0.36	1.39	1.24	0.56	0.87	0.82	0.97	1.92	1.34	0.00	1.92
-Date	1	1	26-27	15-16	15-16	19-20	7- 8	16	14-15	19-20	14-15	1	OCT 19-20
<b>Snow, Ice pellets</b>													
-Total	18.2	32.7	24.3	16.1	0.0	0.0	0.0	0.0	0.0	0.0	9.5	41.2	142.0
-Greatest (day)	3.6	23.6	12.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	11.4	23.6
-Date	16	14	17	15	1	1	1	1	1	1	23	16	FEB 14
<b>WIND</b>													
<b>Resultant</b>													
-Direction	227	258	230	239	267	248	229	227	217	211	226	224	232
-Speed	2.1	2.5	2.3	1.4	1.2	1.1	1.0	1.1	1.5	1.8	2.5	2.3	1.7
Average Speed	3.7	3.7	4.8	3.4	2.4	1.9	1.4	1.7	2.1	2.6	4.2	4.0	3.0
<b>Maximum One-minute</b>													
<b>Average</b>													
-Direction	SW	W	S	SW	W	NW	W	W	S	S	S	WNW	S
-Speed	13	12	20	20	17	17	16	20	14	18	24	21	24
-Date	8	17	10	23	10	8	13	16	14	31	14	1	NOV 14
<b>Peak Gust</b>													
-Direction	S	WNW	S	WNW	WSW	WNW	W	W	S	SW	S	S	S
-Speed	38	32	40	35	28	24	26	34	31	31	37	38	40
-Date	11	15	22	16	10	22	13	16	14	31	14	23	MAR 22

# MEANS AND EXTREMES\*

## Westford

Latitude: 44° 37' 39" N    Longitude: 73° 02' 29" W    Elevation (Ground): 850 feet    Time Zone: Eastern

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Year
<b>TEMPERATURE</b>													
Average													
-Daily Maximum	26.8	31.2	39.5	53.1	66.2	76.4	79.4	77.7	69.7	55.9	43.8	32.6	54.4
-Daily Minimum	8.5	11.6	20.3	32.8	43.7	53.4	57.6	56.0	48.8	38.1	29.1	17.5	34.8
-Monthly	17.6	21.4	29.9	43.0	55.0	64.9	68.5	66.9	59.3	47.0	36.4	25.0	44.6
-Monthly Dew Point	3.0	3.0	7.5	12.2	18.0	21.5	23.5	22.8	20.4	15.7	11.4	6.9	13.8
<b>Extremes</b>													
-Record Highest	59.0	59.0	76.0	86.0	88.0	100.0	103.0	98.0	91.0	80.3	72.0	63.0	103.0
-Year	1996	1999	1998	2002	1998	1995	1995	1995	2002	2007	1996	1998	JUL 1995
-Record Lowest	-29.0	-18.1	-15.3	11.7	26.4	35.0	43.0	38.0	25.0	19.0	0.0	-18.4	-29.0
-Year	1997	2003	2003	2003	2005	2001	2000	1995	2000	2002	2000	2004	JAN 1997
<b>MEAN DEGREE DAYS</b>													
Heating Base 65°F	1459	1203	1091	639	322	81	23	50	195	553	845	1220	7680
Cooling Base 65°F	0	0	0	2	11	75	115	97	23	1	0	0	324
<b>MEAN SOLAR RADIATION</b>													
<b>MEAN NUMBER OF DAYS</b>													
<b>Sunrise to Sunset</b>													
-Clear	21.2	19.3	21.0	19.2	19.8	19.4	19.5	20.6	20.5	20.4	19.2	20.0	240.0
-Partly Cloudy	3.7	3.7	4.2	4.1	5.0	6.1	6.5	6.5	5.7	3.7	3.6	2.8	55.4
-Cloudy	5.8	4.4	5.7	5.4	5.3	2.7	2.5	2.8	2.8	6.1	6.5	7.5	57.6
<b>Precipitation ≥ .01"</b>													
Snow, Ice pfts. ≥ 1.0"	17.3	12.3	14.3	13.5	16.2	13.6	14.5	12.5	12.2	15.6	17.4	16.7	176.1
Thunderstorms	10.2	5.9	5.8	2.5	0.3	0.0	0.0	0.0	0.0	0.4	4.3	9.7	39.0
Heavy Fog, vis. ≤ ¼ mi	0.0	0.1	0.3	1.0	2.7	4.9	5.8	4.6	1.4	0.5	0.4	0.2	21.9
	0.1	0.0	0.5	0.0	0.4	0.2	0.1	0.5	0.3	0.4	0.4	0.0	2.8
<b>TEMPERATURE:</b>													
<b>-Maximum</b>													
90°F and above	0.0	0.0	0.0	0.0	0.0	1.7	1.4	1.5	0.2	0.0	0.0	0.0	4.8
32°F and below	18.7	13.8	7.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	3.2	14.5	58.5
<b>-Minimum</b>													
32°F and below	29.2	25.8	26.0	14.5	2.1	0.0	0.0	0.0	0.4	9.4	18.6	27.5	153.4
0°F and below	10.0	6.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.8	21.2
<b>PRESSURE</b>													
<b>Average</b>													
-Monthly	12.497	12.489	12.482	12.462	12.472	11.489	11.491	11.509	11.547	11.518	11.539	11.536	11.919
<b>Extremes</b>													
-Record Highest	30.85	30.89	30.77	30.69	30.52	30.28	30.34	30.34	30.53	30.50	30.67	30.76	30.89
-Year	2005	2003	2007	2003	2005	2003	2004	2003	2007	2007	2003	2006	FEB 2003
-Record Lowest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-Year	1996	1996	1996	1996	1996	1995	1995	1995	1995	1995	1995	1995	JUN 1995
<b>RELATIVE HUMIDITY (%)</b>													
<b>Average</b>													
-Monthly	29.0	26.5	27.3	26.8	29.5	29.8	30.9	31.3	30.9	31.0	29.4	30.0	29.4
<b>-Local Time</b>													
Hour 01	31	29	29	30	33	33	34	35	34	33	31	31	32
Hour 07	31	29	30	30	33	34	35	35	35	34	31	31	32
Hour 13	26	23	23	23	25	25	26	26	25	26	26	28	25
Hour 19	30	27	27	25	27	27	29	30	31	32	30	30	29
<b>PRECIPITATION</b>													
<b>Water Equivalent</b>													
-Mean	3.29	2.17	2.96	3.03	3.90	4.44	5.05	5.32	4.25	4.59	3.78	3.80	46.57
-Maximum Monthly	6.88	3.16	4.84	6.05	7.92	12.15	7.65	11.43	8.87	8.38	5.35	7.77	12.15
-Year	1998	2000	2001	2000	2006	1998	1996	2004	2002	2006	2007	2003	JUN 1998
-Minimum Monthly	1.28	0.83	1.05	0.00	0.00	0.00	3.10	1.54	1.65	1.45	2.11	1.32	0.00
-Year	2004	2004	1996				2006	2002	2001	2004	1998	1998	
-Greatest (24 hrs)	2.85	0.95	1.23	1.39	2.33	3.08	2.58	6.05	2.65	1.92	1.66	2.24	6.05
-Year	1998	2000	2001	2007	2000	1998	1996	1995	1999	2007	2003	1996	AUG 1995
<b>Snow, Ice pellets</b>													
-Mean	25.9	17.2	21.0	7.3	0.3	0.0	0.0	0.0	0.0	1.5	9.4	28.4	111.0
-Maximum Monthly	34.3	32.7	41.6	21.7	2.2	0.0	0.0	0.0	0.0	6.5	20.5	69.8	69.8
-Year	1999	2007	2001	1996	1996	1995	1995	1995	1995	2005	2002	2003	DEC 2003
-Minimum Monthly	15.5	9.8	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	0.0
-Year	1996	1999	2000	1999	1997	1995	1995	1995	1995	1996	2006	1999	JUN 1995
-Greatest (day)	11.0	23.6	16.2	13.4	2.0	0.0	0.0	0.0	0.0	4.5	9.8	15.0	23.6
-Year	2000	2007	2006	2000	1996	1995	1995	1995	1995	2005	2002	1997	FEB 2007
<b>WIND</b>													
<b>Resultant</b>													
-Direction	223	248	240	233	252	234	218	223	213	219	219	221	228
-Speed	1.9	2.1	2.0	1.3	1.0	1.0	1.0	1.0	1.4	1.6	2.2	2.2	1.5
Average Speed	1.4	1.4	1.6	1.5	1.0	0.8	0.7	0.6	0.8	1.0	1.5	1.5	1.2
<b>Maximum One-minute Average</b>													
-Direction	SW	WSW	S	SW	W	NW	W	W	S	SW	S	WNW	WSW
-Speed	19	25	24	20	17	17	16	20	14	21	24	21	25
-Year	2003	2003	2003	2007	2007	2007	2007	2007	2007	2003	2007	2007	FEB 2003
<b>Peak Gust</b>													
-Direction	SSE	W	S	S	SSW	W	S	W	S	SW	W	S	W
-Speed	41	47	40	39	39	44	33	34	35	40	39	45	47
-Year	2006	2006	2003	2004	2004	2004	2004	2007	2005	2003	2003	2004	FEB 2006

\* Length of record: June 1995 to December 2007

# Westford

## PRECIPITATION (inches)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1995						1.36	3.92	10.18	3.15	6.48	4.24	3.39	32.72
1996	3.86	2.22	1.05	6.03	5.01	3.88	7.65	2.63	3.64	3.88	4.15	5.13	49.13
1997	2.05	1.82	3.34	0.00	0.00	0.00	6.06	5.47	4.28	2.04	4.41	3.78	33.25
1998	6.88	2.22	3.78	2.24	3.22	12.15	7.25	6.20	5.64	3.03	2.11	1.32	56.04
1999	4.61	0.96	2.79	0.76	3.83	2.95	5.07	2.80	8.33	3.82	3.35	1.73	41.00
2000	2.92	3.16	3.01	6.05	7.29	2.94	3.24	3.48	3.04	2.48	3.16	4.43	45.20
2001	1.98	2.27	4.84	0.65	2.63	2.20	4.04	6.07	1.65	2.39	2.72	2.35	33.79
2002	2.80	2.35	2.46	3.79	4.49	9.09	4.92	1.54	8.87	3.97	4.21	2.69	51.18
2003	1.52	1.56	3.72	2.82	4.75	2.76	3.67	6.26	2.81	6.46	4.52	7.77	48.62
2004	1.28	0.83	2.94	2.10	3.59	3.86	6.66	11.43	2.58	1.45	3.09	4.94	44.75
2005	3.25	2.99	2.41	3.68	1.40	4.38	5.22	5.35	4.09	8.00	4.80	3.54	49.11
2006	4.44	2.48	2.02	3.82	7.92	9.50	3.10	4.24	4.15	8.38	3.06	4.67	57.78
2007	3.93	3.13	3.11	4.42	2.72	2.64	4.81	3.50	2.96	7.33	5.35	3.62	47.52

## SNOWFALL (inches)

Year	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
1994-95												0.0	0.0
1995-96	0.0	0.0	0.0	0.1	13.9	46.0	15.5	15.3	13.0	21.7	2.2	0.0	127.7
1996-97	0.0	0.0	0.0	0.0	19.8	15.0	31.9	11.2	24.2	9.8	0.0	0.0	111.9
1997-98	0.0	0.0	0.0	4.7	17.3	40.9	21.9	9.9	24.6	0.2	0.0	0.0	119.5
1998-99	0.0	0.0	0.0	0.0	2.0	7.6	34.3	9.8	25.2	0.0	0.0	0.0	78.9
1999-00	0.0	0.0	0.0	0.0	10.3	2.5	27.8	23.5	9.3	18.9	0.0	0.0	92.3
2000-01	0.0	0.0	0.0	4.3	13.4	40.8	30.9	18.4	41.6	0.0	0.0	0.0	149.4
2001-02	0.0	0.0	0.0	0.9	3.3	17.8	30.0	17.1	20.0	5.0	0.0	0.0	94.1
2002-03	0.0	0.0	0.0	0.0	20.5	15.4	26.3	12.8	13.4	8.4	0.0	0.0	96.8
2003-04	0.0	0.0	0.0	T	4.3	69.8	22.5	12.0	10.5	3.9	1.5	0.0	124.5
2004-05	0.0	0.0	0.0	0.0	2.5	28.4	27.5	28.4	24.0	T	0.0	0.0	110.8
2005-06	0.0	0.0	0.0	6.5	5.2	30.1	23.9	15.5	21.5	3.2	0.0	0.0	105.9
2006-07	0.0	0.0	0.0	3.0	0.1	14.1	18.2	32.7	24.3	16.1	0.0	0.0	108.5
2007-08	0.0	0.0	0.0	0.0	9.5	41.2							

# Westford

## TEMPERATURE °F

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1995						69.5	74.0	70.9	56.3	51.1	33.4	19.6	53.5
1996	15.9	19.8	27.3	41.4	53.0	65.3	67.2	66.8	59.9	45.2	32.0	32.2	43.8
1997	18.0	25.6	27.1	41.1	50.4	65.0	66.8	64.1	56.7	44.6	33.4	23.0	43.0
1998	21.5	27.4	33.4	45.0	60.7	66.1	68.3	66.1	59.0	47.6	38.2	30.9	47.0
1999	18.6	24.0	30.4	44.3	57.9	68.2	71.5	65.3	61.5	44.1	40.4	27.3	46.1
2000	16.4	22.9	35.5	41.8	55.8	62.9	65.6	65.5	55.2	47.4	36.0	18.8	43.6
2001	20.0	22.6	28.4	43.1	58.2	65.4	66.3	70.1	59.6	49.6	40.5	32.6	46.4
2002	26.4	25.2	31.6	46.5	52.5	61.7	68.5	68.6	61.9	44.0	34.9	22.9	45.4
2003	10.1	15.0	28.4	39.9	53.8	62.8	68.1	68.3	60.4	45.3	37.2	23.5	42.7
2004	5.8	19.4	32.4	42.2	55.9	60.6	67.3	65.0	59.3	46.5	35.1	21.0	42.5
2005	13.2	21.9	26.8	45.4	50.5	68.3	69.6	67.9	61.6	48.4	37.8	21.6	44.4
2006	27.0	20.5	30.1	44.2	56.2	63.4	70.7	64.4	57.7	44.8	41.0	29.8	45.8
2007	19.0	12.7	27.4	41.0	54.6	64.7	66.4	66.2	61.4	52.2	33.7	22.3	43.5

## HEATING DEGREE DAYS: Base 65°F

Year	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
1994-95												33	33
1995-96	0	13	262	424	954	1416	1528	1320	1177	665	391	47	8197
1996-97	18	31	180	542	998	1027	1463	1112	1181	652	445	59	7708
1997-98	44	67	265	639	893	1227	1224	1060	954	588	158	69	7188
1998-99	13	53	196	528	784	1032	1444	1154	1049	588	212	46	7099
1999-00	12	50	169	657	696	1139	1466	1147	923	634	299	99	7291
2000-01	45	58	260	537	877	1395	1403	852	1143	643	190	62	7465
2001-02	27	19	189	422	743	917	1206	1122	1044	504	388	123	6704
2002-03	30	38	148	662	790	1270	1710	1408	1148	767	363	135	8469
2003-04	19	59	170	629	848	1303	1841	1337	1024	678	312	147	8367
2004-05	26	75	191	589	910	1377	1614	1220	1198	604	466	59	8329
2005-06	21	36	153	534	833	1351	1184	1250	1092	632	296	105	7487
2006-07	5	93	217	634	724	1086	1419	1457	1159	711	342	75	7922
2007-08	34	58	140	395	929	1316							

# Westford

## COOLING DEGREE DAYS: Base 65 °F

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1995						160	248	182	9	0	0	0	599
1996	0	0	0	0	10	52	74	78	23	0	0	0	237
1997	0	0	0	0	0	53	90	36	7	0	0	0	186
1998	0	0	0	0	16	93	92	78	14	0	0	0	293
1999	0	0	0	0	15	132	164	52	56	0	0	0	419
2000	0	0	0	0	7	40	54	64	8	0	0	0	173
2001	0	0	0	0	6	67	52	164	27	1	0	0	317
2002	0	0	0	16	7	30	125	128	55	4	0	0	365
2003	0	0	0	0	1	56	99	144	16	0	0	0	316
2004	0	0	0	5	15	28	82	59	2	0	0	0	191
2005	0	0	0	0	0	143	150	110	37	5	0	0	445
2006	0	0	0	0	19	52	176	65	4	0	0	0	316
2007	0	0	0	2	30	74	88	104	45	3	0	0	346

## STATION LOCATION AND INSTRUMENTATION Westford

Location	Occupied from	Occupied to	Latitude North	Longitude West	Elevation Above (ft)						
					Sea Level	Ground					
						Wind	Sun	Temp	Humidity	Rain	Barometer
22 Penny Ln Westford, VT 05494	7/2007	Present	44° 37' 39"	73° 02' 29"	850	23	0	5	5	5	5

### INSTRUMENTATION DETAIL

Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.

Davis Vantage Pro, Vantage Pro Plus, Vantage Pro2, Vantage Pro2 Plus

**Wind:**

Electronic sensors:

Large cups: Instantaneous speed to 120 mph and direction to nearest 7°, greater of 2 mph or ±5%.

Small cups: Instantaneous speed to 175 mph and direction to nearest 7°, greater of 3 mph or ±5%.

**Temperature:**

Electronic sensor: -40° to 140°F, ±1°F.

**Humidity:**

Electronic sensor: 0 to 100% RH, ±3%.

**Barometer:**

Electronic sensor: 26.00 to 32.00 inches Hg, ±0.05".

**Rainfall:**

6.5-inch diameter electronic tipping bucket rain gauge. Resolution 0.01", ±4%.

**Sunshine:**

Electronic sensor: 0 to 1600 W/m<sup>2</sup>, 5%.

**UV:**

Electronic sensor: 0 to 16 Index, 8%.

Snow, ice pellets, glaze and other meteorological phenomenon not recorded by the Weather Computer are manually observed and recorded in the station record.

### OBSERVER NOTES