

2005

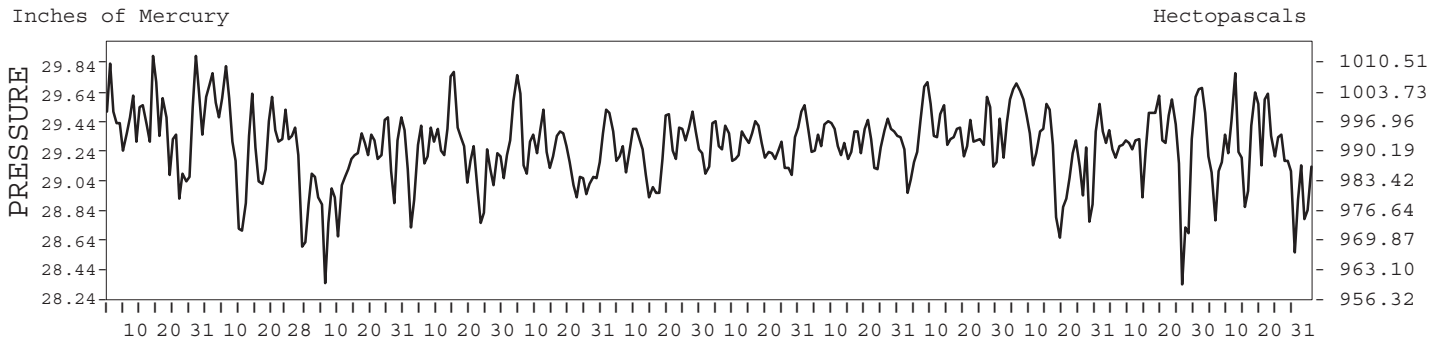
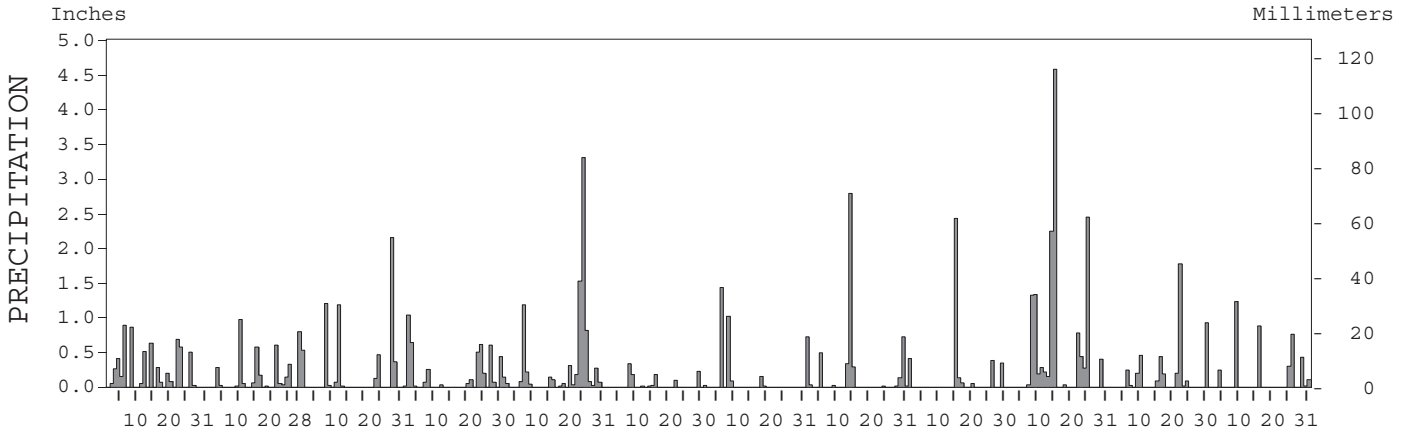
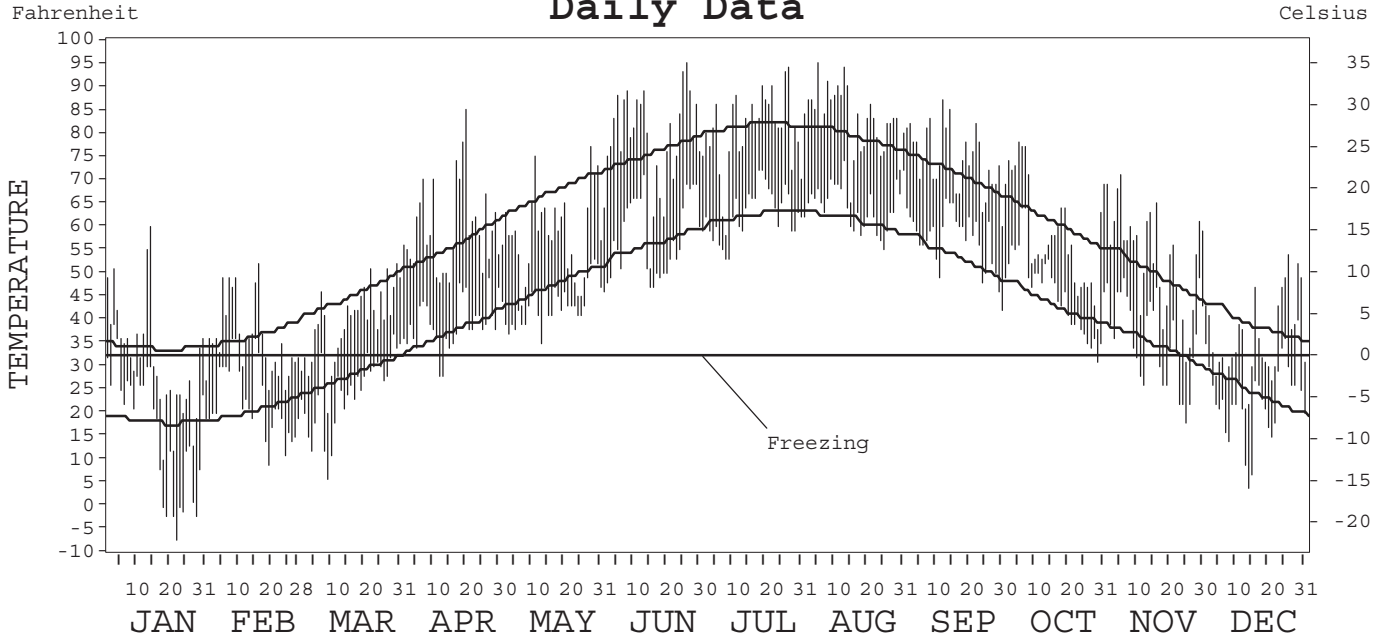
LOCAL CLIMATOLOGICAL DATA  
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2435

BLUE HILL OBSERVATORY,  
MILTON, MASSACHUSETTS (MQE)

Daily Data



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*Thomas R. Karl*

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|---|---|---|---|

# METEOROLOGICAL DATA FOR 2005

## MILTON, MA (MQE)

LATITUDE: 42° 12' 44" N      LONGITUDE: 71° 06' 53" W      ELEVATION (FT): GRND: 654      BARO: 657      TIME ZONE: EASTERN (UTC + 5)      WBAN: 14753

| ELEMENT                  |                               | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   | OCT   | NOV   | DEC    | YEAR      |    |
|--------------------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-----------|----|
| TEMPERATURE °F           | MEAN DAILY MAXIMUM            | 31.3  | 36.3  | 39.6  | 59.6  | 58.5  | 78.7  | 80.5  | 82.9  | 74.4  | 58.8  | 52.8  | 36.0   | 57.4      |    |
|                          | HIGHEST DAILY MAXIMUM         | 60    | 52    | 52    | 85    | 77    | 95    | 94    | 95    | 87    | 78    | 71    | 54     | 95        |    |
|                          | DATE OF OCCURRENCE            | 14    | 16    | 30    | 20    | 28    | 26    | 27    | 05    | 12    | 05    | 05    | 26     | AUG 05    |    |
|                          | MEAN DAILY MINIMUM            | 16.7  | 22.6  | 24.7  | 39.1  | 43.4  | 57.5  | 62.6  | 64.2  | 57.2  | 46.0  | 36.0  | 23.0   | 41.1      |    |
|                          | LOWEST DAILY MINIMUM          | -7    | 9     | 6     | 28    | 35    | 46    | 53    | 55    | 42    | 31    | 18    | 4      | -7        |    |
|                          | DATE OF OCCURRENCE            | 22    | 19    | 09    | 13+   | 13    | 01    | 09+   | 25    | 30    | 29    | 25    | 14     | JAN 22    |    |
|                          | AVERAGE DRY BULB              | 24.0  | 29.5  | 32.2  | 49.4  | 51.0  | 68.1  | 71.6  | 73.6  | 65.8  | 52.4  | 44.4  | 29.5   | 49.3      |    |
|                          | MEAN WET BULB                 | 22.0  | 26.3  | 28.4  | 41.8  | 46.2  |       | 65.8  |       | 60.2  | 49.2  | 39.9  |        |           |    |
|                          | MEAN DEW POINT                | 15.5  | 18.9  | 20.1  | 31.7  | 41.2  |       | 62.5  |       | 56.3  | 46.1  | 33.3  |        |           |    |
|                          | NUMBER OF DAYS WITH:          |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | MAXIMUM ≥ 90°                 | 0     | 0     | 0     | 0     | 0     | 2     | 4     | 5     | 0     | 0     | 0     | 0      | 0         | 11 |
| MAXIMUM ≤ 32°            | 18                            | 11    | 7     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 15    | 52     |           |    |
| MINIMUM ≤ 32°            | 29                            | 24    | 26    | 2     | 0     | 0     | 0     | 0     | 0     | 1     | 11    | 27    | 120    |           |    |
| MINIMUM ≤ 0°             | 7                             | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 7      |           |    |
| H/C                      | HEATING DEGREE DAYS           | 1264  | 988   | 1009  | 466   | 428   | 65    | 16    | 2     | 55    | 396   | 612   | 1095   | 6396      |    |
|                          | COOLING DEGREE DAYS           | 0     | 0     | 0     | 1     | 0     | 166   | 225   | 278   | 87    | 14    | 0     | 0      | 771       |    |
| RH                       | MEAN (PERCENT)                | 73    | 68    | 64    | 58    | 76    | 79    | 77    | 76    | 75    | 83    | 68    | 70     | 72        |    |
|                          | HOUR 01 LST                   | 75    | 71    | 72    | 69    | 87    | 89    | 88    | 89    | 84    | 89    | 73    | 76     | 80        |    |
|                          | HOUR 07 LST                   | 77    | 77    | 72    | 67    | 83    | 85    | 84    | 86    | 84    | 89    | 77    | 76     | 80        |    |
|                          | HOUR 13 LST                   | 67    | 57    | 54    | 43    | 62    | 63    | 62    | 56    | 59    | 71    | 56    | 61     | 59        |    |
|                          | HOUR 19 LST                   | 73    | 65    | 62    | 54    | 74    | 79    | 75    | 75    | 75    | 82    | 68    | 68     | 71        |    |
| S                        | PERCENT POSSIBLE SUNSHINE     |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
| W/O                      | NUMBER OF DAYS WITH:          |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | HEAVY FOG (VISBY ≤ 1/4 MI)    | 2     | 4     | 5     | 4     | 6     | 4     | 5     | 2     | 5     | 7     | 5     | 3      | 52        |    |
|                          | THUNDERSTORMS                 | 0     | 0     | 0     | 0     | 0     | 2     | 2     | 4     | 2     | 0     | 1     | 0      | 11        |    |
| 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.)     | 29.45 | 29.36 | 29.08 | 29.23 | 29.25 | 29.29 | 29.31 | 29.32 | 29.38 | 29.28 | 29.31 | 29.22  | 29.29     |    |
|                          | MEAN SEA-LEVEL PRESS. (IN.)   | 30.19 | 30.10 | 29.81 | 29.95 | 29.97 |       | 30.01 |       | 30.09 | 30.00 | 30.03 |        |           |    |
| WINDS                    | RESULTANT SPEED (MPH)         | 5.3   | 4.8   | 6.7   | 3.4   | 3.9   | 4.9   | 2.9   | 3.3   | 4.3   | 3.2   | 7.1   | 7.7    | 3.5       |    |
|                          | RES. DIR. (TENS OF DEGS.)     | 30    | 30    | 27    | 18    | 34    | 20    | 23    | 20    | 22    | 30    | 22    | 25     | 25        |    |
|                          | MEAN SPEED (MPH)              | 12.4  | 12.7  | 13.5  | 13.1  | 11.7  | 10.4  | 11.3  | 10.7  | 11.5  | 14.0  | 14.0  | 13.3   | 12.4      |    |
|                          | PREVAIL. DIR. (TENS OF DEGS.) | 30    | 28    | 26    | 17    | 02    | 19    | 18    | 16    | 18    | 04    | 28    | 23     | 28        |    |
|                          | MAXIMUM 2-MINUTE WIND:        |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | SPEED (MPH)                   | 46    | 40    | 43    | 40    | 39    | 28    | 32    | 38    | 49    | 43    | 41    | 43     | 49        |    |
|                          | DIR. (TENS OF DEGS.)          | 05    | 14    | 25    | 17    | 02    | 22    | 19    | 17    | 17    | 25    | 17    | 29     | 17        |    |
|                          | DATE OF OCCURRENCE            | 23+   | 15    | 09    | 23    | 25    | 29    | 25    | 31+   | 29    | 16    | 16    | 09     | SEP 29    |    |
|                          | MAXIMUM 5-SECOND WIND:        |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | SPEED (MPH)                   | 60    | 49    | 55    | 52    | 54    | 35    | 39    | 49    | 62    | 61    | 52    | 53     | 62        |    |
| DIR. (TENS OF DEGS.)     | 19                            | 14    | 30    | 17    | 01    | 22    | 20    | 16    | 17    | 04    | 17    | 09    | 17     |           |    |
| DATE OF OCCURRENCE       | 14                            | 15    | 08    | 23+   | 25    | 29    | 25    | 31    | 29    | 25    | 16    | 16    | SEP 29 |           |    |
| PRECIPITATION            | WATER EQUIVALENT:             |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | TOTAL (IN.)                   | 6.23  | 4.10  | 6.12  | 4.63  | 8.65  | 1.07  | 2.72  | 5.56  | 3.81  | 14.72 | 4.65  | 3.96   | 66.22     |    |
|                          | GREATEST 24-HOUR (IN.)        | 1.25  | 0.97  | 2.50  | 1.61  | 3.62  | 0.52  | 1.43  | 3.08  | 2.43  | 5.97  | 1.98  | 1.23   | 5.97      |    |
|                          | DATE OF OCCURRENCE            | 22-23 | 10    | 28-29 | 02-03 | 25-26 | 08-09 | 06    | 14-15 | 15    | 14-15 | 21-22 | 09     | OCT 14-15 |    |
|                          | NUMBER OF DAYS WITH:          |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | PRECIPITATION ≥ 0.01          | 17    | 15    | 10    | 15    | 20    | 8     | 6     | 12    | 7     | 15    | 12    | 8      | 145       |    |
| PRECIPITATION ≥ 0.10     | 12                            | 8     | 7     | 9     | 11    | 5     | 3     | 7     | 5     | 13    | 8     | 7     | 95     |           |    |
| PRECIPITATION ≥ 1.00     | 0                             | 0     | 3     | 1     | 3     | 0     | 2     | 1     | 1     | 5     | 1     | 1     | 18     |           |    |
| SNOWFALL                 | SNOW, ICE PELLETS, HAIL:      |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
|                          | TOTAL (IN.)                   | 44.8  | 25.4  | 25.0  | 0.2   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.5   | 0.6   | 14.4   | 111.9     |    |
|                          | GREATEST 24-HOUR (IN.)        | 10.5  | 8.5   | 8.9   | 0.2   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.5   | 0.4   | 10.8   | 10.8      |    |
|                          | DATE OF OCCURRENCE            | 23    | 28    | 12    | 12    |       |       |       |       |       | 29    | 24    | 09     | DEC 09    |    |
|                          | MAXIMUM SNOW DEPTH (IN.)      | 25    | 16    | 17    | T     | 0     | 0     | 0     | 0     | 0     | 1     | T     | 10     | 25        |    |
|                          | DATE OF OCCURRENCE            | 23    | 01    | 13    | 13    |       |       |       |       |       | 30    | 24+   | 10     | JAN 23    |    |
|                          | NUMBER OF DAYS WITH:          |       |       |       |       |       |       |       |       |       |       |       |        |           |    |
| SNOWFALL ≥ 1.0           | 11                            | 5     | 6     | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 3     | 26     |           |    |

# NORMALS, MEANS, AND EXTREMES

## MILTON, MA (MQE)

LATITUDE: 42° 12' 44" N      LONGITUDE: 71° 06' 53" W      ELEVATION (FT): GRND: 654      BARO: 657      TIME ZONE: EASTERN (UTC + 5)      WBAN: 14753

| ELEMENT               |                             | POR  | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   | OCT   | NOV   | DEC      | YEAR     |
|-----------------------|-----------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|
| TEMPERATURE °F        | NORMAL DAILY MAXIMUM        | 30   | 33.8  | 36.3  | 44.8  | 55.5  | 67.0  | 75.5  | 81.2  | 78.9  | 71.0  | 60.3  | 49.3  | 38.6     | 57.7     |
|                       | MEAN DAILY MAXIMUM          | 43   | 33.4  | 35.9  | 44.3  | 55.7  | 66.7  | 75.4  | 80.7  | 78.9  | 70.9  | 60.5  | 49.2  | 38.1     | 57.5     |
|                       | HIGHEST DAILY MAXIMUM       | 120  | 68    | 68    | 89    | 94    | 93    | 99    | 100   | 101   | 99    | 88    | 81    | 74       | 101      |
|                       | YEAR OF OCCURRENCE          |      | 1950  | 1985  | 1998  | 1976  | 2000  | 1919  | 1977  | 1975  | 1953  | 1963  | 1950  | 1998     | AUG 1975 |
|                       | MEAN OF EXTREME MAXS.       | 43   | 54.2  | 54.5  | 66.6  | 78.5  | 85.9  | 89.6  | 92.9  | 90.3  | 85.7  | 77.5  | 68.2  | 59.0     | 75.2     |
|                       | NORMAL DAILY MINIMUM        | 30   | 18.1  | 20.3  | 27.8  | 37.1  | 47.0  | 55.9  | 62.0  | 60.9  | 53.2  | 42.9  | 34.2  | 23.8     | 40.3     |
|                       | MEAN DAILY MINIMUM          | 43   | 18.1  | 19.8  | 27.5  | 36.9  | 46.7  | 55.9  | 61.9  | 61.1  | 53.5  | 43.4  | 34.4  | 23.7     | 40.2     |
|                       | LOWEST DAILY MINIMUM        | 120  | -16   | -21   | -5    | 6     | 27    | 36    | 44    | 39    | 28    | 21    | 5     | -19      | -21      |
|                       | YEAR OF OCCURRENCE          |      | 1957  | 1934  | 1950  | 1923  | 1911  | 1945  | 1988  | 1965  | 1914  | 1936  | 1932  | 1933     | FEB 1934 |
|                       | MEAN OF EXTREME MINS.       | 43   | -1.0  | 1.8   | 10.5  | 24.7  | 36.4  | 44.9  | 52.8  | 49.9  | 39.9  | 29.3  | 19.0  | 4.7      | 26.1     |
|                       | NORMAL DRY BULB             | 30   | 26.0  | 28.3  | 36.3  | 46.3  | 57.0  | 65.7  | 71.6  | 69.9  | 62.1  | 51.6  | 41.8  | 31.2     | 49.0     |
|                       | MEAN DRY BULB               | 43   | 25.8  | 27.9  | 35.9  | 46.3  | 56.7  | 65.7  | 71.4  | 70.1  | 62.1  | 51.9  | 41.9  | 31.0     | 48.9     |
|                       | MEAN WET BULB               | 6    | 22.7  | 27.6  | 31.7  | 40.2  | 49.9  | 60.4  | 64.7  | 65.5  | 59.3  | 47.4  | 39.8  | 28.8     | 44.8     |
|                       | MEAN DEW POINT              | 6    | 15.8  | 19.1  | 24.3  | 31.8  | 44.2  | 56.4  | 61.2  | 62.2  | 56.1  | 42.7  | 34.0  | 21.6     | 39.1     |
|                       | NORMAL NO. DAYS WITH:       |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
| MAXIMUM ≥ 90°         | 30                          | 0.0  | 0.0   | 0.0   | 0.1   | 0.4   | 1.3   | 3.2   | 1.4   | 0.3   | 0.0   | 0.0   | 0.0   | 6.7      |          |
| MAXIMUM ≤ 32°         | 30                          | 14.6 | 10.6  | 3.2   | 0.2   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.0   | 8.7   | 38.3     |          |
| MINIMUM ≤ 32°         | 30                          | 28.1 | 24.7  | 21.8  | 7.3   | 0.2   | 0.0   | 0.0   | 0.0   | *     | 3.0   | 13.5  | 25.3  | 123.9    |          |
| MINIMUM ≤ 0°          | 30                          | 2.1  | 1.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.5   | 3.6      |          |
| H/C                   | NORMAL HEATING DEG. DAYS    | 30   | 1207  | 1034  | 894   | 562   | 271   | 74    | 9     | 22    | 138   | 422   | 698   | 1040     | 6371     |
|                       | NORMAL COOLING DEG. DAYS    | 30   | 0     | 0     | 1     | 3     | 21    | 93    | 215   | 173   | 49    | 3     | 0     | 0        | 558      |
| RH                    | NORMAL (PERCENT)            |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | HOUR 01 LST                 |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | HOUR 07 LST                 |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | HOUR 13 LST                 |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | HOUR 19 LST                 |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
| S                     | PERCENT POSSIBLE SUNSHINE   | 112  | 46    | 50    | 48    | 49    | 52    | 55    | 57    | 58    | 56    | 55    | 47    | 46       | 52       |
| W/O                   | MEAN NO. DAYS WITH:         |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | HEAVY FOG (VISBY ≤ 1/4 MI)  | 13   | 4.6   | 4.3   | 5.8   | 5.1   | 6.6   | 4.7   | 4.1   | 4.8   | 5.3   | 5.4   | 4.4   | 3.8      | 58.9     |
|                       | THUNDERSTORMS               | 13   | 0.3   | 0.3   | 0.5   | 0.9   | 2.5   | 3.3   | 3.6   | 3.4   | 1.5   | 0.6   | 0.4   | 0.1      | 17.4     |
| CLOUDINESS            | MEAN:                       |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | SUNRISE-SUNSET (OKTAS)      |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | MIDNIGHT-MIDNIGHT (OKTAS)   |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | MEAN NO. DAYS WITH:         |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | CLEAR                       |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | PARTLY CLOUDY               |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | CLOUDY                      |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
| PR                    | MEAN STATION PRESSURE (IN)  | 6    | 29.28 | 29.33 | 29.26 | 29.26 | 29.30 | 29.30 | 29.29 | 29.33 | 29.38 | 29.36 | 29.33 | 29.27    | 29.31    |
|                       | MEAN SEA-LEVEL PRES. (IN)   | 6    | 30.01 | 30.08 | 29.98 | 29.98 | 30.01 | 30.01 | 29.99 | 30.01 | 30.09 | 30.07 | 30.04 | 30.03    | 30.03    |
| WINDS                 | MEAN SPEED (MPH)            | 63   | 17.1  | 16.9  | 17.1  | 16.3  | 14.4  | 13.6  | 12.9  | 12.6  | 13.5  | 15.1  | 16.2  | 16.6     | 15.2     |
|                       | PREVAIL. DIR (TENS OF DEGS) |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | MAXIMUM 2-MINUTE:           |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
|                       | SPEED (MPH)                 | 7    | 46    | 58    | 55    | 54    | 51    | 48    | 45    | 41    | 49    | 51    | 56    | 60       | 60       |
|                       | DIR. (TENS OF DEGS)         |      | 05    | 19    | 14    | 16    | 26    | 29    | 31    | 28    | 17    | 27    | 16    | 16       | 16       |
|                       | YEAR OF OCCURRENCE          |      | 2005  | 2000  | 1999  | 2000  | 2002  | 2000  | 1999  | 2001  | 2005  | 2003  | 1999  | 2000     | DEC 2000 |
|                       | MAXIMUM 5-SECOND:           |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
| SPEED (MPH)           | 7                           | 63   | 61    | 74    | 70    | 64    | 61    | 54    | 52    | 62    | 69    | 76    | 78    | 78       |          |
| DIR. (TENS OF DEGS)   |                             | 21   | 28    | 15    | 15    | 21    | 29    | 32    | 24    | 17    | 28    | 16    | 15    | 15       |          |
| YEAR OF OCCURRENCE    |                             | 2000 | 2001  | 1999  | 2000  | 2000  | 2000  | 1999  | 2004  | 2005  | 2003  | 1999  | 2000  | DEC 2000 |          |
| PRECIPITATION         | NORMAL (IN)                 | 30   | 4.78  | 4.06  | 4.79  | 4.32  | 3.79  | 3.93  | 3.74  | 4.06  | 4.13  | 4.42  | 4.64  | 4.56     | 51.22    |
|                       | MAXIMUM MONTHLY (IN)        | 120  | 11.61 | 9.32  | 13.07 | 10.37 | 9.16  | 17.32 | 11.67 | 18.78 | 12.37 | 14.72 | 9.78  | 12.60    | 18.78    |
|                       | YEAR OF OCCURRENCE          |      | 1979  | 1969  | 2001  | 1987  | 1954  | 1998  | 1938  | 1955  | 1999  | 2005  | 1983  | 1969     | AUG 1955 |
|                       | MINIMUM MONTHLY (IN)        | 120  | 0.89  | 0.71  | 0.06  | 0.92  | 0.50  | 0.14  | 0.13  | 0.53  | 0.45  | 0.22  | 0.55  | 0.92     | 0.06     |
|                       | YEAR OF OCCURRENCE          |      | 1955  | 1987  | 1915  | 1892  | 1944  | 1999  | 1952  | 1981  | 1914  | 1924  | 1976  | 1955     | MAR 1915 |
|                       | MAXIMUM IN 24 HOURS (IN)    | 119  | 3.10  | 4.85  | 6.62  | 3.47  | 5.02  | 6.10  | 4.67  | 9.93  | 5.86  | 7.41  | 5.06  | 5.68     | 9.93     |
|                       | YEAR OF OCCURRENCE          |      | 1889  | 1886  | 1968  | 2004  | 1984  | 1998  | 1979  | 1955  | 1961  | 1996  | 1955  | 1969     | AUG 1955 |
|                       | NORMAL NO. DAYS WITH:       |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
| PRECIPITATION ≥ 0.01  | 30                          | 12.1 | 10.6  | 12.0  | 11.6  | 12.1  | 11.2  | 9.7   | 10.1  | 9.5   | 9.7   | 10.8  | 12.7  | 132.1    |          |
| PRECIPITATION ≥ 1.00  | 30                          | 1.5  | 1.2   | 1.2   | 1.2   | 0.7   | 0.9   | 1.2   | 1.1   | 1.3   | 1.2   | 1.4   | 1.4   | 14.3     |          |
| SNOWFALL              | NORMAL (IN)                 | 30   | 15.9  | 13.0  | 11.4  | 3.8   | 0.3   | 0.0   | 0.0   | 0.0   | 0.3   | 3.1   | 10.7  | 58.5     |          |
|                       | MAXIMUM MONTHLY (IN)        | 120  | 56.3  | 65.4  | 52.0  | 24.2  | 7.8   | T     | T     | 0.0   | 0.0   | 6.8   | 23.0  | 45.2     | 65.4     |
|                       | YEAR OF OCCURRENCE          |      | 1948  | 1969  | 1956  | 1996  | 1977  | 1991  | 2004  |       |       | 1979  | 1889  | 1945     | FEB 1969 |
|                       | MAXIMUM IN 24 HOURS (IN)    | 116  | 20.0  | 28.2  | 27.2  | 15.1  | 7.8   | T     | T     | 0.0   | 0.0   | 6.8   | 16.0  | 21.0     | 28.2     |
|                       | YEAR OF OCCURRENCE          |      | 1898  | 1969  | 1960  | 1996  | 1977  | 1991  | 2004  |       |       | 1979  | 1898  | 1960     | FEB 1969 |
|                       | MAXIMUM SNOW DEPTH (IN)     | 42   | 27    | 41    | 43    | 27    | 8     | 0     | 0     | 0     | 0     | 5     | 12    | 23       | 43       |
|                       | YEAR OF OCCURRENCE          |      | 1978  | 1969  | 1969  | 1997  | 1977  |       |       |       |       | 1979  | 1971  | 2003     | MAR 1969 |
| NORMAL NO. DAYS WITH: |                             |      |       |       |       |       |       |       |       |       |       |       |       |          |          |
| SNOWFALL ≥ 1.0        | 30                          | 4.0  | 3.0   | 3.0   | 0.7   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.9   | 2.7   | 14.5     |          |

PRECIPITATION (inches) 2005 BLUE HILL OBSERVATORY, MA (MQE)

| YEAR            | JAN   | FEB  | MAR   | APR   | MAY  | JUN   | JUL   | AUG  | SEP   | OCT   | NOV  | DEC  | ANNUAL |
|-----------------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|------|--------|
| 1976            | 6.52  | 3.06 | 3.29  | 2.45  | 2.84 | 0.91  | 4.51  | 8.92 | 2.41  | 5.73  | 0.55 | 3.52 | 44.71  |
| 1977            | 4.85  | 2.67 | 5.62  | 4.05  | 3.41 | 4.82  | 2.23  | 3.11 | 5.05  | 6.43  | 3.17 | 6.29 | 51.70  |
| 1978            | 9.85  | 2.97 | 3.24  | 1.88  | 5.00 | 1.53  | 2.04  | 5.91 | 1.36  | 3.24  | 2.28 | 4.19 | 43.49  |
| 1979            | 11.61 | 4.22 | 3.08  | 4.34  | 4.67 | 1.00  | 5.55  | 6.76 | 4.73  | 4.09  | 4.17 | 1.68 | 55.90  |
| 1980            | 0.97  | 1.07 | 6.07  | 5.08  | 1.58 | 3.91  | 2.43  | 2.09 | 0.69  | 4.72  | 3.19 | 1.19 | 32.99  |
| 1981            | 1.25  | 7.93 | 0.63  | 3.16  | 1.60 | 1.89  | 4.09  | 0.53 | 3.76  | 4.14  | 5.60 | 7.24 | 41.82  |
| 1982            | 5.61  | 3.25 | 3.14  | 4.03  | 3.47 | 13.73 | 4.66  | 1.84 | 2.37  | 3.69  | 4.34 | 2.11 | 52.24  |
| 1983            | 5.53  | 6.15 | 10.02 | 7.57  | 3.33 | 1.27  | 1.11  | 6.59 | 1.67  | 3.35  | 9.78 | 6.08 | 62.45  |
| 1984            | 2.81  | 7.80 | 9.00  | 4.34  | 9.14 | 4.10  | 5.26  | 0.91 | 1.73  | 5.02  | 1.59 | 3.21 | 54.91  |
| 1985            | 1.31  | 2.91 | 3.17  | 1.80  | 3.58 | 4.66  | 4.53  | 4.04 | 2.74  | 1.83  | 8.16 | 1.32 | 40.05  |
| 1986            | 4.11  | 3.55 | 3.09  | 1.80  | 1.92 | 7.13  | 4.97  | 4.65 | 1.04  | 3.61  | 6.37 | 7.71 | 49.95  |
| 1987            | 7.94  | 0.71 | 5.42  | 10.37 | 2.45 | 2.18  | 1.23  | 4.09 | 9.62  | 2.38  | 4.91 | 2.99 | 54.29  |
| 1988            | 3.38  | 5.46 | 4.23  | 2.36  | 3.67 | 0.91  | 10.66 | 1.28 | 1.78  | 3.11  | 8.93 | 1.52 | 47.29  |
| 1989            | 1.00  | 3.45 | 3.83  | 5.03  | 4.74 | 4.44  | 7.31  | 6.96 | 5.39  | 8.07  | 4.77 | 1.14 | 56.13  |
| 1990            | 4.85  | 5.21 | 2.21  | 5.62  | 7.81 | 1.35  | 5.04  | 6.03 | 1.86  | 6.23  | 1.96 | 3.95 | 52.12  |
| 1991            | 4.00  | 2.03 | 5.64  | 5.05  | 1.54 | 3.30  | 2.95  | 6.46 | 6.72  | 6.51  | 5.01 | 2.80 | 52.01  |
| 1992            | 3.64  | 2.31 | 4.48  | 3.33  | 1.50 | 5.09  | 2.85  | 5.36 | 3.40  | 1.95  | 5.06 | 9.80 | 48.77  |
| 1993            | 3.15  | 4.42 | 8.72  | 6.59  | 1.23 | 2.12  | 1.77  | 1.67 | 4.16  | 4.36  | 2.97 | 8.01 | 49.17  |
| 1994            | 6.25  | 4.00 | 7.98  | 2.46  | 5.23 | 1.01  | 1.84  | 6.92 | 5.00  | 0.39  | 5.10 | 6.48 | 52.66  |
| 1995            | 4.32  | 3.28 | 2.20  | 1.86  | 2.12 | 1.83  | 2.54  | 2.21 | 3.63  | 5.94  | 6.01 | 3.42 | 39.36  |
| 1996            | 8.49  | 3.53 | 4.01  | 6.68  | 3.37 | 3.05  | 5.48  | 3.31 | 8.78  | 11.76 | 2.59 | 8.31 | 69.36  |
| 1997            | 3.43  | 2.16 | 6.75  | 4.96  | 3.07 | 1.33  | 1.18  | 2.94 | 1.36  | 2.00  | 7.41 | 3.31 | 39.90  |
| 1998            | 7.22  | 6.82 | 5.96  | 5.18  | 8.18 | 17.32 | 2.06  | 5.84 | 1.53  | 7.37  | 1.83 | 1.69 | 71.00  |
| 1999            | 8.47  | 6.02 | 5.04  | 1.17  | 3.82 | 0.14  | 4.77  | 2.08 | 12.37 | 4.35  | 2.43 | 2.38 | 53.04  |
| 2000            | 4.57  | 3.70 | 4.86  | 6.56  | 3.37 | 7.45  | 5.06  | 1.97 | 3.03  | 3.27  | 4.61 | 5.20 | 53.65  |
| 2001            | 3.15  | 2.68 | 13.07 | 1.48  | 2.48 | 7.51  | 2.16  | 4.83 | 2.72  | 0.79  | 1.10 | 3.56 | 45.53  |
| 2002            | 3.65  | 2.30 | 4.25  | 3.31  | 6.80 | 4.31  | 3.17  | 2.76 | 4.92  | 4.00  | 7.12 | 6.81 | 53.40  |
| 2003            | 2.88  | 5.76 | 5.15  | 5.74  | 4.60 | 5.61  | 3.25  | 4.75 | 2.54  | 6.10  | 3.20 | 8.21 | 57.79  |
| 2004            | 1.72  | 1.76 | 4.49  | 9.38  | 3.57 | 1.95  | 4.86  | 5.82 | 8.71  | 2.55  | 4.17 | 6.16 | 55.14  |
| 2005            | 6.23  | 4.10 | 6.12  | 4.63  | 8.65 | 1.07  | 2.72  | 5.56 | 3.81  | 14.72 | 4.65 | 3.96 | 66.22  |
| POR=<br>120 YRS | 4.29  | 3.97 | 4.55  | 4.06  | 3.71 | 3.61  | 3.63  | 4.02 | 4.00  | 3.98  | 4.30 | 4.30 | 48.42  |

WBAN : 14753

AVERAGE TEMPERATURE (°F) 2005 BLUE HILL OBSERVATORY, MA (MQE)

| YEAR            | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANNUAL |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1976            | 22.0 | 34.0 | 37.5 | 51.4 | 57.0 | 69.3 | 70.0 | 68.5 | 61.3 | 48.0 | 37.2 | 24.2 | 48.4   |
| 1977            | 18.6 | 27.5 | 41.9 | 48.2 | 59.5 | 63.8 | 71.5 | 70.8 | 61.3 | 51.2 | 43.5 | 29.0 | 48.9   |
| 1978            | 23.6 | 22.3 | 32.6 | 44.2 | 56.6 | 65.5 | 70.5 | 70.0 | 59.0 | 50.3 | 40.9 | 31.3 | 47.2   |
| 1979            | 28.3 | 18.5 | 39.2 | 45.8 | 58.9 | 64.4 | 72.9 | 68.8 | 62.0 | 50.8 | 46.7 | 34.2 | 49.2   |
| 1980            | 26.6 | 24.5 | 34.8 | 47.7 | 57.2 | 63.3 | 73.1 | 71.1 | 64.0 | 49.1 | 38.1 | 25.7 | 47.9   |
| 1981            | 17.7 | 34.6 | 36.2 | 48.7 | 58.5 | 67.3 | 71.8 | 69.4 | 60.0 | 48.5 | 40.8 | 29.9 | 48.6   |
| 1982            | 19.0 | 27.5 | 35.5 | 44.5 | 56.3 | 61.1 | 71.7 | 66.1 | 61.7 | 51.7 | 44.7 | 35.5 | 47.9   |
| 1983            | 27.5 | 29.8 | 37.7 | 46.8 | 54.0 | 66.7 | 73.5 | 70.0 | 65.6 | 51.3 | 43.5 | 29.3 | 49.6   |
| 1984            | 23.9 | 35.2 | 30.0 | 45.0 | 56.2 | 67.6 | 70.6 | 70.9 | 60.3 | 53.6 | 42.0 | 36.3 | 49.3   |
| 1985            | 20.6 | 30.0 | 37.7 | 47.4 | 57.4 | 62.1 | 71.3 | 68.5 | 62.9 | 53.1 | 43.1 | 28.1 | 48.5   |
| 1986            | 28.7 | 25.5 | 38.7 | 47.1 | 57.4 | 63.0 | 68.3 | 67.2 | 60.4 | 50.9 | 39.4 | 32.4 | 48.3   |
| 1987            | 25.9 | 26.1 | 36.9 | 45.3 | 57.7 | 66.2 | 71.1 | 68.2 | 62.0 | 50.5 | 41.5 | 32.9 | 48.7   |
| 1988            | 24.8 | 29.4 | 36.9 | 44.7 | 56.9 | 66.0 | 72.8 | 73.3 | 61.5 | 47.8 | 44.1 | 29.4 | 49.0   |
| 1989            | 31.2 | 27.3 | 35.1 | 44.8 | 58.6 | 65.7 | 70.2 | 69.4 | 63.2 | 53.5 | 39.8 | 17.9 | 48.1   |
| 1990            | 34.2 | 31.2 | 38.2 | 46.2 | 53.6 | 65.5 | 71.0 | 71.0 | 62.1 | 56.0 | 44.8 | 36.8 | 50.9   |
| 1991            | 26.9 | 33.0 | 39.0 | 49.5 | 62.1 | 66.7 | 72.1 | 71.1 | 60.7 | 54.2 | 42.3 | 32.4 | 50.8   |
| 1992            | 27.9 | 29.2 | 32.6 | 44.0 | 55.2 | 65.3 | 67.9 | 68.2 | 61.1 | 49.2 | 39.7 | 31.1 | 47.6   |
| 1993            | 27.8 | 22.5 | 32.7 | 45.8 | 58.5 | 66.3 | 72.4 | 72.2 | 62.1 | 49.5 | 42.6 | 30.7 | 48.6   |
| 1994            | 19.1 | 23.8 | 35.6 | 49.5 | 55.5 | 68.9 | 75.3 | 69.0 | 60.9 | 52.7 | 45.8 | 35.4 | 49.3   |
| 1995            | 32.4 | 25.9 | 37.3 | 45.0 | 55.5 | 66.6 | 74.1 | 70.3 | 61.2 | 56.3 | 38.1 | 26.6 | 49.1   |
| 1996            | 26.1 | 27.3 | 33.6 | 46.6 | 56.3 | 66.5 | 69.8 | 69.5 | 62.0 | 51.4 | 37.5 | 36.6 | 48.6   |
| 1997            | 26.1 | 33.3 | 34.7 | 45.1 | 54.2 | 66.6 | 72.4 | 69.6 | 62.3 | 51.0 | 39.0 | 32.4 | 48.9   |
| 1998            | 31.8 | 34.3 | 39.4 | 48.6 | 59.9 | 63.7 | 72.0 | 71.3 | 64.5 | 52.1 | 42.2 | 36.9 | 51.4   |
| 1999            | 27.9 | 32.4 | 37.5 | 47.9 | 59.3 | 69.7 | 74.6 | 70.6 | 66.2 | 51.1 | 45.8 | 34.8 | 51.5   |
| 2000            | 24.9 | 32.0 | 41.7 | 45.3 | 57.0 | 65.8 | 67.9 | 68.6 | 61.5 | 52.0 | 41.1 | 26.1 | 48.7   |
| 2001            | 27.1 | 28.8 | 33.4 | 47.8 | 59.1 | 69.4 | 68.4 | 72.9 | 64.0 | 54.5 | 46.3 | 37.5 | 50.8   |
| 2002            | 34.4 | 34.0 | 38.8 | 48.5 | 55.8 | 64.2 | 72.2 | 73.0 | 66.1 | 49.5 | 40.1 | 30.1 | 50.6   |
| 2003            | 20.4 | 23.8 | 35.5 | 43.2 | 54.4 | 64.0 | 72.6 | 72.2 | 63.8 | 50.5 | 43.8 | 33.1 | 48.1   |
| 2004            | 16.8 | 29.3 | 36.6 | 47.8 | 58.1 | 64.5 | 69.4 | 69.7 | 63.4 | 51.5 | 41.6 | 32.4 | 48.4   |
| 2005            | 24.0 | 29.5 | 32.2 | 49.4 | 51.0 | 68.1 | 71.6 | 73.6 | 65.8 | 52.4 | 44.4 | 29.5 | 49.3   |
| POR=<br>120 YRS | 26.2 | 27.0 | 35.1 | 45.8 | 56.7 | 65.4 | 71.1 | 69.3 | 62.4 | 52.1 | 41.3 | 30.3 | 48.6   |

HEATING DEGREE DAYS (base 65°F) 2005 BLUE HILL OBSERVATORY, MA (MQE)

| YEAR    | JUL | AUG | SEP | OCT | NOV | DEC  | JAN  | FEB  | MAR  | APR | MAY | JUN | TOTAL |
|---------|-----|-----|-----|-----|-----|------|------|------|------|-----|-----|-----|-------|
| 1976-77 | 7   | 37  | 135 | 522 | 826 | 1257 | 1428 | 1045 | 710  | 503 | 214 | 92  | 6776  |
| 1977-78 | 7   | 17  | 148 | 419 | 640 | 1109 | 1278 | 1188 | 997  | 618 | 284 | 50  | 6755  |
| 1978-79 | 19  | 19  | 196 | 447 | 717 | 1036 | 1134 | 1296 | 790  | 573 | 207 | 66  | 6500  |
| 1979-80 | 15  | 41  | 138 | 445 | 546 | 949  | 1183 | 1168 | 927  | 512 | 245 | 116 | 6285  |
| 1980-81 | 0   | 18  | 112 | 489 | 799 | 1208 | 1461 | 843  | 888  | 482 | 230 | 22  | 6552  |
| 1981-82 | 3   | 16  | 168 | 501 | 721 | 1080 | 1417 | 1046 | 907  | 611 | 269 | 143 | 6882  |
| 1982-83 | 8   | 50  | 132 | 407 | 601 | 911  | 1159 | 979  | 840  | 543 | 337 | 56  | 6023  |
| 1983-84 | 4   | 23  | 108 | 431 | 638 | 1101 | 1267 | 857  | 1079 | 592 | 277 | 58  | 6435  |
| 1984-85 | 14  | 5   | 170 | 349 | 679 | 882  | 1370 | 975  | 839  | 522 | 247 | 113 | 6165  |
| 1985-86 | 0   | 20  | 110 | 363 | 651 | 1138 | 1119 | 1100 | 803  | 527 | 278 | 113 | 6222  |
| 1986-87 | 42  | 39  | 156 | 435 | 762 | 1003 | 1205 | 1081 | 866  | 584 | 272 | 55  | 6500  |
| 1987-88 | 6   | 41  | 121 | 442 | 699 | 987  | 1238 | 1025 | 864  | 605 | 267 | 90  | 6385  |
| 1988-89 | 17  | 22  | 117 | 531 | 615 | 1098 | 1043 | 1050 | 923  | 598 | 207 | 72  | 6293  |
| 1989-90 | 9   | 20  | 123 | 349 | 751 | 1454 | 948  | 941  | 825  | 563 | 350 | 63  | 6396  |
| 1990-91 | 10  | 17  | 128 | 299 | 603 | 866  | 1171 | 889  | 798  | 461 | 147 | 69  | 5458  |
| 1991-92 | 6   | 12  | 168 | 333 | 675 | 1004 | 1143 | 1033 | 998  | 624 | 333 | 64  | 6393  |
| 1992-93 | 30  | 29  | 160 | 482 | 756 | 1043 | 1146 | 1184 | 996  | 567 | 204 | 61  | 6658  |
| 1993-94 | 4   | 2   | 148 | 474 | 665 | 1054 | 1417 | 1149 | 905  | 456 | 300 | 22  | 6596  |
| 1994-95 | 4   | 22  | 139 | 373 | 571 | 910  | 1004 | 1089 | 852  | 593 | 296 | 52  | 5905  |
| 1995-96 | 0   | 17  | 152 | 275 | 801 | 1181 | 1196 | 1086 | 968  | 551 | 290 | 29  | 6546  |
| 1996-97 | 4   | 15  | 137 | 416 | 819 | 873  | 1200 | 878  | 935  | 591 | 329 | 102 | 6299  |
| 1997-98 | 8   | 9   | 127 | 437 | 772 | 1005 | 1026 | 855  | 799  | 489 | 183 | 84  | 5794  |
| 1998-99 | 0   | 6   | 67  | 394 | 676 | 865  | 1141 | 908  | 845  | 505 | 192 | 34  | 5633  |
| 1999-00 | 3   | 16  | 56  | 423 | 568 | 929  | 1236 | 948  | 719  | 583 | 261 | 89  | 5831  |
| 2000-01 | 19  | 17  | 146 | 399 | 708 | 1199 | 1168 | 1007 | 973  | 512 | 238 | 26  | 6412  |
| 2001-02 | 15  | 1   | 86  | 333 | 550 | 847  | 943  | 863  | 805  | 495 | 294 | 108 | 5340  |
| 2002-03 | 10  | 20  | 53  | 487 | 742 | 1073 | 1373 | 1148 | 906  | 651 | 328 | 107 | 6898  |
| 2003-04 | 3   | 9   | 62  | 442 | 629 | 981  | 1486 | 1030 | 875  | 510 | 224 | 83  | 6334  |
| 2004-05 | 12  | 18  | 83  | 413 | 696 | 1002 | 1264 | 988  | 1009 | 466 | 428 | 65  | 6444  |
| 2005-   | 16  | 2   | 55  | 396 | 612 | 1095 |      |      |      |     |     |     |       |

WBAN : 14753

COOLING DEGREE DAYS (base 65°F) 2005 BLUE HILL OBSERVATORY, MA (MQE)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| 1976 | 0   | 0   | 0   | 48  | 13  | 184 | 171 | 150 | 30  | 3   | 0   | 0   | 599    |
| 1977 | 0   | 0   | 4   | 4   | 48  | 60  | 218 | 204 | 45  | 0   | 0   | 0   | 583    |
| 1978 | 0   | 0   | 0   | 0   | 31  | 72  | 196 | 180 | 23  | 0   | 0   | 0   | 502    |
| 1979 | 0   | 0   | 0   | 0   | 26  | 56  | 264 | 167 | 57  | 14  | 0   | 0   | 584    |
| 1980 | 0   | 0   | 0   | 0   | 7   | 72  | 258 | 213 | 87  | 0   | 0   | 0   | 637    |
| 1981 | 0   | 0   | 0   | 0   | 36  | 95  | 224 | 156 | 27  | 0   | 0   | 0   | 538    |
| 1982 | 0   | 0   | 0   | 0   | 7   | 34  | 221 | 89  | 40  | 2   | 0   | 0   | 393    |
| 1983 | 0   | 0   | 0   | 2   | 4   | 115 | 274 | 190 | 134 | 13  | 0   | 0   | 732    |
| 1984 | 0   | 0   | 0   | 0   | 11  | 142 | 195 | 191 | 36  | 2   | 0   | 0   | 577    |
| 1985 | 0   | 0   | 0   | 3   | 17  | 32  | 203 | 135 | 54  | 1   | 0   | 0   | 445    |
| 1986 | 0   | 0   | 0   | 0   | 49  | 61  | 149 | 113 | 22  | 4   | 0   | 0   | 398    |
| 1987 | 0   | 0   | 0   | 0   | 52  | 100 | 203 | 148 | 36  | 0   | 1   | 0   | 540    |
| 1988 | 0   | 0   | 0   | 0   | 23  | 128 | 266 | 289 | 23  | 4   | 0   | 0   | 733    |
| 1989 | 0   | 0   | 0   | 0   | 16  | 100 | 178 | 163 | 76  | 1   | 0   | 0   | 534    |
| 1990 | 0   | 0   | 0   | 8   | 0   | 84  | 203 | 208 | 48  | 26  | 3   | 0   | 580    |
| 1991 | 0   | 0   | 0   | 0   | 64  | 124 | 234 | 208 | 50  | 5   | 0   | 0   | 685    |
| 1992 | 0   | 0   | 0   | 0   | 36  | 77  | 123 | 135 | 48  | 0   | 0   | 0   | 419    |
| 1993 | 0   | 0   | 0   | 0   | 12  | 108 | 244 | 233 | 66  | 1   | 0   | 0   | 664    |
| 1994 | 0   | 0   | 0   | 0   | 12  | 146 | 329 | 154 | 20  | 0   | 0   | 0   | 661    |
| 1995 | 0   | 0   | 0   | 0   | 11  | 108 | 291 | 185 | 44  | 10  | 0   | 0   | 649    |
| 1996 | 0   | 0   | 0   | 4   | 27  | 81  | 159 | 163 | 55  | 0   | 0   | 0   | 489    |
| 1997 | 0   | 0   | 0   | 0   | 2   | 157 | 243 | 159 | 54  | 6   | 0   | 0   | 621    |
| 1998 | 0   | 0   | 14  | 2   | 32  | 54  | 225 | 206 | 61  | 0   | 0   | 0   | 594    |
| 1999 | 0   | 0   | 0   | 0   | 23  | 180 | 308 | 194 | 100 | 0   | 0   | 0   | 805    |
| 2000 | 0   | 0   | 0   | 0   | 23  | 121 | 118 | 133 | 49  | 2   | 0   | 0   | 446    |
| 2001 | 0   | 0   | 0   | 4   | 60  | 167 | 126 | 253 | 61  | 15  | 0   | 0   | 686    |
| 2002 | 0   | 0   | 0   | 8   | 13  | 92  | 240 | 277 | 92  | 12  | 0   | 0   | 734    |
| 2003 | 0   | 0   | 0   | 3   | 5   | 84  | 246 | 239 | 32  | 0   | 0   | 0   | 609    |
| 2004 | 0   | 0   | 0   | 1   | 22  | 74  | 155 | 170 | 43  | 0   | 0   | 0   | 465    |
| 2005 | 0   | 0   | 0   | 1   | 0   | 166 | 225 | 278 | 87  | 14  | 0   | 0   | 771    |

SNOWFALL (inches) 2005 BLUE HILL OBSERVATORY, MA (MQE)

| YEAR            | JUL | AUG | SEP | OCT | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY | JUN | TOTAL |
|-----------------|-----|-----|-----|-----|------|------|------|------|------|------|-----|-----|-------|
| 1976-77         | 0.0 | 0.0 | 0.0 | 0.0 | 1.6  | 22.5 | 27.1 | 9.5  | 12.7 | T    | 7.8 | 0.0 | 81.2  |
| 1977-78         | 0.0 | 0.0 | 0.0 | 0.0 | 0.8  | 7.6  | 35.6 | 30.4 | 19.0 | 0.1  | T   | 0.0 | 93.5  |
| 1978-79         | 0.0 | 0.0 | 0.0 | 0.0 | 7.5  | 8.0  | 9.0  | 9.1  | 0.1  | 3.2  | 0.0 | 0.0 | 36.9  |
| 1979-80         | 0.0 | 0.0 | 0.0 | 6.8 | 0.0  | 6.2  | 0.7  | 6.9  | 4.7  | T    | 0.0 | 0.0 | 25.3  |
| 1980-81         | 0.0 | 0.0 | 0.0 | 0.0 | 7.3  | 8.1  | 16.1 | 8.3  | 2.5  | T    | 0.0 | 0.0 | 42.3  |
| 1981-82         | 0.0 | 0.0 | 0.0 | 0.0 | T    | 27.3 | 17.4 | 10.9 | 6.0  | 14.0 | 0.0 | 0.0 | 75.6  |
| 1982-83         | 0.0 | 0.0 | 0.0 | 0.0 | T    | 15.8 | 11.2 | 28.5 | 1.0  | T    | 0.0 | 0.0 | 56.5  |
| 1983-84         | 0.0 | 0.0 | 0.0 | 0.0 | T    | 9.5  | 23.6 | 0.6  | 26.7 | T    | 0.0 | 0.0 | 60.4  |
| 1984-85         | 0.0 | 0.0 | 0.0 | 0.0 | 0.2  | 5.2  | 11.1 | 16.7 | 10.4 | 3.5  | T   | 0.0 | 47.1  |
| 1985-86         | 0.0 | 0.0 | 0.0 | 0.0 | 5.1  | 2.9  | 1.6  | 13.8 | 3.0  | T    | T   | 0.0 | 26.4  |
| 1986-87         | 0.0 | 0.0 | 0.0 | 0.0 | 13.5 | 6.4  | 38.3 | 5.6  | 8.4  | 13.5 | 0.0 | 0.0 | 85.7  |
| 1987-88         | 0.0 | 0.0 | 0.0 | 0.0 | 11.4 | 12.1 | 20.3 | 16.3 | 8.5  | T    | 0.0 | 0.0 | 68.6  |
| 1988-89         | 0.0 | 0.0 | 0.0 | T   | 0.0  | 8.4  | 1.4  | 10.2 | 9.3  | 4.7  | 0.0 | 0.0 | 34.0  |
| 1989-90         | 0.0 | 0.0 | 0.0 | 0.0 | 5.6  | 7.3  | 13.3 | 25.8 | 5.7  | 1.5  | 0.2 | 0.0 | 59.4  |
| 1990-91         | 0.0 | 0.0 | 0.0 | 0.0 | 0.4  | 5.6  | 11.7 | 5.8  | 5.5  | T    | 0.0 | T   | 29.0  |
| 1991-92         | 0.0 | 0.0 | 0.0 | T   | 0.2  | 7.5  | 1.1  | 5.0  | 11.9 | 1.5  | 0.0 | 0.0 | 27.2  |
| 1992-93         | 0.0 | 0.0 | 0.0 | 0.0 | 0.5  | 19.0 | 13.5 | 12.8 | 35.5 | 3.0  | 0.0 | 0.0 | 84.3  |
| 1993-94         | 0.0 | 0.0 | 0.0 | 0.0 | 0.3  | 15.0 | 33.0 | 33.9 | 18.9 | 0.0  | 0.0 | 0.0 | 101.1 |
| 1994-95         | 0.0 | 0.0 | 0.0 | 0.0 | 1.6  | 1.3  | 4.3  | 10.0 | 0.7  | T    | T   | 0.0 | 17.9  |
| 1995-96         | 0.0 | 0.0 | 0.0 | 0.0 | 5.8  | 25.3 | 47.6 | 18.3 | 23.2 | 24.2 | T   | 0.0 | 144.4 |
| 1996-97         | 0.0 | 0.0 | 0.0 | T   | 2.6  | 9.3  | 12.2 | 7.8  | 22.6 | 15.1 | 0.0 | 0.0 | 69.6  |
| 1997-98         | 0.0 | 0.0 | 0.0 | 0.0 | 4.1  | 15.3 | 15.8 | 1.0  | 5.3  | 0.1  | 0.0 | 0.0 | 41.6  |
| 1998-99         | 0.0 | 0.0 | 0.0 | 0.0 | 0.0  | 0.0  | 19.7 | 14.4 | 22.5 | T    | 0.0 | 0.0 | 0.0   |
| 1999-00         | 0.0 | 0.0 | 0.0 | T   | T    | T    | 18.6 | 11.1 | 3.0  | 1.0  | 0.0 | 0.0 | 33.7  |
| 2000-01         | 0.0 | 0.0 | 0.0 | 0.6 | T    | 9.6  | 19.7 | 19.3 | 41.4 | 0.0  | 0.0 | 0.0 | 90.6  |
| 2001-02         | 0.0 | 0.0 | 0.0 | T   | T    | 10.1 | 15.7 | 6.4  | 6.8  | 1.3  | T   | 0.0 | 40.3  |
| 2002-03         | 0.0 | 0.0 | 0.0 | 1.3 | 8.2  | 21.8 | 12.7 | 51.3 | 13.3 | 4.5  | 0.0 | 0.0 | 113.1 |
| 2003-04         | 0.0 | 0.0 | 0.0 | 0.5 | T    | 29.7 | 8.5  | 3.0  | 15.8 | 0.5  | 0.0 | 0.0 | 58.0  |
| 2004-05         | T   | 0.0 | 0.0 | 0.0 | 7.8  | 16.2 | 44.8 | 25.4 | 25.0 | 0.2  | 0.0 | 0.0 | 119.4 |
| 2005-           | 0.0 | 0.0 | 0.0 | 1.5 | 0.6  | 14.4 |      |      |      |      |     |     |       |
| POR=<br>119 YRS | 0.0 | 0.0 | 0.0 | 0.2 | 2.8  | 11.0 | 15.6 | 15.9 | 11.8 | 3.3  | 0.1 | T   | 60.7  |

WBAN : 14753

REFERENCE NOTES:

|   |  |
|---|--|
| <p>PAGE 1:<br/>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:<br/>H/C INDICATES HEATING AND COOLING DEGREE DAYS.<br/>RH INDICATES RELATIVE HUMIDITY<br/>W/O INDICATES WEATHER AND OBSTRUCTIONS<br/>S INDICATES SUNSHINE.<br/>PR INDICATES PRESSURE.<br/>CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL:<br/>T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE.<br/>+ INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES.<br/>BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.<br/>NORMALS ARE 30-YEAR AVERAGES (1971 - 2000).<br/>ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM.<br/>PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH.<br/>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.<br/>WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED.<br/>0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05.<br/>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.<br/>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:<br/>CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.<br/>WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.<br/>WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH.<br/>RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION.<br/>AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2.<br/>SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL.<br/>A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F.<br/>DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR.<br/>DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY.<br/>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> |
|---|--|

2005  
BLUE HILL OBSERVATORY,  
MILTON, MASSACHUSETTS (MQE)

The altitude of the Observatory and its proximity to Massachusetts Bay play major roles in determining the climate of Blue Hill. The elevation of 635 feet marks the summit as the highest point of a wooded range that extends east-northeast to west-southwest. The station lies at the southwest end of this range and has a three-quadrant unrestricted exposure, at approximately 400 feet above the surrounding terrain. The orographic effect created by this difference in elevation is responsible for lower temperatures, more precipitation, higher winds, more frequent occurrences of fog, and longer periods of snow cover than at nearby lower elevations. Eight miles to the northeast lies the nearest approach of Boston Harbor, and thus, the station is within range of the sea breeze.

Summer temperatures are generally comfortable. Winters at the summit are more severe than those experienced at surrounding areas. Average occurrence of last freezing temperature in the spring is late April and the first in the fall is late October. The freeze-free period is about 178 days. Records indicate that the freeze-free period at base stations is from 6 to 7 weeks shorter than at the summit. This seeming paradox is due to temperature inversions, in which the colder air is found at lower elevations. This condition develops on clear, calm nights, and is responsible for the shorter freeze-free period in base areas.

Total precipitation is fairly evenly distributed throughout the year. Precipitation occurrences are most frequent January through March and least frequent August through October. Hourly precipitation occurrences indicate a coastal type distribution for the year as a whole, with maxima in the early morning and minima in the early afternoon. In the summer, however, convective action or the continental influence dominates, causing a late afternoon maximum. Coastal storms or northeasters are prolific producers of rain and snow.

The main snow season extends from November through early April. Nearly 14 percent of the annual total precipitation occurs as snow or sleet.

Wind velocities are higher in winter than in summer. Speeds average greatest from January through March and least in August. Surface contour is a factor in the stations wind force, particularly from the southerly and westerly directions. These are the steepest slopes of the hill, and winds velocities increase. Peak winds have been recorded from these directions. Winds from the east-northeast and northeast are somewhat slowed by striking the lower range first.

# STATION LOCATION

BLUE HILL OBSERVATORY, MILTON,  
MASSACHUSETTS

| LOCATION                            | Occupied From | Occupied To | Airline Distances and Directions from previous Location | LATITUDE<br>NORTH | LONGITUDE<br>WEST | ELEVATION ABOVE |        |                 |                      |              |                 |                |            |                     |                   | AUTOMATIC OBSERVING EQUIPMENT * | * TYPE<br><br>M = AMOS<br>T = AUTOB<br>S = ASOS<br>W = AWOS<br><br>REMARKS |
|-------------------------------------|---------------|-------------|---|-------------------|-------------------|-----------------|--------|-----------------|----------------------|--------------|-----------------|----------------|------------|---------------------|-------------------|---------------------------------|--|
|                                     |               |             |   |                   |                   | GROUND          |        |                 |                      |              |                 |                |            |                     |                   |                                 |  |
|                                     |               |             |   |                   |                   | SEA LEVEL       | GROUND | WIND INSTRUMENT | EXTREME THERMOMETERS | PSYCHROMETER | SUNSHINE SWITCH | TIPPING BUCKET | RAIN GAUGE | WINDHOLE RAIN GAUGE | 8 INCH RAIN GAUGE |                                 |  |
| *NOTE:<br><br>Blue Hill Observatory | 10/15/98      | Present     | NA  | 42°13'            | 71°07'            | a654            |        |                 |                      |              |                 |                |            |                     |                   |                                 | S<br><br>ASOS Commissioned 10/15/98.<br>a. Ground elevation.               |

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