

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

September 2016

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

| Date | Temperature | | | | | Humidity | Deg. Days | | Precip Ty 1 fog 2 hvy fog 3 thunder 4 ice plt 5 hail 6 glaze 7 duststm 8 smk, hz 9 blw snw | Snow Cvr | Precip | | Pressure Adj. to Sea Level | | | Wind | | | | | Solar Radiation | | | |
|------------------------|-------------|------------|------------------------|------------|------------|------------|-----------------------|----------------------------|---|---------------------------------------|-------------------|------------------|-------------------------------|---------|--|------|-----------|-------------|-------------|------------|--------------------|----------|-------|-----|
| | Maximum | Minimum | Average | Mean | Dew Point | | Mean | Heating Base 65°F | | | Cooling Base 65°F | Water Equivalent | Ice Pellets Snow | Maximum | Minimum | Mean | Avg Speed | Res Speed | Res Dir | Peak | | 2 Minute | | |
| | | | | | | | | | | | | | | | | | | | | Speed | | Dir | Speed | Dir | Speed | Dir |
| 1 | 2 | 3 | 4A | 4B | 5 | 6 | 7 | 8 | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | |
| 1 | 73.8 | 55.7 | 64.8 | 63.6 | 59 | 85 | 0 | 0 | ..... | 0 | 0.01 | 0.0 | 29.95 | 29.79 | 29.862 | 0.6 | 0.6 | 308 | 14 | WNW | 9 | 298 | 225 | |
| 2 | 70.8 | 48.3 | 59.6 | 59.2 | 55 | 87 | 5 | 0 | ..... | 0 | 0.00 | 0.0 | 30.18 | 29.95 | 30.082 | 0.2 | 0.2 | 331 | 16 | NNW | 6 | 294 | 169 | |
| 3 | 73.8 | 45.6 | 59.7 | 57.6 | 53 | 86 | 5 | 0 | ..... | 0 | 0.01 | 0.0 | 30.24 | 30.17 | 30.200 | 0.1 | 0.0 | 319 | 9 | WNW | 6 | 299 | 194 | |
| 4 | 80.5 | 48.0 | 64.3 | 62.3 | 56 | 83 | 0 | 0 | ..... | 0 | 0.00 | 0.0 | 30.27 | 30.19 | 30.223 | 0.1 | 0.1 | 213 | 9 | WSW | 5 | 263 | 199 | |
| 5 | 81.4 | 52.3 | 66.9 | 64.6 | 58 | 82 | 0 | 2 | ..... | 0 | 0.00 | 0.0 | 30.24 | 30.07 | 30.162 | 0.0 | 0.0 | 352 | 8 | NNE | 5 | 9 | 209 | |
| 6 | 84.6 | 50.1 | 67.3 | 65.8 | 59 | 82 | 0 | 3 | ..... | 0 | 0.00 | 0.0 | 30.09 | 30.00 | 30.050 | 0.0 | 0.0 | 306 | 8 | WNW | 5 | 292 | 201 | |
| 7 | 85.4 | 58.5 | 72.0 | 71.2 | 64 | 81 | 0 | 7 | ..... | 0 | 0.01 | 0.0 | 30.03 | 29.86 | 29.959 | 0.5 | 0.4 | 219 | 19 | SSW | 7 | 273 | 199 | |
| 8 | 81.5 | 65.2 | 73.3* | 72.1 | 68 | 86 | 0 | 9 | ..... | 0 | 0.19 | 0.0 | 29.88 | 29.65 | 29.751 | 1.3 | 1.3 | 213 | 20 | SW | 9 | 226 | 114 | |
| 9 | 82.5 | 60.3 | 71.4 | 71.7 | 66 | 84 | 0 | 7 | ..... | 0 | 0.00 | 0.0 | 29.94 | 29.68 | 29.806 | 0.7 | 0.7 | 285 | 14 | WNW | 8 | 304 | 168 | |
| 10 | 81.8 | 56.6 | 69.2 | 69.3 | 64 | 84 | 0 | 5 | ..... | 0 | 0.00 | 0.0 | 29.98 | 29.71 | 29.880 | 1.1 | 1.1 | 200 | 21 | SSW | 11 | 203 | 142 | |
| 11 | 77.1 | 46.4 | 61.8 | 63.9 | 57 | 79 | 3 | 0 | ..3..... | 0 | 0.73 | 0.0 | 30.10 | 29.60 | 29.860 | 2.7 | 2.1 | 265 | 32 | SSW | 14 | 307 | 131 | |
| 12 | 73.3 | 43.3 | 58.3 | 57.1 | 49 | 78 | 7 | 0 | ..... | 0 | 0.01 | 0.0 | 30.20 | 30.10 | 30.142 | 0.0 | 0.0 | 223 | 5 | SSW | 1 | 217 | 195 | |
| 13 | 78.7 | 49.3 | 64.0 | 63.5 | 56 | 78 | 1 | 0 | ..... | 0 | 0.00 | 0.0 | 30.11 | 29.94 | 30.033 | 1.1 | 1.1 | 215 | 16 | SSW | 9 | 214 | 192 | |
| 14 | 66.2 | 49.3 | 57.7 | 61.0 | 57 | 88 | 7 | 0 | ..3..... | 0 | 0.22 | 0.0 | 30.18 | 29.88 | 29.991 | 0.8 | 0.6 | 257 | 22 | W | 9 | 307 | 46 | |
| 15 | 65.0 | 40.1 | 52.5 | 50.6 | 45 | 83 | 12 | 0 | ..... | 0 | 0.00 | 0.0 | 30.31 | 30.19 | 30.254 | 0.0 | 0.0 | 0 | 8 | W | 0 | 0 | 191 | |
| 16 | 72.4 | 38.5 | 55.5 | 54.1 | 47 | 80 | 9 | 0 | ..... | 0 | 0.01 | 0.0 | 30.29 | 30.14 | 30.223 | 0.1 | 0.1 | 257 | 12 | SW | 6 | 300 | 188 | |
| 17 | 74.3 | 50.2 | 62.3 | 63.4 | 56 | 76 | 3 | 0 | ..... | 0 | 0.01 | 0.0 | 30.15 | 29.87 | 30.012 | 2.9 | 2.9 | 211 | 31 | SW | 14 | 220 | 143 | |
| 18 | 77.8 | 63.3 | 70.6 | 68.7 | 65 | 88 | 0 | 6 | ..... | 0 | 0.22 | 0.0 | 29.95 | 29.84 | 29.892 | 2.8 | 2.8 | 211 | 26 | WSW | 11 | 216 | 114 | |
| 19 | 77.1 | 62.1 | 69.6 | 68.3 | 65 | 91 | 0 | 5 | ..... | 0 | 0.26 | 0.0 | 30.02 | 29.92 | 29.959 | 0.5 | 0.5 | 215 | 11 | S | 6 | 246 | 115 | |
| 20 | 81.4 | 60.5 | 71.0 | 69.3 | 63 | 82 | 0 | 6 | ..... | 0 | 0.00 | 0.0 | 30.04 | 29.93 | 29.996 | 2.0 | 1.9 | 223 | 18 | S | 8 | 216 | 156 | |
| 21 | 79.5 | 50.0 | 64.8 | 64.8 | 53 | 69 | 0 | 0 | ..... | 0 | 0.00 | 0.0 | 30.14 | 30.03 | 30.087 | 1.5 | 1.4 | 253 | 13 | WSW | 8 | 278 | 173 | |
| 22 | 80.8 | 55.4 | 68.1 | 65.5 | 57 | 75 | 0 | 3 | ..... | 0 | 0.00 | 0.0 | 30.15 | 29.93 | 30.054 | 0.4 | 0.4 | 214 | 11 | SSW | 7 | 211 | 154 | |
| 23 | 59.4 | 46.0 | 52.7 | 52.8 | 51 | 95 | 12 | 0 | ..... | 0 | 0.72 | 0.0 | 30.11 | 29.92 | 30.019 | 0.2 | 0.2 | 14 | 11 | NNE | 5 | 304 | 44 | |
| 24 | 62.5 | 39.4 | 51.0 | 49.2 | 42 | 80 | 14 | 0 | ..... | 0 | 0.00 | 0.0 | 30.17 | 30.07 | 30.115 | 0.8 | 0.8 | 297 | 19 | W | 10 | 277 | 168 | |
| 25 | 59.7 | 36.3 | 48.0* | 45.7 | 39 | 80 | 17 | 0 | ..... | 0 | 0.00 | 0.0 | 30.17 | 30.12 | 30.145 | 0.5 | 0.5 | 305 | 18 | NW | 8 | 302 | 162 | |
| 26 | 64.6 | 32.8* | 48.7 | 48.5 | 40 | 76 | 16 | 0 | ..... | 0 | 0.00 | 0.0 | 30.18 | 29.84 | 30.055 | 0.9 | 0.9 | 213 | 16 | SW | 8 | 243 | 149 | |
| 27 | 71.6 | 48.3 | 59.9 | 58.0 | 53 | 84 | 5 | 0 | ..... | 0 | 0.16 | 0.0 | 29.98 | 29.81 | 29.849 | 1.0 | 1.0 | 216 | 19 | WSW | 9 | 212 | 140 | |
| 28 | 70.3 | 48.7 | 59.5 | 58.1 | 52 | 83 | 5 | 0 | ..... | 0 | 0.00 | 0.0 | 30.33 | 29.98 | 30.150 | 0.3 | 0.2 | 188 | 12 | SW | 7 | 204 | 148 | |
| 29 | 68.0 | 43.2 | 55.6 | 54.1 | 49 | 85 | 9 | 0 | ..... | 0 | 0.00 | 0.0 | 30.45 | 30.33 | 30.406 | 0.1 | 0.1 | 47 | 8 | N | 4 | 98 | 142 | |
| 30 | 63.1 | 41.8 | 52.4 | 52.0 | 47 | 86 | 12 | 0 | ..... | 0 | 0.00 | 0.0 | 30.45 | 30.33 | 30.401 | 0.0 | 0.0 | 343 | 6 | SW | 4 | 275 | 98 | |
| Sum | Sum | | | | --- | -- | Ttl | Ttl | | | Total | Total | For the month: | | | | | | | | | | --- | |
| 2219 | 1486 | | | | | | 142 | 53 | Number of Days | | 2.56 | 0.0 | 30.45 | 29.60 | 30.054 | 0.8 | 0.6 | 233 | 32 | SSW | 14 | 220 | | |
| Avg | Avg | Avg | Mean | Avg | Avg | Avg | -- | -- | Precip | | Season Ttl | Date | Date | | -- | -- | --- | Date | Date | Avg | | | | |
| 74.0 | 49.5 | 61.7 | 60.9 | 55 | 82.5 | -- | -- | -- | ≥.01 inch | 13 | 28.56 | 0.0 | 30 | 11 | | -- | -- | --- | 11 | 17 | 156 | | | |
| Number of Days | | | | | | | Season to Date | Snow, Ice ≥1.0 inch | 0 | Greatest in 24 Hours and Dates | | | | | Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date | | | | | | | | | |
| Max Temperature | | | Min Temperature | | | 174 | 448 | Thunder | 2 | Precipitation | | | Snow, Ice Plts | | | | | | | | | | | |
| ≥ 90°F | ≤ 32°F | ≤ 32°F | ≤ 0°F | -- | -- | -- | -- | Heavy Fog | 0 | 2.27 | 11-12 | 0.0 | - | 0 | | | - | | | | | | | |
| 0 | 0 | 0 | 0 | -- | -- | -- | -- | Clear | 11 | Partly Cloudy | | 15 | Cloudy | | 4 | | | | | | | | | |

NOTES:
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.
 Data in column 4A are (MAX+MIN) ÷ 2, whereas columns 4B, 5, 6, 15, 16, 23 are means via continuous observations for 24 hours.
 Column 5: Dew point is calculated from temperature and humidity and is continuously averaged for 24 hours.
 Data in columns 9, 10, 12 are entered manually by the station observer.
 Columns 17-18: Resultant wind is calculated by the vector sum of continuous wind observations.
 Column 23: Solar Radiation is measured in Watts/m^2 and is continuously averaged for 24 hours.
 Data in columns 4B, 5, 6, 15, 16, 23 are updated continuously, there by achieving a "true" mean.

OBSERVATIONS AT 3-HOUR INTERVALS

September 2016: Westford

| Hour | Wind | | | | | | | | | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Wind | | | | | | | | | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Wind | | | | | | | | |
|--------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|--------|----------|----------|---------------|-------------|-----------|----------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|------|----------|----------|---------------|-------------|-----------|----------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|------|
| | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Direction | Speed | Gust | | | | | | | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Direction | Speed | Gust | | | | | | | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Direction | Speed | Gust |
| SEP 01 | | | | | | | | | SEP 02 | | | | | | | | | SEP 03 | | | | | | | | | | | | | | | | | | | | | |
| 01 | 0 | 29.80 | 0.00 | 63 | 62 | 96 | 29 | 0 | 5 | 0 | 29.95 | 0.00 | 58 | 57 | 97 | 00 | 0 | 0 | 0 | 30.17 | 0.00 | 48 | 47 | 97 | 00 | 0 | 0 | | | | | | | | | | | | |
| 04 | 0 | 29.80 | 0.00 | 60 | 59 | 96 | 00 | 0 | 0 | 0 | 29.98 | 0.00 | 56 | 55 | 96 | 00 | 0 | 0 | 0 | 30.19 | 0.00 | 47 | 46 | 97 | 00 | 0 | 0 | | | | | | | | | | | | |
| 07 | 0 | 29.83 | 0.00 | 58 | 58 | 97 | 00 | 0 | 0 | 1 | 30.03 | 0.00 | 56 | 55 | 97 | 00 | 1 | 8 | 2 | 30.22 | 0.00 | 46 | 45 | 98 | 00 | 0 | 0 | | | | | | | | | | | | |
| 10 | 410 | 29.86 | 0.00 | 66 | 61 | 85 | 00 | 0 | 0 | 163 | 30.10 | 0.00 | 59 | 56 | 89 | 02 | 0 | 8 | 406 | 30.23 | 0.00 | 60 | 58 | 93 | 00 | 0 | 0 | | | | | | | | | | | | |
| 13 | 714 | 29.87 | 0.00 | 70 | 59 | 67 | 29 | 5 | 12 | 618 | 30.12 | 0.00 | 65 | 58 | 78 | 29 | 1 | 8 | 361 | 30.22 | 0.00 | 67 | 59 | 76 | 29 | 0 | 4 | | | | | | | | | | | | |
| 16 | 593 | 29.87 | 0.00 | 73 | 59 | 61 | 29 | 1 | 13 | 405 | 30.11 | 0.00 | 68 | 58 | 71 | 00 | 0 | 7 | 535 | 30.19 | 0.00 | 72 | 59 | 64 | 24 | 0 | 6 | | | | | | | | | | | | |
| 19 | 48 | 29.89 | 0.00 | 65 | 58 | 80 | 04 | 0 | 2 | 64 | 30.13 | 0.00 | 63 | 55 | 75 | 00 | 0 | 4 | 69 | 30.17 | 0.00 | 67 | 59 | 75 | 00 | 0 | 0 | | | | | | | | | | | | |
| 22 | 0 | 29.93 | 0.00 | 57 | 56 | 95 | 00 | 0 | 0 | 0 | 30.17 | 0.00 | 51 | 50 | 95 | 00 | 0 | 0 | 0 | 30.19 | 0.00 | 53 | 52 | 95 | 00 | 0 | 0 | | | | | | | | | | | | |
| SEP 04 | | | | | | | | | SEP 05 | | | | | | | | | SEP 06 | | | | | | | | | | | | | | | | | | | | | |
| 01 | 0 | 30.19 | 0.00 | 51 | 50 | 97 | 00 | 0 | 0 | 0 | 30.22 | 0.00 | 55 | 54 | 97 | 00 | 0 | 0 | 0 | 30.08 | 0.00 | 54 | 53 | 97 | 00 | 0 | 0 | | | | | | | | | | | | |
| 04 | 0 | 30.21 | 0.00 | 50 | 49 | 97 | 00 | 0 | 0 | 0 | 30.21 | 0.00 | 54 | 53 | 97 | 00 | 0 | 0 | 0 | 30.06 | 0.00 | 51 | 50 | 97 | 00 | 0 | 0 | | | | | | | | | | | | |
| 07 | 2 | 30.24 | 0.00 | 49 | 48 | 98 | 00 | 0 | 0 | 0 | 30.22 | 0.00 | 53 | 52 | 98 | 00 | 0 | 0 | 1 | 30.08 | 0.00 | 52 | 52 | 98 | 00 | 0 | 0 | | | | | | | | | | | | |
| 10 | 364 | 30.26 | 0.00 | 64 | 62 | 95 | 00 | 0 | 0 | 383 | 30.23 | 0.00 | 68 | 65 | 89 | 00 | 0 | 0 | 381 | 30.08 | 0.00 | 67 | 63 | 88 | 00 | 0 | 0 | | | | | | | | | | | | |
| 13 | 644 | 30.25 | 0.00 | 74 | 62 | 65 | 22 | 1 | 9 | 666 | 30.17 | 0.00 | 77 | 58 | 52 | 06 | 0 | 1 | 646 | 30.05 | 0.00 | 80 | 63 | 56 | 02 | 0 | 1 | | | | | | | | | | | | |
| 16 | 516 | 30.21 | 0.00 | 80 | 60 | 52 | 27 | 0 | 5 | 549 | 30.11 | 0.00 | 80 | 63 | 55 | 00 | 0 | 1 | 512 | 30.03 | 0.00 | 83 | 67 | 59 | 00 | 0 | 0 | | | | | | | | | | | | |
| 19 | 66 | 30.20 | 0.00 | 72 | 64 | 76 | 00 | 0 | 0 | 67 | 30.08 | 0.00 | 74 | 64 | 69 | 00 | 0 | 0 | 67 | 30.00 | 0.00 | 79 | 67 | 68 | 00 | 0 | 0 | | | | | | | | | | | | |
| 22 | 0 | 30.21 | 0.00 | 58 | 57 | 95 | 00 | 0 | 0 | 0 | 30.08 | 0.00 | 58 | 57 | 95 | 00 | 0 | 0 | 0 | 30.03 | 0.00 | 62 | 61 | 94 | 00 | 0 | 0 | | | | | | | | | | | | |
| SEP 07 | | | | | | | | | SEP 08 | | | | | | | | | SEP 09 | | | | | | | | | | | | | | | | | | | | | |
| 01 | 0 | 30.01 | 0.00 | 63 | 62 | 96 | 00 | 0 | 0 | 0 | 29.87 | 0.00 | 66 | 64 | 93 | 18 | 0 | 5 | 0 | 29.68 | 0.00 | 71 | 70 | 97 | 20 | 0 | 6 | | | | | | | | | | | | |
| 04 | 0 | 30.00 | 0.00 | 62 | 61 | 96 | 24 | 0 | 5 | 0 | 29.85 | 0.00 | 67 | 64 | 89 | 22 | 1 | 9 | 0 | 29.69 | 0.00 | 70 | 69 | 97 | 22 | 0 | 9 | | | | | | | | | | | | |
| 07 | 0 | 30.03 | 0.00 | 61 | 60 | 97 | 22 | 0 | 4 | 2 | 29.81 | 0.00 | 67 | 64 | 90 | 20 | 0 | 5 | 0 | 29.76 | 0.00 | 69 | 67 | 92 | 29 | 0 | 6 | | | | | | | | | | | | |
| 10 | 367 | 30.00 | 0.00 | 75 | 66 | 75 | 20 | 1 | 8 | 229 | 29.79 | 0.00 | 73 | 68 | 83 | 20 | 1 | 11 | 367 | 29.81 | 0.00 | 74 | 68 | 81 | 29 | 2 | 11 | | | | | | | | | | | | |
| 13 | 665 | 29.98 | 0.00 | 81 | 65 | 58 | 22 | 1 | 11 | 483 | 29.75 | 0.00 | 79 | 68 | 68 | 22 | 4 | 20 | 647 | 29.82 | 0.00 | 79 | 68 | 69 | 29 | 3 | 13 | | | | | | | | | | | | |
| 16 | 521 | 29.92 | 0.00 | 85 | 67 | 56 | 20 | 2 | 11 | 180 | 29.67 | 0.00 | 78 | 69 | 74 | 20 | 3 | 15 | 498 | 29.83 | 0.00 | 82 | 68 | 64 | 29 | 0 | 8 | | | | | | | | | | | | |
| 19 | 58 | 29.89 | 0.00 | 79 | 68 | 69 | 00 | 0 | 0 | 24 | 29.66 | 0.00 | 72 | 70 | 95 | 20 | 0 | 10 | 61 | 29.85 | 0.00 | 75 | 67 | 78 | 00 | 0 | 0 | | | | | | | | | | | | |
| 22 | 0 | 29.89 | 0.00 | 66 | 64 | 92 | 00 | 0 | 0 | 0 | 29.68 | 0.00 | 72 | 71 | 96 | 22 | 2 | 11 | 0 | 29.92 | 0.00 | 61 | 60 | 95 | 00 | 0 | 0 | | | | | | | | | | | | |
| SEP 10 | | | | | | | | | SEP 11 | | | | | | | | | SEP 12 | | | | | | | | | | | | | | | | | | | | | |
| 01 | 0 | 29.94 | 0.00 | 61 | 60 | 97 | 00 | 0 | 0 | 0 | 29.70 | 0.00 | 75 | 70 | 83 | 20 | 3 | 21 | 0 | 30.11 | 0.01 | 47 | 45 | 95 | 00 | 0 | 0 | | | | | | | | | | | | |
| 04 | 0 | 29.94 | 0.00 | 59 | 58 | 97 | 00 | 0 | 0 | 0 | 29.62 | 0.00 | 76 | 70 | 82 | 20 | 4 | 22 | 0 | 30.12 | 0.00 | 45 | 44 | 96 | 00 | 0 | 0 | | | | | | | | | | | | |
| 07 | 0 | 29.96 | 0.00 | 57 | 56 | 98 | 00 | 0 | 0 | 0 | 29.65 | 0.00 | 68 | 66 | 96 | 22 | 0 | 9 | 0 | 30.17 | 0.00 | 44 | 43 | 97 | 00 | 0 | 0 | | | | | | | | | | | | |
| 10 | 277 | 29.97 | 0.00 | 70 | 65 | 85 | 00 | 0 | 0 | 67 | 29.78 | 0.14 | 63 | 59 | 85 | 24 | 2 | 19 | 360 | 30.20 | 0.00 | 61 | 55 | 79 | 00 | 0 | 0 | | | | | | | | | | | | |
| 13 | 627 | 29.90 | 0.00 | 79 | 67 | 67 | 20 | 3 | 15 | 437 | 29.89 | 0.00 | 65 | 52 | 63 | 29 | 7 | 21 | 637 | 30.18 | 0.00 | 69 | 52 | 55 | 00 | 0 | 0 | | | | | | | | | | | | |
| 16 | 217 | 29.85 | 0.00 | 77 | 66 | 70 | 20 | 5 | 18 | 524 | 29.96 | 0.00 | 68 | 51 | 55 | 29 | 4 | 18 | 514 | 30.14 | 0.00 | 72 | 50 | 47 | 20 | 0 | 5 | | | | | | | | | | | | |
| 19 | 67 | 29.80 | 0.00 | 73 | 66 | 79 | 20 | 1 | 11 | 79 | 30.02 | 0.00 | 60 | 50 | 68 | 29 | 0 | 12 | 61 | 30.10 | 0.00 | 68 | 55 | 62 | 00 | 0 | 0 | | | | | | | | | | | | |
| 22 | 0 | 29.76 | 0.00 | 71 | 66 | 85 | 22 | 1 | 10 | 0 | 30.08 | 0.00 | 50 | 47 | 90 | 00 | 0 | 0 | 0 | 30.12 | 0.00 | 53 | 51 | 91 | 00 | 0 | 0 | | | | | | | | | | | | |
| SEP 13 | | | | | | | | | SEP 14 | | | | | | | | | SEP 15 | | | | | | | | | | | | | | | | | | | | | |
| 01 | 0 | 30.11 | 0.00 | 52 | 50 | 94 | 00 | 0 | 0 | 0 | 29.94 | 0.00 | 61 | 58 | 90 | 20 | 0 | 5 | 0 | 30.19 | 0.00 | 48 | 45 | 90 | 00 | 0 | 0 | | | | | | | | | | | | |
| 04 | 0 | 30.10 | 0.00 | 50 | 49 | 96 | 00 | 0 | 0 | 0 | 29.91 | 0.00 | 65 | 60 | 85 | 22 | 0 | 6 | 0 | 30.23 | 0.00 | 42 | 41 | 95 | 00 | 0 | 0 | | | | | | | | | | | | |
| 07 | 0 | 30.11 | 0.00 | 50 | 48 | 95 | 00 | 0 | 0 | 0 | 29.90 | 0.00 | 66 | 61 | 86 | 22 | 1 | 10 | 0 | 30.26 | 0.00 | 42 | 41 | 97 | 00 | 0 | 0 | | | | | | | | | | | | |
| 10 | 362 | 30.10 | 0.00 | 65 | 56 | 75 | 20 | 2 | 10 | 23 | 29.91 | 0.01 | 63 | 62 | 95 | 20 | 1 | 7 | 361 | 30.30 | 0.00 | 54 | 49 | 86 | 00 | 0 | 0 | | | | | | | | | | | | |
| 13 | 639 | 30.04 | 0.00 | 74 | 59 | 59 | 22 | 2 | 12 | 111 | 29.96 | 0.00 | 62 | 60 | 93 | 29 | 4 | 18 | 733 | 30.29 | 0.00 | 61 | 47 | 59 | 29 | 0 | 7 | | | | | | | | | | | | |
| 16 | 499 | 29.97 | 0.00 | 79 | 60 | 52 | 22 | 4 | 15 | 193 | 30.01 | 0.00 | 61 | 60 | 94 | 31 | 1 | 12 | 510 | 30.25 | 0.00 | 64 | 50 | 61 | 29 | 0 | 6 | | | | | | | | | | | | |
| 19 | 58 | 29.94 | 0.00 | 73 | 60 | 65 | 20 | 1 | 10 | 45 | 30.08 | 0.00 | 59 | 53 | 81 | 02 | 0 | 5 | 50 | 30.23 | 0.00 | 57 | 50 | 76 | 00 | 0 | 0 | | | | | | | | | | | | |
| 22 | 0 | 29.96 | 0.00 | 64 | 59 | 82 | 20 | 0 | 6 | 0 | 30.14 | 0.00 | 54 | 51 | 89 | 00 | 0 | 0 | 0 | 30.26 | 0.00 | 43 | 42 | 95 | 01 | 0 | 0 | | | | | | | | | | | | |
| SEP 16 | | | | | | | | | SEP 17 | | | | | | | | | SEP 18 | | | | | | | | | | | | | | | | | | | | | |
| 01 | 0 | 30.26 | 0.00 | 41 | 40 | 96 | 01 | 0 | 0 | 0 | 30.14 | 0.00 | 51 | 47 | 89 | 19 | 0 | 0 | 0 | 29.87 | 0.00 | 65 | 61 | 88 | 19 | 1 | 19 | | | | | | | | | | | | |
| 04 | 0 | 30.25 | 0.00 | 40 | 39 | 97 | 01 | 0 | 0 | 0 | 30.12 | 0.00 | 54 | 50 | 87 | 21 | 0 | 6 | 0 | 29.85 | 0.06 | 63 | 62 | 94 | 20 | 5 | 18 | | | | | | | | | | | | |
| 07 | 11 | 30.26 | 0.00 | 39 | 39 | 97 | 01 | 0 | 0 | 18 | 30.10 | 0.00 | 55 | 51 | 86 | 22 | 1 | 11 | 0 | 29.89 | 0.00 | 64 | 63 | 97 | 23 | 4 | 13 | | | | | | | | | | | | |
| 10 | 457 | 30.29 | 0.00 | 59 | 53 | 79 | 25 | 0 | 7 | 406 | 30.07 | 0.00 | 64 | 55 | 71 | 18 | 4 | 13 | 360 | 29.91 | 0.00 | 68 | 66 | 91 | 20 | 5 | 11 | | | | | | | | | | | | |
| 13 | 629 | 30.25 | 0.00 | 68 | 54 | 61 | 26 | 0 | 7 | 438 | 30.00 | 0.00 | 70 | 59 | 68 | 21 | 3 | 23 | 192 | 29.90 | 0.00 | 75 | 68 | 77 | 20 | 4 | 11 | | | | | | | | | | | | |
| 16 | 429 | 30.17 | 0.00 | 71 | 53 | 53 | 25 | 0 | 0 | 253 | 29.92 | 0.00 | 73 | 60 | 65 | 21 | 8 | 24 | 181 | 29.89 | 0.00 | 75 | 68 | 77 | 21 | 2 | 12 | | | | | | | | | | | | |
| 19 | 0 | 30.15 | 0.00 | 58 | 53 | 82 | 19 | 0 | 0 | 0 | 29.90 | 0.00 | 69 | 59 | 72 | 20 | 2 | 14 | 0 | 29.90 | 0.00 | 70 | 66 | 88 | 20 | 3 | 8 | | | | | | | | | | | | |
| 22 | 0 | 30.17 | 0.00 | 53 | 48 | 81 | 19 | 0 | 0 | 0 | 29.88 | 0.00 | 69 | 60 | 72 | 23 | 6 | 15 | 0 | 29.94 | 0.00 | 67 | 65 | 94 | 21 | 1 | 6 | | | | | | | | | | | | |

MAXIMUM SHORT DURATION PRECIPITATION

| Time Period (minutes) | 5 | 10 | 15 | 20 | 30 | 45 | 60 | 80 | 100 | 120 | 150 | 180 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Precipitation | 0.16 | 0.32 | 0.48 | 0.64 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.92 | 0.92 | 0.92 |
| Ended: Date | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Ended: Time | 1604 | 1609 | 1614 | 1619 | 1628 | 1628 | 1628 | 1628 | 1628 | 1628 | 1628 | 1628 |

The precipitation amounts may occur at any time during the month. The time indicated is the ending time of the interval. Date and time are not entered for trace amounts.

OBSERVATIONS AT 3-HOUR INTERVALS

September 2016: Westford

| Hour | Wind | | | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Wind | | | Sunshine | Pressure | Rainfall rate | Temperature | Dew Point | Humidity | Wind | | | | | | | | |
|--------|-----------|-------|------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|------|----|----|----|----|---|----|
| | Direction | Speed | Gust | | | | | | | Direction | Speed | Gust | | | | | | | Direction | Speed | Gust | | | | | | |
| SEP 19 | | | | | | | | | SEP 20 | | | | | | | | | SEP 21 | | | | | | | | | |
| 01 | 0 | 29.94 | 0.00 | 67 | 65 | 96 | 20 | 1 | 6 | 0 | 30.01 | 0.00 | 62 | 61 | 97 | 20 | 0 | 0 | 0 | 30.03 | 0.00 | 62 | 56 | 83 | 23 | 1 | 6 |
| 04 | 0 | 29.92 | 0.00 | 66 | 65 | 95 | 20 | 0 | 0 | 0 | 30.01 | 0.00 | 62 | 61 | 98 | 20 | 0 | 0 | 0 | 30.07 | 0.00 | 53 | 51 | 93 | 22 | 0 | 0 |
| 07 | 5 | 29.95 | 0.00 | 64 | 63 | 96 | 20 | 0 | 0 | 16 | 30.03 | 0.00 | 62 | 61 | 98 | 20 | 0 | 6 | 9 | 30.10 | 0.00 | 50 | 49 | 94 | 22 | 0 | 0 |
| 10 | 200 | 29.98 | 0.00 | 65 | 64 | 96 | 21 | 1 | 6 | 417 | 30.04 | 0.00 | 70 | 66 | 86 | 23 | 5 | 10 | 434 | 30.14 | 0.00 | 67 | 56 | 66 | 21 | 0 | 9 |
| 13 | 454 | 29.96 | 0.00 | 74 | 68 | 81 | 22 | 1 | 6 | 589 | 29.98 | 0.00 | 79 | 66 | 64 | 22 | 8 | 13 | 606 | 30.10 | 0.00 | 76 | 53 | 44 | 25 | 5 | 10 |
| 16 | 243 | 29.96 | 0.00 | 77 | 68 | 75 | 21 | 0 | 0 | 369 | 29.94 | 0.00 | 79 | 67 | 66 | 22 | 4 | 8 | 309 | 30.07 | 0.00 | 79 | 53 | 41 | 28 | 6 | 11 |
| 19 | 0 | 29.96 | 0.00 | 68 | 65 | 90 | 09 | 0 | 0 | 0 | 29.95 | 0.00 | 70 | 62 | 76 | 22 | 0 | 5 | 0 | 30.09 | 0.00 | 68 | 55 | 62 | 25 | 0 | 10 |
| 22 | 0 | 30.00 | 0.00 | 64 | 63 | 96 | 20 | 0 | 0 | 0 | 30.01 | 0.00 | 68 | 60 | 75 | 24 | 3 | 8 | 0 | 30.10 | 0.00 | 62 | 53 | 73 | 21 | 0 | 1 |
| SEP 22 | | | | | | | | | SEP 23 | | | | | | | | | SEP 24 | | | | | | | | | |
| 01 | 0 | 30.08 | 0.00 | 60 | 53 | 78 | 26 | 0 | 4 | 0 | 29.92 | 0.00 | 58 | 57 | 95 | 30 | 0 | 0 | 0 | 30.10 | 0.00 | 43 | 42 | 97 | 06 | 0 | 0 |
| 04 | 0 | 30.12 | 0.00 | 56 | 52 | 87 | 25 | 0 | 4 | 0 | 29.93 | 0.04 | 57 | 56 | 96 | 22 | 0 | 0 | 0 | 30.10 | 0.00 | 42 | 41 | 98 | 06 | 0 | 0 |
| 07 | 9 | 30.14 | 0.00 | 57 | 54 | 90 | 24 | 0 | 0 | 0 | 29.98 | 0.06 | 52 | 51 | 97 | 05 | 0 | 0 | 9 | 30.14 | 0.00 | 40 | 40 | 98 | 06 | 0 | 0 |
| 10 | 172 | 30.14 | 0.00 | 68 | 58 | 72 | 24 | 0 | 0 | 47 | 30.03 | 0.35 | 51 | 50 | 97 | 05 | 0 | 6 | 427 | 30.16 | 0.00 | 52 | 50 | 92 | 01 | 0 | 6 |
| 13 | 582 | 30.08 | 0.00 | 76 | 58 | 55 | 22 | 0 | 6 | 118 | 30.05 | 0.00 | 53 | 51 | 96 | 04 | 0 | 5 | 612 | 30.13 | 0.00 | 60 | 45 | 59 | 29 | 1 | 10 |
| 16 | 343 | 30.00 | 0.00 | 81 | 58 | 46 | 21 | 4 | 8 | 98 | 30.04 | 0.00 | 55 | 52 | 90 | 06 | 0 | 0 | 448 | 30.07 | 0.00 | 62 | 45 | 55 | 28 | 4 | 10 |
| 19 | 0 | 29.96 | 0.00 | 65 | 59 | 83 | 24 | 0 | 0 | 0 | 30.07 | 0.00 | 52 | 50 | 95 | 06 | 0 | 0 | 0 | 30.09 | 0.00 | 51 | 42 | 70 | 31 | 0 | 8 |
| 22 | 0 | 29.94 | 0.00 | 62 | 58 | 87 | 29 | 3 | 7 | 0 | 30.09 | 0.00 | 46 | 45 | 97 | 06 | 0 | 0 | 0 | 30.12 | 0.00 | 45 | 39 | 78 | 01 | 0 | 0 |
| SEP 25 | | | | | | | | | SEP 26 | | | | | | | | | SEP 27 | | | | | | | | | |
| 01 | 0 | 30.13 | 0.00 | 40 | 36 | 87 | 05 | 0 | 0 | 0 | 30.17 | 0.00 | 36 | 35 | 96 | 02 | 0 | 0 | 0 | 29.83 | 0.10 | 55 | 52 | 90 | 21 | 2 | 12 |
| 04 | 0 | 30.13 | 0.00 | 40 | 38 | 91 | 05 | 0 | 0 | 0 | 30.16 | 0.00 | 34 | 33 | 97 | 02 | 0 | 0 | 0 | 29.81 | 0.04 | 55 | 54 | 96 | 21 | 1 | 14 |
| 07 | 9 | 30.15 | 0.00 | 39 | 37 | 95 | 31 | 0 | 0 | 11 | 30.16 | 0.00 | 33 | 32 | 97 | 01 | 0 | 0 | 0 | 29.85 | 0.00 | 54 | 53 | 97 | 20 | 0 | 5 |
| 10 | 441 | 30.16 | 0.00 | 52 | 44 | 76 | 31 | 1 | 6 | 424 | 30.14 | 0.00 | 52 | 45 | 76 | 21 | 0 | 7 | 404 | 29.85 | 0.00 | 63 | 59 | 87 | 20 | 1 | 7 |
| 13 | 691 | 30.15 | 0.00 | 55 | 42 | 61 | 28 | 6 | 11 | 619 | 30.07 | 0.00 | 63 | 44 | 51 | 24 | 5 | 13 | 638 | 29.82 | 0.00 | 68 | 55 | 63 | 30 | 1 | 8 |
| 16 | 362 | 30.13 | 0.00 | 59 | 41 | 52 | 32 | 0 | 7 | 90 | 29.99 | 0.00 | 60 | 40 | 48 | 22 | 4 | 11 | 439 | 29.82 | 0.00 | 66 | 52 | 61 | 27 | 0 | 1 |
| 19 | 0 | 30.14 | 0.00 | 44 | 40 | 86 | 02 | 0 | 0 | 0 | 29.92 | 0.00 | 55 | 43 | 65 | 20 | 0 | 0 | 0 | 29.87 | 0.00 | 54 | 50 | 88 | 27 | 0 | 0 |
| 22 | 0 | 30.16 | 0.00 | 37 | 36 | 95 | 02 | 0 | 0 | 0 | 29.88 | 0.00 | 54 | 46 | 75 | 22 | 2 | 6 | 0 | 29.93 | 0.00 | 50 | 48 | 93 | 06 | 0 | 0 |
| SEP 28 | | | | | | | | | SEP 29 | | | | | | | | | SEP 30 | | | | | | | | | |
| 01 | 0 | 30.00 | 0.00 | 51 | 49 | 96 | 05 | 0 | 3 | 0 | 30.34 | 0.00 | 49 | 48 | 96 | 14 | 0 | 0 | 0 | 30.44 | 0.00 | 49 | 48 | 96 | 05 | 0 | 0 |
| 04 | 0 | 30.03 | 0.00 | 52 | 51 | 95 | 19 | 0 | 0 | 0 | 30.34 | 0.00 | 45 | 44 | 96 | 14 | 0 | 0 | 0 | 30.42 | 0.00 | 46 | 45 | 97 | 05 | 0 | 0 |
| 07 | 12 | 30.09 | 0.00 | 51 | 49 | 93 | 10 | 0 | 0 | 5 | 30.40 | 0.00 | 44 | 43 | 97 | 14 | 0 | 0 | 0 | 30.44 | 0.00 | 42 | 41 | 95 | 22 | 0 | 0 |
| 10 | 406 | 30.16 | 0.00 | 64 | 56 | 75 | 17 | 1 | 5 | 343 | 30.44 | 0.00 | 57 | 50 | 79 | 06 | 0 | 0 | 165 | 30.44 | 0.00 | 53 | 47 | 80 | 07 | 0 | 0 |
| 13 | 149 | 30.18 | 0.00 | 66 | 54 | 64 | 22 | 0 | 7 | 561 | 30.44 | 0.00 | 64 | 51 | 62 | 15 | 1 | 6 | 327 | 30.41 | 0.00 | 63 | 49 | 62 | 29 | 1 | 6 |
| 16 | 346 | 30.18 | 0.00 | 69 | 53 | 57 | 16 | 0 | 0 | 174 | 30.40 | 0.00 | 64 | 51 | 63 | 03 | 0 | 4 | 153 | 30.36 | 0.00 | 61 | 51 | 69 | 01 | 0 | 0 |
| 19 | 0 | 30.22 | 0.00 | 57 | 54 | 91 | 14 | 0 | 0 | 0 | 30.42 | 0.00 | 53 | 51 | 92 | 05 | 0 | 0 | 0 | 30.36 | 0.00 | 53 | 50 | 91 | 01 | 0 | 0 |
| 22 | 0 | 30.29 | 0.00 | 53 | 51 | 93 | 14 | 0 | 0 | 0 | 30.44 | 0.00 | 52 | 50 | 92 | 05 | 0 | 0 | 0 | 30.34 | 0.00 | 50 | 48 | 93 | 01 | 0 | 0 |

WEATHER NOTES

NOTES:
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.
 Wind Direction: Directions are those from which the wind is blowing, indicated in tens of degrees from true north: i.e., 09 for East, 18 for South, 27 for West, and 00 or 36 for North.
 Wind Speed: The observed one-minute average speed in miles-per-hour.
 Wind Gust: The maximum instantaneous wind speed for the 10-minute period preceding the observation.
 Rainfall Rate: The instantaneous rainfall rate at the time of observation, calculated by timing consecutive 0.01" pulses from the electronic rain gauge and interpolating this rate for one hour.

SUMMARY BY HOUR

| Hour | Averages | | | | | | Resultant Wind | |
|------|----------|----------|-------------|-----------|----------|------------|----------------|-------|
| | Sunshine | Pressure | Temperature | Dew Point | Humidity | Wind Speed | Direction | Speed |
| 01 | 0 | 30.040 | 55 | 53 | 93 | 0.3 | 21 | 0.2 |
| 04 | 0 | 30.039 | 54 | 52 | 94 | 0.4 | 21 | 0.4 |
| 07 | 4 | 30.064 | 53 | 51 | 95 | 0.3 | 24 | 0.2 |
| 10 | 321 | 30.085 | 63 | 58 | 84 | 0.8 | 22 | 0.7 |
| 13 | 528 | 30.067 | 70 | 57 | 65 | 2.2 | 25 | 1.8 |
| 16 | 367 | 30.035 | 72 | 57 | 62 | 1.7 | 24 | 1.4 |
| 19 | 29 | 30.035 | 64 | 57 | 78 | 0.2 | 21 | 0.2 |
| 22 | 0 | 30.057 | 57 | 54 | 89 | 0.6 | 24 | 0.6 |

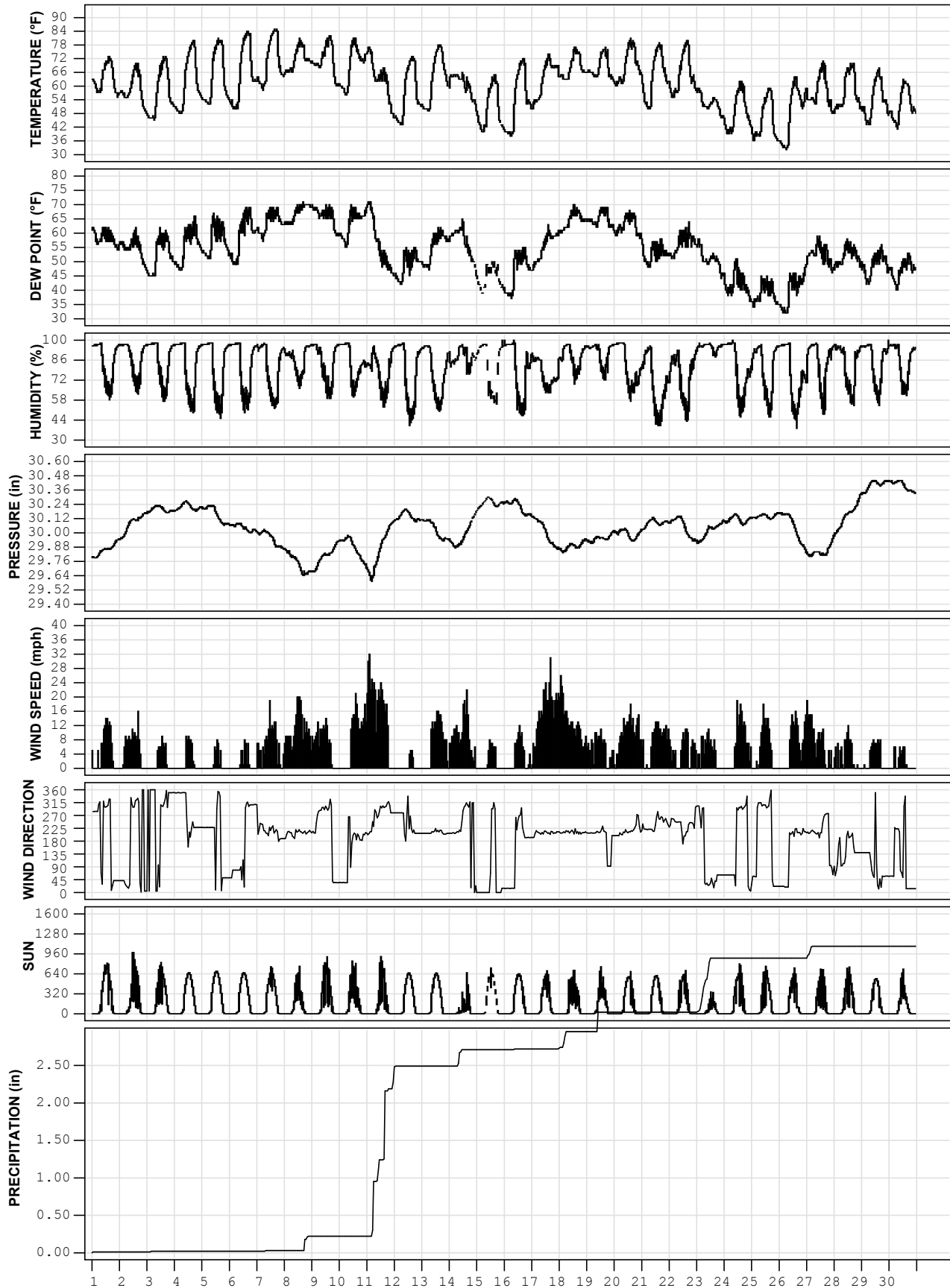
HOURLY PRECIPITATION (Water Equivalent) September 2016: Westford

| Date | A.M. Hour Ending at | | | | | | | | | | | | P.M. Hour Ending at | | | | | | | | | | | | Date |
|------------|---------------------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | |
| 01 | 0.01 | | | | | | | | | | | | | | | | | | | | | | | 01 | |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | | 02 |
| 03 | | | | 0.01 | | | | | | | | | | | | | | | | | | | | | 03 |
| 04 | | | | | | | | | | | | | | | | | | | | | | | | | 04 |
| 05 | | | | | | | | | | | | | | | | | | | | | | | | | 05 |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | | 06 |
| 07 | | | | | | | | 0.01 | | | | | | | | | | | | | | | | | 07 |
| 08 | | | | | | | | | | | | | | | | | 0.15 | | 0.03 | 0.01 | | | | | 08 |
| 09 | | | | | | | | | | | | | | | | | | | | | | | | | 09 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | 0.08 | 0.65 | | | 0.01 | 0.14 | 0.14 | | | | 0.01 | 0.91 | | | 0.03 | | | 0.08 | 0.21 | 11 | |
| 12 | 0.01 | | | | | | | | | | | | | | | | | | | | | | | 12 | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | 13 | |
| 14 | | | | | | | | 0.04 | 0.14 | 0.01 | 0.03 | | | | | | | | | | | | | 14 | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | 15 | |
| 16 | | | | | | | | | 0.01 | | | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | 0.01 | 17 | |
| 18 | 0.01 | | | 0.06 | 0.09 | 0.06 | | | | | | | | | | | | | | | | | | 18 | |
| 19 | | | | | | | | | | 0.26 | | | | | | | | | | | | | | 19 | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | 20 | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | 21 | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | 22 | |
| 23 | 0.01 | 0.01 | 0.02 | 0.08 | 0.10 | 0.11 | 0.06 | 0.04 | 0.01 | 0.11 | 0.12 | 0.05 | | | | | | | | | | | | 23 | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | 24 | |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | 25 | |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | 26 | |
| 27 | 0.04 | 0.01 | 0.04 | 0.06 | 0.01 | | | | | | | | | | | | | | | | | | | 27 | |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | 28 | |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | 29 | |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | 30 | |
| Sum | 0.08 | 0.02 | 0.06 | 0.21 | 0.28 | 0.82 | 0.06 | 0.09 | 0.17 | 0.52 | 0.29 | 0.05 | 0.00 | 0.00 | 0.01 | 0.91 | 0.00 | 0.15 | 0.03 | 0.03 | 0.01 | 0.00 | 0.08 | 0.22 | Sum |

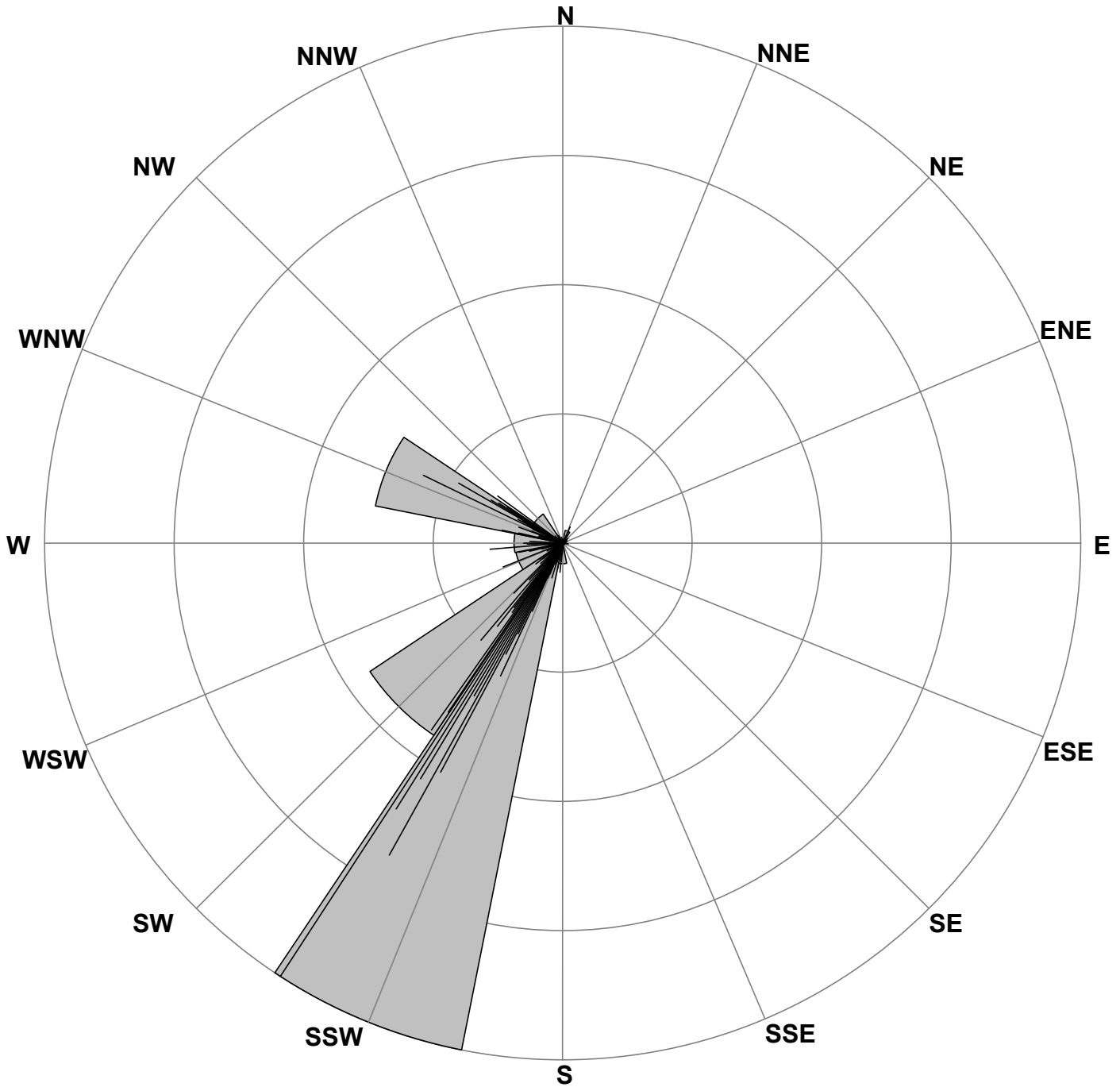
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA

September 2016: Westford



**Wind Rose: September 2016
Westford**



**Maximum direction of wind: 52.4 miles from 213°
Maximum sector of wind: 259.4 miles from SSW
564.2 total miles of wind**