

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

November 2009

Station: Oakland, NJ
 Latitude: 41° 02' 28" N Longitude: 74° 13' 52" W Elevation (Ground): 280 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 | | | | | | Sun | | |
|-----------------|-------------|---------|-----------------|------|-----------|----------------|---------------------|-------------------|---|---------------|-------------------|------------------|-------------------------------|---------|---|-------|--------|------|------|-------|-------|------|--------|-------|
| | Maximum | Minimum | Average | Mean | Dew Point | | Mean | Heating Base 65°F | | | Cooling Base 65°F | Water Equivalent | Ice Pellets Snow | Maximum | Minimum | Mean | Avg | Res | Res | Peak | | | Minute | |
| | | | | | | | | | | | | | | | | | | | | Speed | Speed | | Dir | Speed | Dir | Speed | Dir |
| 1 | 2 | 3 | 4A | 4B | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | |
| 1 | 57.4 | 38.4 | 47.9 | 49.2 | 40 | 73 | 17 | 0 | ..... | 0 | 0.04 | 0.0 | 30.21 | 29.85 | 30.087 | 1.0 | 0.9 | 340 | 15 | NNW | 8 | 347 | | |
| 2 | 55.7 | 35.3 | 45.5 | 45.4 | 37 | 75 | 19 | 0 | ..... | 0 | 0.00 | 0.0 | 30.25 | 30.10 | 30.174 | 1.0 | 1.0 | 53 | 14 | NNE | 8 | 51 | | |
| 3 | 60.7 | 31.7 | 46.2 | 44.4 | 36 | 74 | 18 | 0 | ..... | 0 | 0.00 | 0.0 | 30.19 | 29.95 | 30.063 | 1.3 | 0.8 | 271 | 14 | NNE | 8 | 333 | | |
| 4 | 51.1 | 30.9 | 41.0 | 42.3 | 32 | 70 | 24 | 0 | ..... | 0 | 0.00 | 0.0 | 30.33 | 30.19 | 30.255 | 0.9 | 0.7 | 256 | 13 | SSW | 7 | 214 | | |
| 5 | 52.6 | 38.3 | 45.4 | 43.6 | 35 | 75 | 19 | 0 | ..... | 0 | 0.11 | 0.0 | 30.23 | 29.98 | 30.090 | 1.7 | 1.3 | 256 | 17 | WNW | 9 | 335 | | |
| 6 | 46.7 | 29.5 | 38.1* | 38.9 | 29 | 67 | 26 | 0 | ..... | 0 | 0.00 | 0.0 | 30.31 | 30.01 | 30.195 | 2.8 | 2.8 | 335 | 27 | NNW | 14 | 342 | | |
| 7 | 51.5 | 24.8* | 38.1 | 36.7 | 29 | 76 | 26 | 0 | ..... | 0 | 0.00 | 0.0 | 30.33 | 30.13 | 30.231 | 1.3 | 1.3 | 210 | 16 | S | 10 | 228 | | |
| 8 | 69.2* | 32.2 | 50.7 | 47.4 | 38 | 74 | 14 | 0 | ..... | 0 | 0.00 | 0.0 | 30.38 | 30.13 | 30.232 | 0.5 | 0.4 | 301 | 10 | NNW | 6 | 346 | | |
| 9 | 69.0 | 34.1 | 51.5 | 50.3 | 44 | 81 | 13 | 0 | ..... | 0 | 0.00 | 0.0 | 30.42 | 30.26 | 30.331 | 1.0 | 1.0 | 217 | 15 | SSW | 9 | 231 | | |
| 10 | 65.7 | 44.7 | 55.2* | 54.5 | 47 | 78 | 9 | 0 | ..... | 0 | 0.00 | 0.0 | 30.27 | 30.21 | 30.239 | 0.6 | 0.5 | 15 | 13 | N | 6 | 20 | | |
| 11 | 54.7 | 46.0 | 50.4 | 49.9 | 35 | 57 | 14 | 0 | ..... | 0 | 0.00 | 0.0 | 30.37 | 30.26 | 30.316 | 2.7 | 2.6 | 29 | 18 | NNE | 9 | 40 | | |
| 12 | 52.0 | 45.2 | 48.6 | 47.9 | 29 | 47 | 16 | 0 | ..... | 0 | 0.00 | 0.0 | 30.30 | 30.06 | 30.177 | 4.4 | 4.4 | 43 | 22 | NE | 12 | 44 | | |
| 13 | 55.2 | 45.6 | 50.4 | 50.3 | 41 | 72 | 14 | 0 | ..... | 0 | 0.01 | 0.0 | 30.06 | 29.94 | 30.008 | 5.0 | 5.0 | 39 | 25 | ENE | 12 | 58 | | |
| 14 | 55.8 | 49.5 | 52.6 | 52.7 | 51 | 94 | 12 | 0 | ..... | 0 | 0.23 | 0.0 | 29.95 | 29.85 | 29.889 | 2.1 | 2.0 | 38 | 19 | ENE | 10 | 36 | | |
| 15 | 64.1 | 46.1 | 55.1 | 55.2 | 53 | 92 | 10 | 0 | ..... | 0 | 0.01 | 0.0 | 29.93 | 29.84 | 29.886 | 0.8 | 0.6 | 8 | 12 | NW | 7 | 349 | | |
| 16 | 57.8 | 39.6 | 48.7 | 49.1 | 39 | 70 | 16 | 0 | ..... | 0 | 0.01 | 0.0 | 30.14 | 29.93 | 30.034 | 1.4 | 1.3 | 356 | 17 | NNW | 8 | 348 | | |
| 17 | 55.0 | 33.1 | 44.0 | 43.9 | 28 | 57 | 21 | 0 | ..... | 0 | 0.00 | 0.0 | 30.39 | 30.14 | 30.269 | 1.1 | 1.0 | 23 | 12 | N | 7 | 344 | | |
| 18 | 53.1 | 30.9 | 42.0 | 42.9 | 37 | 80 | 23 | 0 | ..... | 0 | 0.00 | 0.0 | 30.48 | 30.39 | 30.433 | 0.5 | 0.4 | 62 | 10 | NE | 5 | 65 | | |
| 19 | 56.2 | 43.3 | 49.8 | 50.2 | 47 | 89 | 15 | 0 | ..... | 0 | 0.23 | 0.0 | 30.40 | 30.03 | 30.265 | 0.5 | 0.4 | 38 | 11 | N | 3 | 18 | | |
| 20 | 59.8 | 39.1 | 49.4 | 52.1 | 45 | 78 | 15 | 0 | ..... | 0 | 0.73 | 0.0 | 30.07 | 29.91 | 29.997 | 2.8 | 2.5 | 285 | 22 | W | 12 | 290 | | |
| 21 | 55.8 | 36.3 | 46.0 | 46.2 | 39 | 76 | 19 | 0 | ..... | 0 | 0.00 | 0.0 | 30.17 | 30.03 | 30.085 | 1.2 | 0.9 | 340 | 14 | W | 7 | 339 | | |
| 22 | 52.1 | 34.8 | 43.4 | 42.9 | 37 | 82 | 21 | 0 | ..... | 0 | 0.00 | 0.0 | 30.40 | 30.17 | 30.297 | 0.9 | 0.9 | 11 | 13 | N | 7 | 345 | | |
| 23 | 49.9 | 41.8 | 45.9 | 45.6 | 39 | 79 | 19 | 0 | ..... | 0 | 0.00 | 0.0 | 30.44 | 30.23 | 30.364 | 2.3 | 2.3 | 40 | 16 | ENE | 7 | 42 | | |
| 24 | 58.2 | 39.6 | 48.9 | 48.2 | 44 | 84 | 16 | 0 | ..... | 0 | 0.00 | 0.0 | 30.23 | 30.11 | 30.168 | 0.9 | 0.9 | 36 | 13 | NE | 7 | 33 | | |
| 25 | 48.8 | 41.9 | 45.4 | 47.1 | 46 | 95 | 19 | 0 | ..... | 0 | 0.07 | 0.0 | 30.13 | 29.92 | 30.014 | 0.2 | 0.1 | 100 | 5 | ENE | 3 | 65 | | |
| 26 | 56.4 | 45.6 | 51.0 | 49.3 | 47 | 91 | 14 | 0 | ..... | 0 | 0.01 | 0.0 | 29.94 | 29.64 | 29.838 | 0.3 | 0.3 | 74 | 7 | NE | 4 | 68 | | |
| 27 | 46.7 | 41.5 | 44.1 | 44.2 | 36 | 75 | 20 | 0 | ..... | 0 | 0.00 | 0.0 | 29.64 | 29.38 | 29.474 | 4.3 | 4.0 | 318 | 28 | WSW | 14 | 283 | | |
| 28 | 49.6 | 41.3 | 45.4 | 45.2 | 33 | 62 | 19 | 0 | ..... | 0 | 0.00 | 0.0 | 29.85 | 29.43 | 29.648 | 6.2 | 5.9 | 303 | 39 | NW | 18 | 298 | | |
| 29 | 59.3 | 30.0 | 44.6 | 43.3 | 34 | 71 | 20 | 0 | ..... | 0 | 0.00 | 0.0 | 29.93 | 29.69 | 29.836 | 1.5 | 1.3 | 240 | 15 | W | 8 | 279 | | |
| 30 | 48.4 | 36.9 | 42.7 | 42.7 | 38 | 84 | 22 | 0 | ..... | 0 | 0.02 | 0.0 | 29.78 | 29.59 | 29.659 | 1.6 | 1.5 | 335 | 21 | N | 14 | 345 | | |
| Sum | Sum | ----- | ----- | --- | ---- | Ttl | Ttl | | | | | | For the month: | | | | | | | | | | --- | |
| 1669 | 1148 | | | | | 530 | 0 | | | | | | 1.47 | 0.0 | 30.48 | 29.38 | 30.085 | 1.8 | 1.0 | 347 | 39 | NW | 18 | 298 |
| Avg | Avg | Avg | Mean | Avg | Avg | ---- | ---- | | | | | | Season Ttl | | Date | Date | ----- | ---- | ---- | --- | Date | Date | Avg | |
| 55.6 | 38.3 | 46.9 | 46.7 | 39 | 76.0 | ---- | ---- | | | | | | 40.09 | T | 18 | 27 | ----- | ---- | ---- | --- | 28 | 28 | | |
| 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 | | | 1086 | 544 | Thunder | 0 | Precipitation | | | Snow, Ice Plts | | | | | | | | | | | |
| ≥ 90°F | ≤ 32°F | ≤ 32°F | ≤ 0°F | ---- | ---- | Heavy Fog | 0 | 0.96 | 19-20 | 0.0 | - | 0 | | | | | | - | | | | | | |
| 0 | 0 | 7 | 0 | ---- | ---- | Clear | 30 | Partly Cloudy | 0 | Cloudy | 0 | | | | | | | | | | | | | |

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: Sunshine index is measured in Watts/m² 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

November 2009: Oakland, NJ

| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOV 01 | | | | | | | | | | | | | | | NOV 02 | | | | | | | | | | | | | | | NOV 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | | 29.90 | 0.00 | 56 | 46 | 70 | 22 | 0 | 11 | | 30.18 | 0.00 | 41 | 36 | 83 | 09 | 0 | 1 | | 30.09 | 0.00 | 35 | 33 | 95 | 07 | 0 | 0 | 04 | | 30.00 | 0.00 | 52 | 44 | 72 | 02 | 0 | 3 | | 30.19 | 0.00 | 38 | 36 | 92 | 05 | 1 | 3 | | 30.08 | 0.00 | 33 | 32 | 96 | 07 | 0 | 0 | 07 | | 30.07 | 0.00 | 47 | 45 | 95 | 28 | 0 | 2 | | 30.23 | 0.00 | 44 | 37 | 77 | 04 | 1 | 7 | | 30.07 | 0.00 | 32 | 31 | 96 | 07 | 0 | 0 | 10 | | 30.10 | 0.00 | 52 | 39 | 63 | 34 | 0 | 7 | | 30.23 | 0.00 | 50 | 40 | 67 | 06 | 7 | 12 | | 30.05 | 0.00 | 49 | 42 | 79 | 23 | 3 | 9 | 13 | | 30.08 | 0.00 | 55 | 37 | 51 | 33 | 2 | 7 | | 30.17 | 0.00 | 55 | 38 | 53 | 05 | 4 | 13 | | 29.97 | 0.00 | 60 | 44 | 56 | 23 | 3 | 12 | 16 | | 30.12 | 0.00 | 55 | 35 | 48 | 01 | 0 | 6 | | 30.15 | 0.00 | 54 | 37 | 53 | 11 | 1 | 4 | | 29.99 | 0.00 | 58 | 39 | 50 | 34 | 5 | 10 | 19 | | 30.17 | 0.00 | 42 | 39 | 87 | 03 | 0 | 0 | | 30.14 | 0.00 | 45 | 39 | 80 | 07 | 0 | 1 | | 30.08 | 0.00 | 49 | 31 | 51 | 33 | 0 | 5 | 22 | | 30.19 | 0.00 | 39 | 36 | 92 | 07 | 0 | 2 | | 30.12 | 0.00 | 38 | 36 | 94 | 07 | 0 | 0 | | 30.16 | 0.00 | 44 | 29 | 56 | 33 | 0 | 2 |
| NOV 04 | | | | | | | | | | | | | | | NOV 05 | | | | | | | | | | | | | | | NOV 06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | | 30.22 | 0.00 | 41 | 33 | 73 | 25 | 1 | 5 | | 30.21 | 0.00 | 40 | 36 | 85 | 23 | 0 | 0 | | 30.03 | 0.00 | 39 | 30 | 69 | 31 | 5 | 13 | 04 | | 30.26 | 0.00 | 36 | 32 | 86 | 25 | 1 | 4 | | 30.18 | 0.00 | 40 | 37 | 90 | 23 | 0 | 0 | | 30.06 | 0.00 | 38 | 28 | 66 | 32 | 7 | 17 | 07 | | 30.30 | 0.00 | 31 | 29 | 94 | 25 | 0 | 0 | | 30.15 | 0.00 | 39 | 36 | 92 | 28 | 0 | 0 | | 30.14 | 0.00 | 37 | 26 | 64 | 29 | 6 | 11 | 10 | | 30.32 | 0.00 | 47 | 32 | 57 | 28 | 2 | 6 | | 30.13 | 0.00 | 45 | 37 | 73 | 24 | 0 | 2 | | 30.21 | 0.00 | 43 | 30 | 60 | 35 | 5 | 18 | 13 | | 30.26 | 0.00 | 49 | 30 | 47 | 28 | 1 | 6 | | 30.06 | 0.00 | 52 | 34 | 51 | 21 | 2 | 9 | | 30.22 | 0.00 | 46 | 30 | 53 | 33 | 6 | 10 | 16 | | 30.20 | 0.00 | 49 | 31 | 50 | 20 | 0 | 4 | | 30.00 | 0.00 | 50 | 34 | 53 | 23 | 2 | 11 | | 30.26 | 0.00 | 43 | 28 | 56 | 30 | 4 | 12 | 19 | | 30.23 | 0.00 | 42 | 34 | 73 | 18 | 0 | 0 | | 30.01 | 0.00 | 41 | 39 | 91 | 22 | 2 | 5 | | 30.29 | 0.00 | 35 | 28 | 77 | 30 | 0 | 1 | 22 | | 30.24 | 0.00 | 42 | 36 | 78 | 16 | 0 | 2 | | 30.02 | 0.00 | 40 | 33 | 75 | 35 | 3 | 13 | | 30.31 | 0.00 | 32 | 28 | 85 | 34 | 0 | 1 |
| NOV 07 | | | | | | | | | | | | | | | NOV 08 | | | | | | | | | | | | | | | NOV 09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | | 30.29 | 0.00 | 28 | 26 | 90 | 18 | 0 | 1 | | 30.13 | 0.00 | 38 | 35 | 88 | 18 | 0 | 0 | | 30.37 | 0.00 | 38 | 36 | 95 | 28 | 0 | 0 | 04 | | 30.31 | 0.00 | 26 | 24 | 93 | 19 | 0 | 0 | | 30.14 | 0.00 | 34 | 32 | 94 | 18 | 0 | 0 | | 30.38 | 0.00 | 36 | 35 | 96 | 28 | 0 | 0 | 07 | | 30.32 | 0.00 | 25 | 24 | 94 | 19 | 0 | 1 | | 30.18 | 0.00 | 32 | 31 | 95 | 18 | 0 | 0 | | 30.41 | 0.00 | 34 | 33 | 96 | 28 | 0 | 0 | 10 | | 30.30 | 0.00 | 40 | 29 | 65 | 22 | 4 | 9 | | 30.22 | 0.00 | 55 | 43 | 64 | 22 | 1 | 4 | | 30.41 | 0.00 | 56 | 48 | 74 | 28 | 0 | 1 | 13 | | 30.19 | 0.00 | 50 | 30 | 46 | 19 | 6 | 11 | | 30.22 | 0.00 | 68 | 44 | 42 | 35 | 1 | 6 | | 30.28 | 0.00 | 68 | 51 | 54 | 22 | 6 | 10 | 16 | | 30.15 | 0.00 | 50 | 32 | 49 | 19 | 3 | 7 | | 30.24 | 0.00 | 66 | 38 | 36 | 28 | 0 | 1 | | 30.28 | 0.00 | 66 | 51 | 59 | 22 | 2 | 6 | 19 | | 30.15 | 0.00 | 38 | 32 | 78 | 18 | 0 | 0 | | 30.32 | 0.00 | 47 | 39 | 74 | 28 | 0 | 0 | | 30.27 | 0.00 | 54 | 49 | 83 | 24 | 0 | 0 | 22 | | 30.16 | 0.00 | 34 | 31 | 89 | 18 | 0 | 0 | | 30.36 | 0.00 | 42 | 39 | 91 | 28 | 0 | 0 | | 30.28 | 0.00 | 51 | 48 | 91 | 16 | 0 | 3 |
| NOV 10 | | | | | | | | | | | | | | | NOV 11 | | | | | | | | | | | | | | | NOV 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | | 30.25 | 0.00 | 47 | 45 | 95 | 16 | 0 | 0 | | 30.27 | 0.00 | 54 | 37 | 53 | 02 | 3 | 11 | | 30.29 | 0.00 | 46 | 28 | 48 | 03 | 2 | 13 | 04 | | 30.23 | 0.00 | 45 | 44 | 96 | 18 | 0 | 1 | | 30.29 | 0.00 | 50 | 37 | 59 | 35 | 1 | 4 | | 30.25 | 0.00 | 46 | 25 | 45 | 01 | 3 | 11 | 07 | | 30.24 | 0.00 | 46 | 45 | 96 | 00 | 2 | 6 | | 30.32 | 0.00 | 49 | 35 | 58 | 35 | 1 | 9 | | 30.24 | 0.00 | 46 | 29 | 52 | 03 | 6 | 14 | 10 | | 30.25 | 0.00 | 60 | 52 | 75 | 25 | 0 | 2 | | 30.36 | 0.00 | 52 | 34 | 51 | 06 | 5 | 12 | | 30.22 | 0.00 | 48 | 31 | 51 | 04 | 8 | 22 | 13 | | 30.22 | 0.00 | 66 | 51 | 59 | 35 | 4 | 7 | | 30.32 | 0.00 | 51 | 35 | 55 | 03 | 2 | 10 | | 30.15 | 0.00 | 50 | 32 | 51 | 04 | 2 | 19 | 16 | | 30.22 | 0.00 | 62 | 49 | 63 | 02 | 0 | 5 | | 30.32 | 0.00 | 49 | 35 | 57 | 35 | 2 | 9 | | 30.11 | 0.00 | 51 | 29 | 44 | 05 | 4 | 13 | 19 | | 30.22 | 0.00 | 54 | 48 | 81 | 08 | 0 | 1 | | 30.33 | 0.00 | 47 | 34 | 61 | 04 | 2 | 6 | | 30.11 | 0.00 | 49 | 28 | 44 | 04 | 5 | 17 | 22 | | 30.25 | 0.00 | 56 | 45 | 67 | 03 | 2 | 7 | | 30.31 | 0.00 | 47 | 34 | 61 | 07 | 4 | 10 | | 30.09 | 0.00 | 47 | 27 | 46 | 04 | 6 | 18 |
| NOV 13 | | | | | | | | | | | | | | | NOV 14 | | | | | | | | | | | | | | | NOV 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | | 30.04 | 0.00 | 47 | 35 | 63 | 04 | 4 | 12 | | 29.94 | 0.00 | 50 | 48 | 95 | 04 | 5 | 12 | | 29.86 | 0.00 | 54 | 53 | 96 | 06 | 0 | 2 | 04 | | 30.03 | 0.00 | 47 | 35 | 63 | 03 | 3 | 10 | | 29.90 | 0.00 | 50 | 48 | 95 | 05 | 1 | 6 | | 29.85 | 0.00 | 54 | 53 | 96 | 06 | 0 | 4 | 07 | | 30.04 | 0.00 | 46 | 37 | 72 | 02 | 3 | 12 | | 29.89 | 0.00 | 52 | 49 | 92 | 05 | 3 | 14 | | 29.87 | 0.00 | 51 | 50 | 97 | 01 | 0 | 1 | 10 | | 30.05 | 0.00 | 50 | 40 | 69 | 02 | 7 | 19 | | 29.92 | 0.00 | 53 | 51 | 94 | 03 | 2 | 16 | | 29.90 | 0.00 | 59 | 55 | 88 | 02 | 0 | 5 | 13 | | 30.01 | 0.00 | 53 | 43 | 68 | 03 | 7 | 18 | | 29.88 | 0.04 | 54 | 52 | 94 | 07 | 1 | 3 | | 29.88 | 0.00 | 61 | 56 | 84 | 32 | 3 | 6 | 16 | | 29.99 | 0.00 | 54 | 43 | 66 | 03 | 5 | 19 | | 29.86 | 0.00 | 55 | 53 | 92 | 34 | 2 | 6 | | 29.88 | 0.00 | 63 | 57 | 80 | 08 | 0 | 1 | 19 | | 29.98 | 0.00 | 52 | 46 | 82 | 03 | 7 | 19 | | 29.87 | 0.00 | 53 | 52 | 96 | 05 | 1 | 5 | | 29.92 | 0.00 | 53 | 52 | 96 | 08 | 0 | 0 | 22 | | 29.95 | 0.00 | 51 | 48 | 92 | 04 | 5 | 14 | | 29.86 | 0.00 | 53 | 52 | 96 | 03 | 0 | 2 | | 29.92 | 0.00 | 48 | 47 | 97 | 01 | 0 | 0 |
| NOV 16 | | | | | | | | | | | | | | | NOV 17 | | | | | | | | | | | | | | | NOV 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | | 29.94 | 0.00 | 46 | 45 | 97 | 01 | 0 | 2 | | 30.15 | 0.00 | 38 | 33 | 84 | 09 | 1 | 2 | | 30.40 | 0.00 | 32 | 29 | 89 | 02 | 0 | 0 | 04 | | 29.97 | 0.00 | 45 | 44 | 97 | 05 | 0 | 2 | | 30.18 | 0.00 | 45 | 26 | 47 | 02 | 3 | 10 | | 30.44 | 0.00 | 33 | 30 | 89 | 07 | 0 | 0 | 07 | | 30.01 | 0.00 | 50 | 42 | 76 | 31 | 5 | 14 | | 30.24 | 0.00 | 45 | 27 | 51 | 00 | 1 | 5 | | 30.47 | 0.00 | 32 | 30 | 92 | 07 | 0 | 1 | 10 | | 30.05 | 0.00 | 51 | 39 | 62 | 33 | 4 | 15 | | 30.29 | 0.00 | 47 | 27 | 46 | 01 | 1 | 8 | | 30.47 | 0.00 | 46 | 37 | 73 | 02 | 1 | 6 | 13 | | 30.03 | 0.00 | 55 | 37 | 50 | 00 | 2 | 10 | | 30.27 | 0.00 | 54 | 29 | 38 | 08 | 4 | 6 | | 30.43 | 0.00 | 52 | 40 | 65 | 34 | 1 | 4 | 16 | | 30.04 | 0.00 | 56 | 34 | 43 | 34 | 3 | 7 | | 30.27 | 0.00 | 51 | 26 | 38 | 04 | 0 | 1 | | 30.41 | 0.00 | 52 | 42 | 68 | 03 | 0 | 2 | 19 | | 30.08 | 0.00 | 48 | 35 | 62 | 06 | 0 | 3 | | 30.34 | 0.00 | 38 | 30 | 71 | 07 | 0 | 0 | | 30.42 | 0.00 | 48 | 42 | 79 | 12 | 0 | 2 | 22 | | 30.13 | 0.00 | 42 | 34 | 73 | 06 | 0 | 0 | | 30.37 | 0.00 | 34 | 29 | 83 | 07 | 0 | 1 | | 30.41 | 0.00 | 46 | 42 | 86 | 05 | 0 | 1 |

MAXIMUM SHORT DURATION PRECIPITATION

| Time Period (minutes) | 5 | 10 | 15 | 20 | 30 | 45 | 60 | 80 | 100 | 120 | 150 | 180 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Precipitation | 0.12 | 0.19 | 0.21 | 0.24 | 0.33 | 0.36 | 0.40 | 0.47 | 0.51 | 0.52 | 0.52 | 0.57 |
| Ended: Date | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Ended: Time | 0109 | 0109 | 0109 | 0116 | 0128 | 0131 | 0127 | 0128 | 0131 | 0131 | 0128 | 0131 |

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

November 2009: Oakland, NJ

| Hour | NOV 19 | | | | | | | | | NOV 20 | | | | | | | | | NOV 21 | | | | | | | | |
|--------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|--------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|--------|----------|----------|---------------|-------------|-----------|----------|-----------|-------|------|
| | 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 |
| 01 | | 30.40 | 0.00 | 45 | 42 | 91 | 06 | 0 | 1 | | 29.99 | 0.88 | 57 | 56 | 97 | 05 | 0 | 2 | | 30.05 | 0.00 | 39 | 36 | 89 | 28 | 1 | 2 |
| 04 | | 30.36 | 0.00 | 47 | 43 | 87 | 06 | 0 | 0 | | 29.93 | 0.04 | 59 | 58 | 97 | 27 | 2 | 4 | | 30.03 | 0.00 | 37 | 35 | 92 | 30 | 1 | 3 |
| 07 | | 30.36 | 0.00 | 46 | 41 | 82 | 05 | 1 | 5 | | 29.95 | 0.00 | 56 | 51 | 84 | 29 | 9 | 18 | | 30.06 | 0.00 | 44 | 38 | 81 | 12 | 0 | 2 |
| 10 | | 30.33 | 0.00 | 52 | 44 | 74 | 03 | 1 | 6 | | 29.99 | 0.00 | 55 | 46 | 71 | 29 | 9 | 22 | | 30.09 | 0.00 | 50 | 41 | 71 | 00 | 1 | 9 |
| 13 | | 30.25 | 0.00 | 52 | 49 | 91 | 02 | 0 | 2 | | 29.99 | 0.00 | 56 | 40 | 55 | 34 | 4 | 16 | | 30.06 | 0.00 | 55 | 41 | 60 | 32 | 2 | 10 |
| 16 | | 30.20 | 0.00 | 52 | 51 | 95 | 03 | 0 | 2 | | 30.01 | 0.00 | 52 | 36 | 55 | 31 | 3 | 7 | | 30.08 | 0.00 | 54 | 40 | 61 | 33 | 4 | 9 |
| 19 | | 30.17 | 0.00 | 52 | 51 | 97 | 04 | 0 | 2 | | 30.04 | 0.00 | 43 | 36 | 78 | 26 | 0 | 1 | | 30.13 | 0.00 | 48 | 39 | 73 | 33 | 3 | 7 |
| 22 | | 30.10 | 0.00 | 54 | 53 | 97 | 11 | 1 | 3 | | 30.06 | 0.00 | 42 | 37 | 81 | 17 | 1 | 4 | | 30.15 | 0.00 | 44 | 38 | 82 | 35 | 1 | 3 |
| NOV 22 | | | | | | | | | NOV 23 | | | | | | | | | NOV 24 | | | | | | | | | |
| 01 | | 30.17 | 0.00 | 38 | 36 | 92 | 07 | 0 | 2 | | 30.41 | 0.00 | 44 | 38 | 81 | 04 | 4 | 9 | | 30.22 | 0.00 | 46 | 43 | 91 | 04 | 0 | 4 |
| 04 | | 30.21 | 0.00 | 36 | 35 | 95 | 07 | 0 | 0 | | 30.42 | 0.00 | 42 | 36 | 79 | 04 | 3 | 8 | | 30.20 | 0.00 | 46 | 44 | 90 | 04 | 0 | 3 |
| 07 | | 30.27 | 0.00 | 35 | 34 | 96 | 07 | 0 | 1 | | 30.43 | 0.00 | 43 | 36 | 78 | 04 | 2 | 6 | | 30.19 | 0.00 | 46 | 43 | 88 | 00 | 0 | 5 |
| 10 | | 30.33 | 0.00 | 50 | 40 | 71 | 33 | 1 | 6 | | 30.43 | 0.00 | 45 | 38 | 75 | 05 | 2 | 11 | | 30.21 | 0.00 | 51 | 44 | 78 | 02 | 3 | 7 |
| 13 | | 30.30 | 0.00 | 52 | 39 | 62 | 00 | 2 | 9 | | 30.34 | 0.00 | 50 | 40 | 71 | 02 | 2 | 8 | | 30.14 | 0.00 | 57 | 47 | 70 | 06 | 4 | 7 |
| 16 | | 30.32 | 0.00 | 50 | 39 | 64 | 00 | 1 | 4 | | 30.33 | 0.00 | 49 | 42 | 76 | 04 | 3 | 10 | | 30.13 | 0.00 | 54 | 46 | 74 | 33 | 0 | 4 |
| 19 | | 30.37 | 0.00 | 41 | 37 | 86 | 04 | 0 | 0 | | 30.32 | 0.00 | 47 | 42 | 83 | 01 | 2 | 6 | | 30.13 | 0.00 | 45 | 42 | 90 | 06 | 0 | 0 |
| 22 | | 30.38 | 0.00 | 41 | 38 | 88 | 04 | 1 | 3 | | 30.27 | 0.00 | 46 | 43 | 89 | 02 | 1 | 10 | | 30.13 | 0.00 | 41 | 40 | 95 | 06 | 0 | 1 |
| NOV 25 | | | | | | | | | NOV 26 | | | | | | | | | NOV 27 | | | | | | | | | |
| 01 | | 30.12 | 0.00 | 44 | 43 | 96 | 06 | 0 | 0 | | 29.92 | 0.00 | 49 | 48 | 97 | 05 | 0 | 0 | | 29.61 | 0.00 | 46 | 44 | 92 | 06 | 0 | 1 |
| 04 | | 30.08 | 0.00 | 45 | 44 | 96 | 06 | 0 | 0 | | 29.92 | 0.00 | 48 | 47 | 97 | 05 | 0 | 0 | | 29.54 | 0.00 | 45 | 43 | 91 | 00 | 4 | 11 |
| 07 | | 30.08 | 0.00 | 47 | 46 | 96 | 01 | 0 | 3 | | 29.93 | 0.00 | 47 | 46 | 97 | 05 | 0 | 0 | | 29.49 | 0.00 | 45 | 41 | 87 | 34 | 2 | 5 |
| 10 | | 30.06 | 0.00 | 47 | 45 | 92 | 09 | 0 | 2 | | 29.92 | 0.00 | 49 | 48 | 97 | 05 | 0 | 0 | | 29.46 | 0.00 | 46 | 38 | 75 | 34 | 2 | 14 |
| 13 | | 29.98 | 0.00 | 48 | 46 | 95 | 12 | 0 | 0 | | 29.83 | 0.00 | 55 | 47 | 74 | 03 | 1 | 5 | | 29.38 | 0.00 | 45 | 36 | 69 | 33 | 4 | 22 |
| 16 | | 29.93 | 0.00 | 48 | 47 | 96 | 09 | 0 | 1 | | 29.78 | 0.00 | 53 | 47 | 78 | 08 | 0 | 4 | | 29.43 | 0.00 | 43 | 33 | 68 | 30 | 9 | 23 |
| 19 | | 29.94 | 0.00 | 48 | 47 | 97 | 04 | 0 | 1 | | 29.76 | 0.00 | 46 | 44 | 94 | 07 | 0 | 0 | | 29.44 | 0.00 | 43 | 30 | 61 | 32 | 5 | 25 |
| 22 | | 29.94 | 0.00 | 48 | 48 | 97 | 04 | 0 | 0 | | 29.69 | 0.00 | 47 | 45 | 92 | 07 | 0 | 2 | | 29.45 | 0.00 | 43 | 29 | 59 | 29 | 3 | 20 |
| NOV 28 | | | | | | | | | NOV 29 | | | | | | | | | NOV 30 | | | | | | | | | |
| 01 | | 29.44 | 0.00 | 42 | 31 | 66 | 26 | 10 | 17 | | 29.85 | 0.00 | 41 | 32 | 70 | 28 | 6 | 12 | | 29.67 | 0.00 | 43 | 39 | 86 | 21 | 0 | 1 |
| 04 | | 29.45 | 0.00 | 45 | 36 | 71 | 28 | 8 | 18 | | 29.89 | 0.00 | 37 | 30 | 76 | 20 | 0 | 4 | | 29.64 | 0.00 | 44 | 40 | 88 | 21 | 0 | 1 |
| 07 | | 29.53 | 0.00 | 45 | 35 | 67 | 33 | 6 | 19 | | 29.92 | 0.00 | 31 | 28 | 90 | 20 | 0 | 0 | | 29.62 | 0.00 | 42 | 39 | 91 | 20 | 0 | 0 |
| 10 | | 29.65 | 0.00 | 48 | 33 | 57 | 32 | 10 | 24 | | 29.92 | 0.00 | 44 | 32 | 64 | 21 | 1 | 4 | | 29.64 | 0.00 | 47 | 44 | 87 | 24 | 0 | 1 |
| 13 | | 29.69 | 0.00 | 48 | 33 | 55 | 31 | 5 | 21 | | 29.83 | 0.00 | 57 | 34 | 43 | 17 | 2 | 5 | | 29.60 | 0.00 | 46 | 42 | 88 | 32 | 2 | 11 |
| 16 | | 29.75 | 0.00 | 47 | 31 | 55 | 28 | 6 | 15 | | 29.79 | 0.00 | 56 | 38 | 50 | 21 | 1 | 3 | | 29.64 | 0.00 | 43 | 39 | 86 | 32 | 5 | 13 |
| 19 | | 29.80 | 0.00 | 45 | 32 | 60 | 31 | 7 | 14 | | 29.79 | 0.00 | 43 | 37 | 80 | 22 | 0 | 0 | | 29.71 | 0.00 | 41 | 33 | 74 | 34 | 9 | 18 |
| 22 | | 29.83 | 0.00 | 42 | 32 | 68 | 27 | 4 | 9 | | 29.74 | 0.00 | 40 | 37 | 87 | 22 | 0 | 1 | | 29.74 | 0.00 | 39 | 31 | 73 | 34 | 2 | 11 |

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

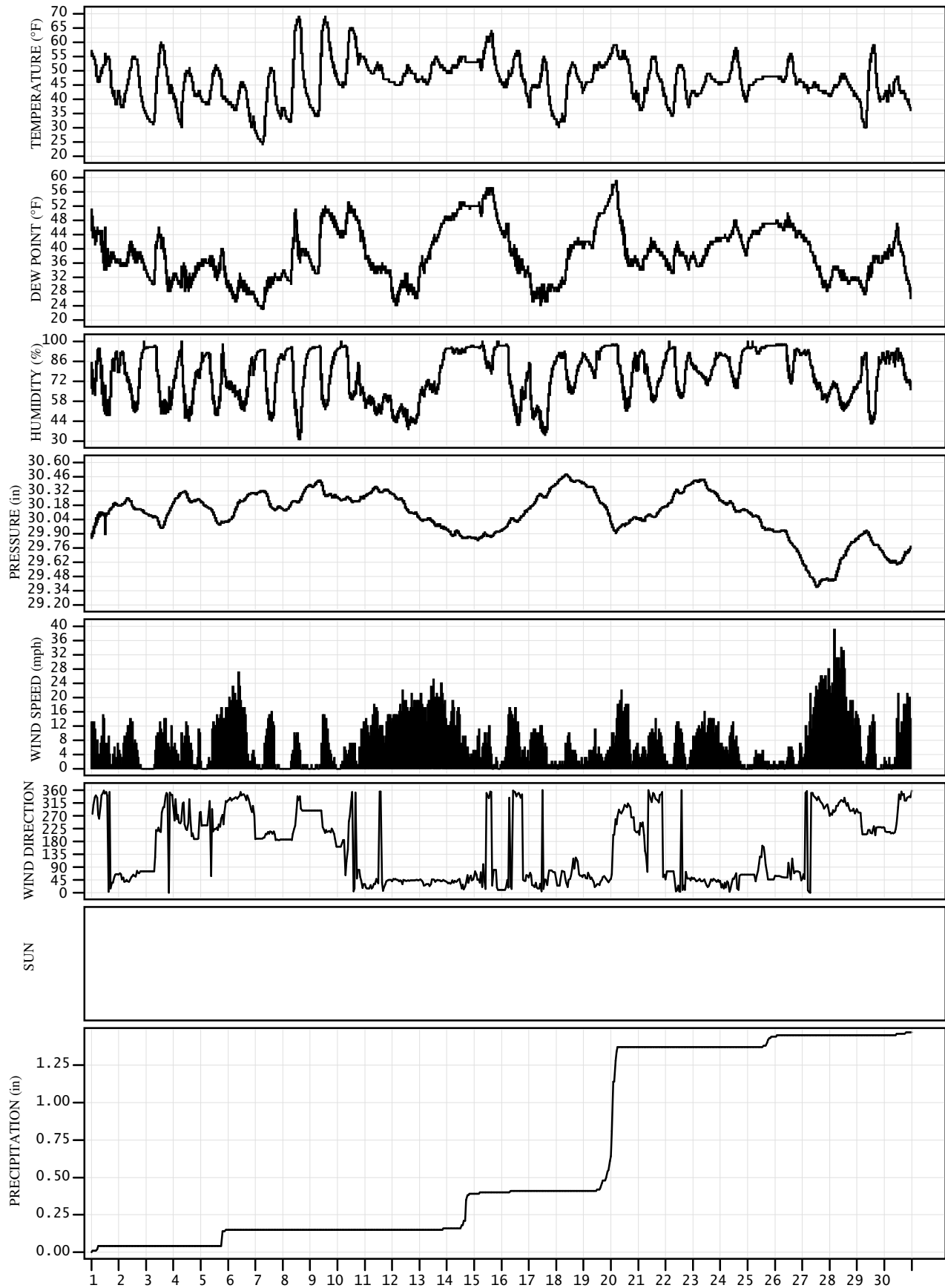
| Hour | Averages | | | | | | Resultant Wind | |
|------|----------|----------|-------------|-----------|----------|------------|----------------|-------|
| | Sunshine | Pressure | Temperature | Dew Point | Humidity | Wind Speed | Direction | Speed |
| 01 | | 30.080 | 43 | 38 | 84 | 1.4 | 34 | 0.6 |
| 04 | | 30.081 | 43 | 38 | 84 | 1.3 | 34 | 0.9 |
| 07 | | 30.101 | 42 | 37 | 84 | 1.6 | 34 | 1.2 |
| 10 | | 30.117 | 49 | 40 | 71 | 2.7 | 36 | 1.5 |
| 13 | | 30.067 | 54 | 40 | 62 | 2.9 | 35 | 1.1 |
| 16 | | 30.062 | 53 | 39 | 62 | 2.2 | 33 | 1.3 |
| 19 | | 30.085 | 46 | 39 | 78 | 1.5 | 36 | 1.1 |
| 22 | | 30.088 | 44 | 38 | 82 | 1.1 | 2 | 0.6 |

HOURLY PRECIPITATION (Water Equivalent)
November 2009: Oakland, NJ

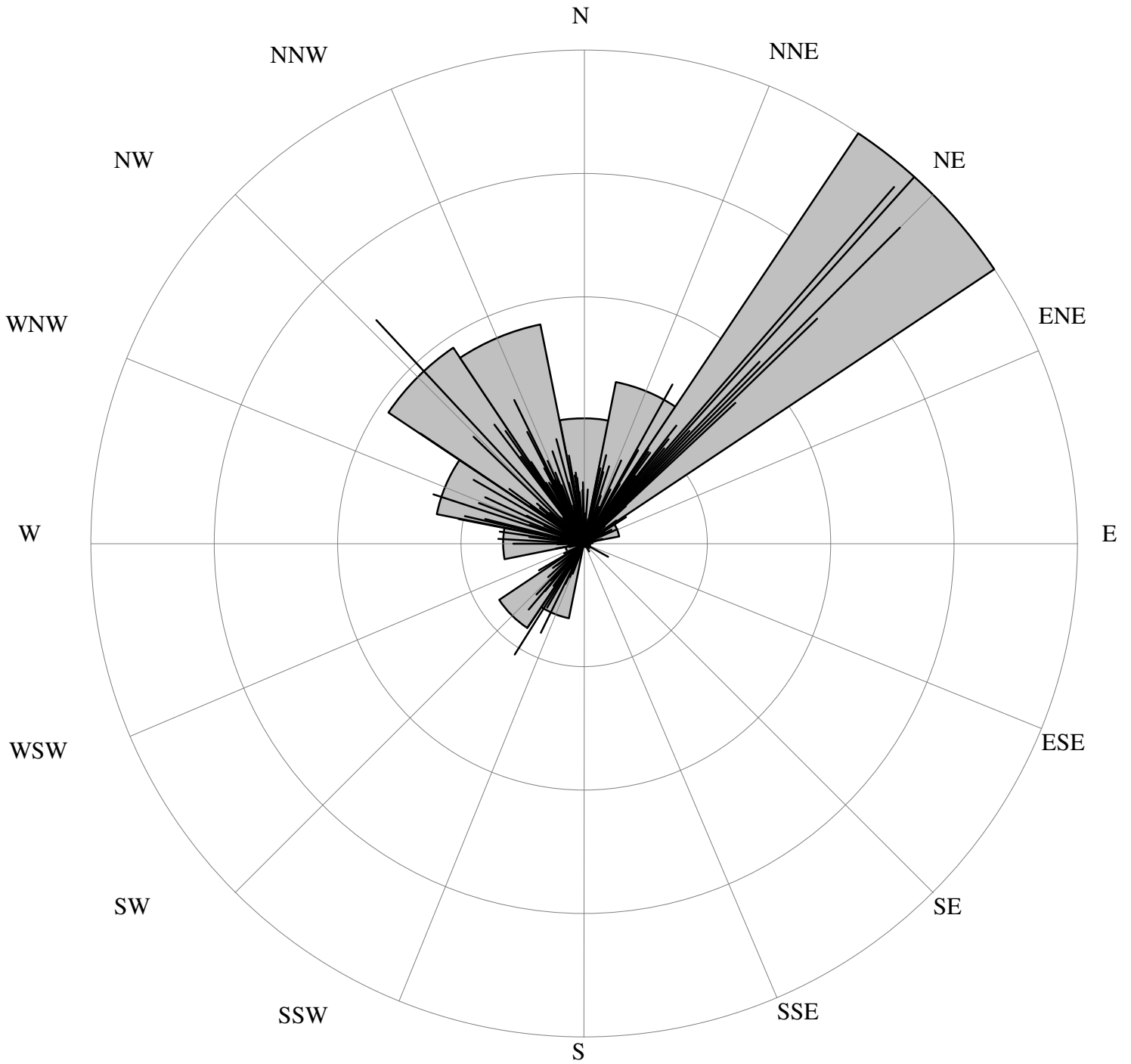
| Date | A.M. Hour Ending at | | | | | | | | | | | | P.M. Hour Ending at | | | | | | | | | | | | Date |
|------|---------------------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 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 | | | | 0.01 | 0.02 | | | | | | | | | | | | | | | | | | 01 | |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | 02 | |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | 03 | |
| 04 | | | | | | | | | | | | | | | | | | | | | | | | 04 | |
| 05 | | | | | | | | | | | | | | | | | | 0.10 | | | 0.01 | | | 05 | |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | 06 | |
| 07 | | | | | | | | | | | | | | | | | | | | | | | | 07 | |
| 08 | | | | | | | | | | | | | | | | | | | | | | | | 08 | |
| 09 | | | | | | | | | | | | | | | | | | | | | | | | 09 | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | 12 | |
| 13 | | | | | | | | | | | | 0.02 | | 0.03 | | 0.14 | 0.03 | | 0.01 | | 0.01 | | | 13 | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | 14 | |
| 15 | | | | | 0.01 | | | | | | | | | | | | | | | | | | | 15 | |
| 16 | | | | | | | | 0.01 | | | | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | 17 | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | 18 | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | 19 | |
| 20 | 0.17 | 0.33 | | 0.14 | 0.06 | 0.03 | | | | | 0.01 | | | 0.01 | 0.03 | 0.02 | | | 0.02 | 0.04 | 0.01 | 0.06 | 0.03 | 20 | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | 21 | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | 22 | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | 23 | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | 24 | |
| 25 | | | | | | | | | | | | | | 0.01 | | 0.02 | 0.02 | 0.01 | | 0.01 | | | | 25 | |
| 26 | | 0.01 | | | | | | | | | | | | | | | | | | | | | | 26 | |
| 27 | | | | | | | | | | | | | | | | | | | | | | | | 27 | |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | 28 | |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | 29 | |
| 30 | | | | | | | | | | | 0.01 | | | | | | | | 0.01 | | | | | 30 | |
| Sum | 0.18 | 0.34 | 0.00 | 0.14 | 0.08 | 0.05 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.04 | 0.03 | 0.18 | 0.05 | 0.12 | 0.03 | 0.06 | 0.02 | 0.06 | 0.03 | 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
November 2009: Oakland, NJ



Wind Rose: November 2009
Oakland, NJ



Maximum direction of wind: 53.5 miles from 42°
Maximum sector of wind: 364.3 miles from NE
1270.9 total miles of wind