

1994

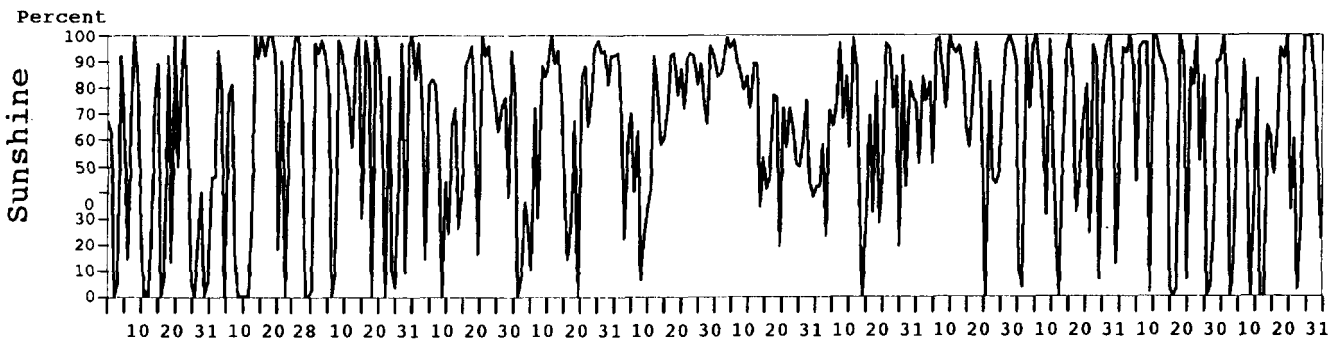
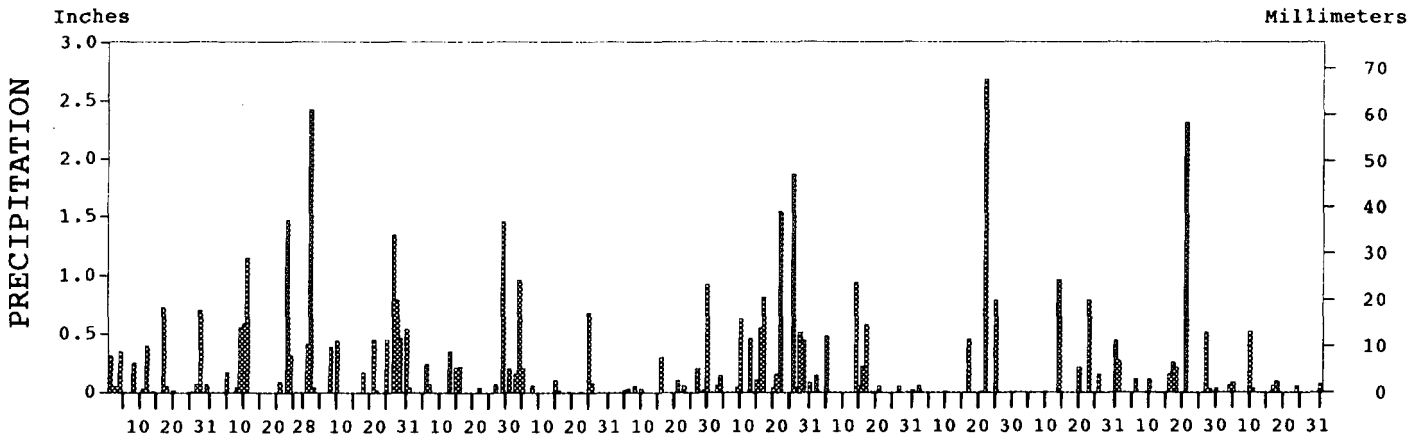
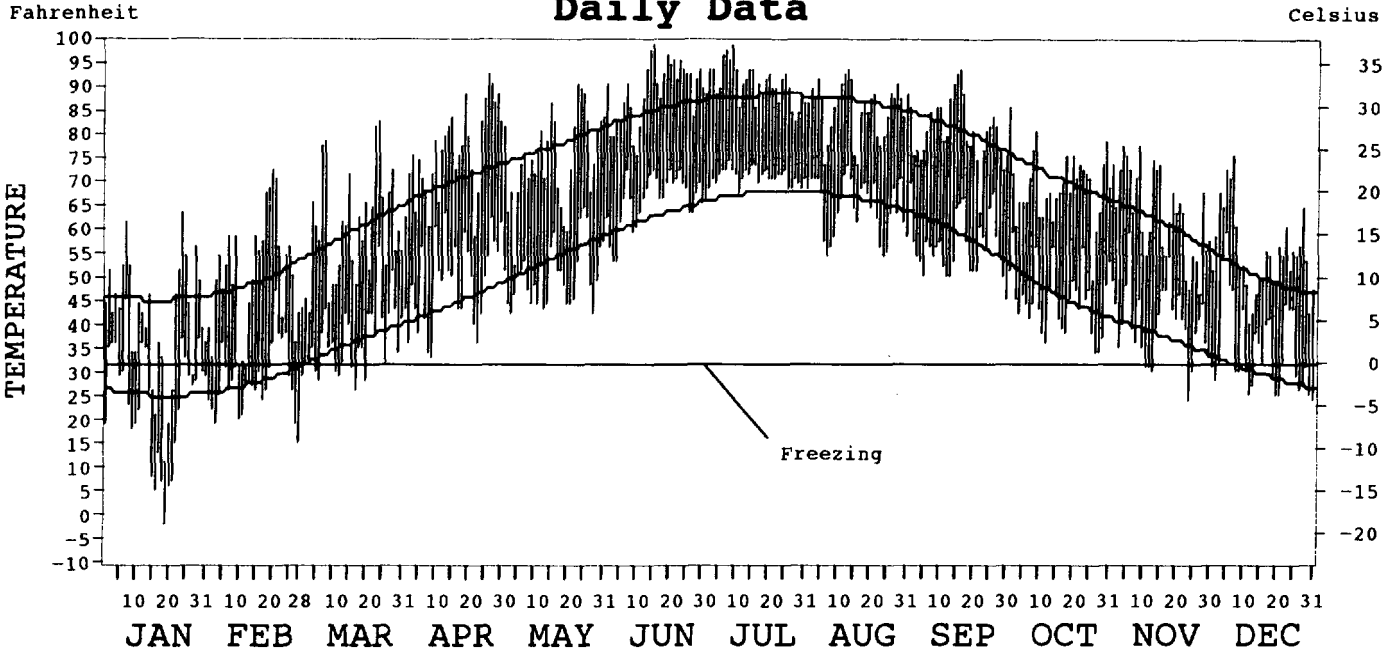
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-5361

## RICHMOND, VIRGINIA (RIC)

### Daily Data



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA

*Kenneth D. Haden*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 1994

## RICHMOND, VIRGINIA

LATITUDE: 37° 30' N LONGITUDE: 77° 20' W ELEVATION: FT. GRND 164 BARO 178 TIME ZONE: EASTERN WBAN: 13740

|                                 | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    | OCT    | NOV    | DEC    | YEAR      |
|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|
| <b>TEMPERATURE °F</b>           |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Averages                        |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Daily Maximum                  | 41.9   | 51.3   | 60.4   | 76.7   | 75.3   | 89.5   | 90.9   | 85.7   | 81.2   | 69.4   | 64.0   | 55.6   | 70.2      |
| -Daily Minimum                  | 24.9   | 29.1   | 37.4   | 49.6   | 51.0   | 66.5   | 71.3   | 65.0   | 57.2   | 45.8   | 41.2   | 35.6   | 47.9      |
| -Monthly                        | 33.4   | 40.2   | 48.9   | 63.2   | 63.2   | 78.0   | 81.1   | 75.4   | 69.2   | 57.6   | 52.6   | 45.6   | 59.0      |
| -Monthly Dewpt.                 | 24.8   | 27.4   | 33.9   | 46.0   | 49.6   | 64.6   | 70.8   | 66.2   | 57.4   | 48.0   | 40.0   | 34.3   | 46.9      |
| Extremes                        |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Highest                        | 64     | 73     | 83     | 93     | 91     | 99     | 99     | 94     | 94     | 86     | 78     | 76     | 99        |
| -Date                           | 24     | 20     | 24     | 26     | 23     | 15     | 9      | 13     | 16     | 1      | 9      | 7      | JUL 9     |
| -Lowest                         | -1     | 16     | 27     | 34     | 43     | 54     | 67     | 55     | 46     | 35     | 25     | 25     | -1        |
| -Date                           | 19     | 28     | 17     | 9      | 28     | 4      | 1      | 24     | 30     | 28     | 24     | 31     | JAN 19    |
| <b>DEGREE DAYS BASE 65 °F</b>   |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Heating                         | 973    | 687    | 497    | 130    | 120    | 0      | 0      | 0      | 11     | 232    | 365    | 595    | 3610      |
| Cooling                         | 0      | 0      | 5      | 80     | 70     | 396    | 507    | 332    | 142    | 9      | 2      | 2      | 1545      |
| <b>% OF POSSIBLE SUNSHINE</b>   |        |        |        |        |        |        |        |        |        |        |        |        |           |
|                                 | 43     | 60     | 57     | 68     | 62     | 69     | 72     | 61     | 76     | 64     | 65     | 57     | 63        |
| <b>AVG. SKY COVER (tenths)</b>  |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Sunrise - Sunset                | 7.1    | 5.8    | 6.4    | 5.1    | 6.1    | 6.0    | 6.5    | 5.9    | 5.2    | 5.7    | 6.2    | 6.1    | 6.0       |
| Midnight - Midnight             | 6.7    | 5.3    | 6.2    | 4.9    | 5.5    | 5.9    | 6.1    | 5.4    | 4.6    | 5.0    | 5.5    | 6.0    | 5.6       |
| <b>NUMBER OF DAYS:</b>          |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Sunrise to Sunset               |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Clear                          | 9      | 10     | 7      | 11     | 8      | 7      | 5      | 8      | 11     | 11     | 9      | 9      | 105       |
| -Partly Cloudy                  | 2      | 6      | 8      | 11     | 11     | 11     | 13     | 11     | 11     | 8      | 8      | 6      | 106       |
| -Cloudy                         | 20     | 12     | 16     | 8      | 12     | 12     | 13     | 12     | 8      | 12     | 13     | 16     | 154       |
| Precipitation                   |        |        |        |        |        |        |        |        |        |        |        |        |           |
| .01 inches or more              | 15     | 8      | 13     | 9      | 11     | 10     | 16     | 10     | 6      | 6      | 10     | 8      | 122       |
| Snow,Ice Pellets,Hail           |        |        |        |        |        |        |        |        |        |        |        |        |           |
| 1.0 inches or more              | 1      | 1      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 2         |
| Thunderstorms                   | 0      | 0      | 4      | 3      | 3      | 7      | 15     | 5      | 2      | 1      | 2      | 0      | 42        |
| Heavy Fog, visibility           |        |        |        |        |        |        |        |        |        |        |        |        |           |
| 1/4 mile or less                | 4      | 4      | 1      | 2      | 0      | 0      | 2      | 1      | 2      | 2      | 4      | 3      | 25        |
| Temperature F °                 |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Maximum                        |        |        |        |        |        |        |        |        |        |        |        |        |           |
| 90° and above                   | 0      | 0      | 0      | 2      | 2      | 18     | 20     | 7      | 3      | 0      | 0      | 0      | 52        |
| 32° and below                   | 6      | 2      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 8         |
| -Minimum                        |        |        |        |        |        |        |        |        |        |        |        |        |           |
| 32° and below                   | 22     | 22     | 8      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 5      | 16     | 73        |
| 0° and below                    | 1      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1         |
| <b>AVG. STATION PRESS. (mb)</b> |        |        |        |        |        |        |        |        |        |        |        |        |           |
|                                 | 1016.3 | 1016.3 | 1007.8 | 1012.2 | 1009.3 | 1008.8 | 1011.2 | 1012.2 | 1011.5 | 1013.7 | 1014.6 | 1016.3 | 1012.5    |
| <b>RELATIVE HUMIDITY (%)</b>    |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Hour 01                         | 79     | 76     | 68     | 69     | 78     | 82     | 90     | 90     | 88     | 88     | 78     | 77     | 80        |
| Hour 07 (Local Time)            | 83     | 80     | 74     | 76     | 74     | 78     | 87     | 89     | 88     | 90     | 81     | 81     | 82        |
| Hour 13                         | 62     | 51     | 51     | 40     | 48     | 48     | 59     | 58     | 46     | 53     | 49     | 52     | 51        |
| Hour 19                         | 69     | 61     | 57     | 50     | 56     | 64     | 73     | 75     | 69     | 78     | 67     | 68     | 66        |
| <b>PRECIPITATION (inches):</b>  |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Water Equivalent                |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Total                          | 3.10   | 4.38   | 7.92   | 2.70   | 2.49   | 1.73   | 7.46   | 2.54   | 3.99   | 2.56   | 3.99   | 0.95   | 43.81     |
| -Greatest (24 hrs)              | 0.78   | 1.74   | 2.55   | 1.46   | 1.07   | 0.94   | 1.87   | 0.99   | 2.69   | 0.96   | 2.31   | 0.52   | 2.69      |
| -Date                           | 17-18  | 10-11  | 1-2    | 29     | 3-4    | 29-30  | 26     | 14-15  | 21-22  | 14     | 21     | 10-11  | SEP 21-22 |
| Snow,Ice pellets,Hail           |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Total                          | 2.2    | 1.7    | 0.7    | 0.0    | T      | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | T      | 4.6       |
| -Greatest (24 hrs)              | 1.2    | 1.6    | 0.4    | 0.0    | T      | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | T      | 1.6       |
| -Date                           | 18     | 10-11  | 3      |        | 25     |        |        |        |        |        |        | 31     | FEB 10-11 |
| <b>WIND:</b>                    |        |        |        |        |        |        |        |        |        |        |        |        |           |
| Resultant                       |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Direction (!!)                 | 311    | 272    | 283    | 200    | 295    | 187    | 188    | 184    | 318    | 007    | 291    | 349    | 246       |
| -Speed (mph)                    | 1.8    | 1.4    | 2.4    | 4.3    | 1.9    | 3.9    | 4.6    | 2.5    | 1.8    | 1.8    | 1.4    | 3.5    | 1.1       |
| Average Speed (mph)             | 8.4    | 8.5    | 10.3   | 10.0   | 9.2    | 8.8    | 7.9    | 7.7    | 7.3    | 6.3    | 7.8    | 7.5    | 8.3       |
| Fastest Obs. 1 Min.             |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Direction (!!)                 | 22     | 29     | 32     | 33     | 27     | 21     | 16     | 29     | 01     | 32     | 36     | 33     | 21        |
| -Speed (mph)                    | 29     | 23     | 29     | 24     | 28     | 30     | 26     | 28     | 22     | 20     | 29     | 24     | 30        |
| -Date                           | 4      | 26     | 16     | 29     | 25     | 29     | 27     | 14     | 22     | 20     | 10     | 24     | JUN 29    |
| Peak Gust                       |        |        |        |        |        |        |        |        |        |        |        |        |           |
| -Direction (!!)                 | SW     | NW     | NW     | NW     | W      | S      | SW     | NW     | N      | NW     | N      | NW     | S         |
| -Speed (mph)                    | 39     | 36     | 46     | 45     | 45     | 47     | 46     | 43     | 44     | 35     | 39     | 39     | 47        |
| -Date                           | 4      | 26     | 18     | 29     | 25     | 27     | 10     | 14     | 22     | 20     | 10     | 24     | JUN 27    |

(!!) See Reference Notes on Page 6B

# NORMALS, MEANS, AND EXTREMES

## RICHMOND, VIRGINIA

LATITUDE: 37° 30' N    LONGITUDE: 77° 20' W    ELEVATION: FT. GRND 164 BARO 178    TIME ZONE: EASTERN    WBAN: 13740

|                                   | (a) | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    | OCT    | NOV    | DEC    | YEAR     |
|-----------------------------------|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| <b>TEMPERATURE °F</b>             |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Normals                           |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Daily Maximum                    |     | 45.7   | 49.2   | 59.5   | 70.0   | 77.8   | 85.1   | 88.4   | 87.1   | 80.9   | 70.7   | 61.3   | 50.2   | 68.8     |
| -Daily Minimum                    |     | 25.7   | 28.1   | 36.3   | 44.6   | 54.2   | 62.7   | 67.5   | 66.4   | 59.0   | 46.5   | 37.9   | 29.9   | 46.6     |
| -Monthly                          |     | 35.7   | 38.7   | 48.0   | 57.3   | 66.0   | 73.9   | 78.0   | 76.8   | 70.0   | 58.6   | 49.6   | 40.1   | 57.7     |
| Extremes                          |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Record Highest                   | 65  | 80     | 83     | 93     | 96     | 100    | 104    | 105    | 102    | 103    | 99     | 86     | 80     | 105      |
| -Year                             |     | 1950   | 1932   | 1938   | 1990   | 1941   | 1952   | 1977   | 1983   | 1954   | 1941   | 1993   | 1971   | JUL 1977 |
| -Record Lowest                    | 65  | -12    | -10    | 11     | 23     | 31     | 40     | 51     | 46     | 35     | 21     | 10     | -1     | -12      |
| -Year                             |     | 1940   | 1936   | 1960   | 1985   | 1956   | 1967   | 1965   | 1934   | 1974   | 1962   | 1933   | 1942   | JAN 1940 |
| <b>NORMAL DEGREE DAYS:</b>        |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Heating (base 65 °F)              |     | 908    | 736    | 527    | 241    | 61     | 0      | 0      | 0      | 23     | 233    | 462    | 772    | 3963     |
| Cooling (base 65 °F)              |     | 0      | 0      | 0      | 10     | 92     | 270    | 403    | 366    | 173    | 34     | 0      | 0      | 1348     |
| <b>% OF POSSIBLE SUNSHINE</b>     | 44  | 54     | 58     | 61     | 66     | 66     | 70     | 68     | 66     | 65     | 63     | 59     | 54     | 63       |
| <b>MEAN SKY COVER(tenths)</b>     |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Sunrise - Sunset                  | 49  | 6.5    | 6.2    | 6.2    | 6.1    | 6.3    | 6.0    | 6.2    | 6.0    | 5.8    | 5.4    | 5.8    | 6.2    | 6.1      |
| <b>MEAN NUMBER OF DAYS:</b>       |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Sunrise to Sunset                 |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Clear                            | 49  | 8.3    | 8.2    | 8.2    | 7.9    | 7.0    | 6.8    | 6.9    | 7.2    | 9.2    | 11.5   | 9.3    | 9.4    | 99.9     |
| -Partly Cloudy                    | 49  | 6.6    | 6.4    | 8.2    | 9.2    | 10.1   | 11.9   | 11.7   | 11.6   | 8.7    | 7.3    | 7.7    | 6.3    | 105.8    |
| -Cloudy                           | 49  | 16.1   | 13.6   | 14.6   | 12.9   | 13.9   | 11.3   | 12.5   | 12.2   | 12.1   | 12.1   | 13.0   | 15.2   | 159.5    |
| Precipitation                     |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| .01 inches or more                | 57  | 10.4   | 9.2    | 10.8   | 9.4    | 10.7   | 9.4    | 11.2   | 9.7    | 8.1    | 7.3    | 8.3    | 8.9    | 113.4    |
| Snow,Ice Pellets,Hail             |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| 1.0 inches or more                | 57  | 1.3    | 1.1    | 0.6    | 0.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.1    | 0.6    | 3.8      |
| Thunderstorms                     | 57  | 0.2    | 0.4    | 1.6    | 2.5    | 5.3    | 6.7    | 8.8    | 6.5    | 2.9    | 1.0    | 0.6    | 0.2    | 36.7     |
| Heavy Fog Visibility              |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| 1/4 mile or less                  | 65  | 2.7    | 2.1    | 1.7    | 1.6    | 1.8    | 1.5    | 2.1    | 2.4    | 2.9    | 3.3    | 2.2    | 2.8    | 27.1     |
| Temperature °F                    |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Maximum                          |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| 90° and above                     | 65  | 0.0    | 0.0    | 0.1    | 0.8    | 2.7    | 9.5    | 14.2   | 10.9   | 4.4    | 0.4    | 0.0    | 0.0    | 43.0     |
| 32° and below                     | 65  | 3.2    | 1.4    | 0.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.*    | 1.6    | 6.5      |
| -Minimum                          |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| 32° and below                     | 65  | 21.3   | 18.9   | 10.4   | 2.1    | 0.1    | 0.0    | 0.0    | 0.0    | 0.0    | 1.7    | 9.9    | 20.0   | 84.3     |
| 0° and below                      | 65  | 0.4    | 0.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.*    | 0.5      |
| <b>AV. STATION PRES.(mb)</b>      | 22  | 1013.1 | 1012.7 | 1010.7 | 1009.4 | 1009.4 | 1009.5 | 1010.1 | 1011.3 | 1012.3 | 1013.3 | 1013.5 | 1013.8 | 1011.6   |
| <b>RELATIVE HUMIDITY (%)</b>      |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Hour 01                           | 60  | 77     | 74     | 73     | 74     | 83     | 86     | 88     | 90     | 90     | 87     | 80     | 77     | 82       |
| Hour 07 (Local Time)              | 60  | 80     | 79     | 78     | 76     | 80     | 82     | 85     | 89     | 90     | 89     | 84     | 81     | 83       |
| Hour 13                           | 60  | 57     | 53     | 49     | 45     | 51     | 53     | 56     | 57     | 56     | 53     | 51     | 55     | 53       |
| Hour 19                           | 60  | 68     | 63     | 58     | 55     | 64     | 67     | 71     | 75     | 78     | 76     | 69     | 70     | 68       |
| <b>PRECIPITATION (ins):</b>       |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Water Equivalent                  |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Normal                           |     | 3.24   | 3.16   | 3.61   | 2.96   | 3.84   | 3.62   | 5.03   | 4.40   | 3.34   | 3.53   | 3.17   | 3.26   | 43.16    |
| -Maximum Monthly                  | 57  | 7.97   | 5.97   | 8.65   | 7.31   | 8.87   | 9.24   | 18.87  | 14.10  | 10.98  | 9.39   | 7.64   | 7.07   | 18.87    |
| -Year                             |     | 1978   | 1979   | 1984   | 1987   | 1972   | 1938   | 1945   | 1955   | 1975   | 1971   | 1959   | 1973   | JUL 1945 |
| -Minimum Monthly                  | 57  | 0.64   | 0.48   | 0.94   | 0.64   | 0.87   | 0.38   | 0.51   | 0.52   | 0.26   | 0.30   | 0.36   | 0.40   | 0.26     |
| -Year                             |     | 1981   | 1978   | 1966   | 1963   | 1965   | 1980   | 1983   | 1943   | 1978   | 1963   | 1965   | 1980   | SEP 1978 |
| -Maximum in 24 hrs                | 57  | 3.31   | 2.67   | 3.43   | 2.97   | 3.08   | 4.61   | 5.73   | 8.79   | 4.02   | 6.50   | 4.07   | 3.16   | 8.79     |
| -Year                             |     | 1962   | 1979   | 1992   | 1987   | 1981   | 1963   | 1969   | 1955   | 1985   | 1961   | 1956   | 1958   | AUG 1955 |
| Snow,Ice Pellets,Hail             |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Maximum Monthly                  | 57  | 28.5   | 21.4   | 19.7   | 2.0    | T      | 0.0    | 0.0    | 0.0    | 0.0    | T      | 7.3    | 12.5   | 28.5     |
| -Year                             |     | 1940   | 1983   | 1960   | 1940   | 1994   |        |        |        |        | 1979   | 1953   | 1958   | JAN 1940 |
| -Maximum in 24 hrs                | 57  | 21.6   | 16.8   | 12.1   | 2.0    | T      | 0.0    | 0.0    | 0.0    | 0.0    | T      | 7.3    | 7.5    | 21.6     |
| -Year                             |     | 1940   | 1983   | 1962   | 1940   | 1994   |        |        |        |        | 1979   | 1953   | 1966   | JAN 1940 |
| <b>WIND:</b>                      |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Mean Speed (mph)                  | 46  | 8.1    | 8.7    | 9.2    | 9.0    | 7.9    | 7.4    | 6.9    | 6.5    | 6.7    | 7.0    | 7.6    | 7.8    | 7.7      |
| Prevailing Direction through 1963 |     | S      | NNE    | W      | S      | SSW    | S      | SSW    | S      | S      | NNE    | S      | SW     | S        |
| Fastest Obs. 1 Min.               |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Direction (!!)                   | 9   | 23     | 32     | 27     | 21     | 23     | 30     | 23     | 18     | 36     | 36     | 27     | 21     | 23       |
| -Speed (mph)                      |     | 30     | 32     | 41     | 29     | 46     | 32     | 40     | 30     | 37     | 29     | 32     | 32     | 46       |
| -Year                             |     | 1992   | 1987   | 1989   | 1990   | 1989   | 1987   | 1992   | 1991   | 1989   | 1990   | 1989   | 1988   | MAY 1989 |
| Peak Gust                         |     |        |        |        |        |        |        |        |        |        |        |        |        |          |
| -Direction (!!)                   | 10  | NW     | NW     | W      | N      | SW     | NW     | N      | SW     | N      | N      | SW     | SW     | SW       |
| -Speed (mph)                      | 10  | 48     | 48     | 67     | 49     | 79     | 53     | 61     | 48     | 49     | 43     | 54     | 49     | 79       |
| -Date                             |     | 1985   | 1987   | 1989   | 1992   | 1989   | 1987   | 1986   | 1992   | 1989   | 1990   | 1988   | 1988   | MAY 1989 |

(!!) See Reference Notes on Page 6B

**PRECIPITATION (inches)**

**RICHMOND, VIRGINIA**

| YEAR        | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL   | AUG   | SEP   | OCT  | NOV  | DEC  | ANNUAL |
|-------------|------|------|------|------|------|------|-------|-------|-------|------|------|------|--------|
| 1965        | 2.51 | 2.77 | 3.68 | 2.13 | 0.87 | 3.39 | 6.33  | 0.81  | 4.81  | 1.38 | 0.36 | 0.72 | 29.76  |
| 1966        | 4.58 | 3.80 | 0.94 | 2.18 | 2.58 | 2.54 | 4.07  | 1.31  | 5.06  | 4.81 | 1.31 | 3.07 | 36.25  |
| 1967        | 1.50 | 3.35 | 2.34 | 1.32 | 3.71 | 3.58 | 5.00  | 6.65  | 0.95  | 1.00 | 1.76 | 6.48 | 37.64  |
| 1968        | 2.53 | 0.98 | 4.00 | 2.93 | 3.13 | 2.89 | 3.41  | 3.71  | 1.78  | 1.59 | 3.87 | 2.28 | 33.10  |
| 1969        | 2.04 | 3.95 | 3.95 | 2.60 | 3.32 | 4.36 | 13.90 | 9.31  | 3.89  | 1.88 | 1.87 | 5.26 | 56.33  |
| 1970        | 1.32 | 2.37 | 3.70 | 2.84 | 1.84 | 1.12 | 4.74  | 1.69  | 1.02  | 1.55 | 3.10 | 3.00 | 28.29  |
| 1971        | 1.84 | 4.37 | 2.68 | 1.76 | 6.82 | 4.10 | 4.40  | 3.73  | 2.35  | 9.39 | 2.76 | 0.75 | 44.95  |
| 1972        | 1.43 | 5.15 | 2.11 | 3.35 | 8.87 | 8.82 | 5.80  | 3.84  | 3.35  | 7.89 | 5.82 | 2.91 | 59.34  |
| 1973        | 2.66 | 3.11 | 3.44 | 4.58 | 3.56 | 2.45 | 3.64  | 4.34  | 1.82  | 2.56 | 1.27 | 7.07 | 40.50  |
| 1974        | 3.21 | 2.54 | 3.79 | 1.58 | 3.02 | 1.80 | 2.25  | 6.84  | 4.83  | 0.39 | 1.23 | 4.22 | 35.70  |
| 1975        | 5.71 | 2.96 | 8.04 | 2.78 | 2.59 | 4.00 | 12.29 | 2.31  | 10.98 | 3.10 | 2.04 | 4.51 | 61.31  |
| 1976        | 3.39 | 1.35 | 2.14 | 1.08 | 3.76 | 2.85 | 2.63  | 1.35  | 4.78  | 6.99 | 1.88 | 2.56 | 34.76  |
| 1977        | 2.22 | 1.34 | 2.67 | 2.33 | 3.99 | 1.25 | 4.20  | 6.15  | 2.16  | 7.88 | 4.32 | 5.57 | 44.08  |
| 1978        | 7.97 | 0.48 | 5.67 | 4.31 | 3.92 | 5.26 | 4.24  | 5.93  | 0.26  | 1.21 | 4.57 | 3.80 | 47.62  |
| 1979        | 6.16 | 5.97 | 2.59 | 3.97 | 3.80 | 2.42 | 4.36  | 7.08  | 9.76  | 3.87 | 5.50 | 1.64 | 57.12  |
| 1980        | 6.05 | 1.01 | 5.49 | 4.28 | 4.68 | 0.38 | 5.18  | 2.15  | 2.37  | 6.96 | 2.18 | 0.40 | 41.13  |
| 1981        | 0.64 | 2.76 | 1.52 | 2.96 | 6.62 | 3.69 | 4.01  | 2.89  | 2.70  | 2.36 | 0.68 | 5.04 | 35.87  |
| 1982        | 2.76 | 4.44 | 3.74 | 2.97 | 3.48 | 3.97 | 9.21  | 4.39  | 2.55  | 2.90 | 2.70 | 3.37 | 46.48  |
| 1983        | 1.59 | 3.95 | 6.04 | 5.21 | 2.50 | 5.46 | 0.51  | 0.97  | 3.05  | 4.02 | 5.63 | 4.50 | 43.43  |
| 1984        | 3.98 | 3.97 | 8.65 | 5.92 | 4.52 | 2.01 | 3.55  | 4.58  | 1.86  | 2.14 | 3.34 | 1.52 | 46.04  |
| 1985        | 3.54 | 3.20 | 1.80 | 0.65 | 2.36 | 4.01 | 5.31  | 10.58 | 4.97  | 5.09 | 6.99 | 0.58 | 49.08  |
| 1986        | 2.69 | 2.67 | 1.16 | 1.16 | 3.15 | 1.30 | 7.01  | 6.75  | 0.63  | 2.43 | 2.46 | 5.15 | 36.56  |
| 1987        | 5.53 | 2.57 | 1.65 | 7.31 | 2.94 | 6.29 | 1.20  | 1.11  | 4.43  | 1.25 | 3.13 | 2.86 | 40.27  |
| 1988        | 2.53 | 3.08 | 1.98 | 2.55 | 4.81 | 2.25 | 7.50  | 2.95  | 1.74  | 2.74 | 4.34 | 0.79 | 37.26  |
| 1989        | 1.88 | 4.34 | 5.00 | 4.27 | 5.02 | 5.85 | 4.00  | 4.89  | 5.33  | 3.54 | 3.00 | 2.62 | 49.74  |
| 1990        | 2.84 | 2.38 | 2.54 | 2.81 | 6.85 | 0.97 | 6.74  | 5.76  | 1.92  | 3.90 | 1.70 | 3.52 | 41.93  |
| 1991        | 3.62 | 1.09 | 5.87 | 0.87 | 0.91 | 6.24 | 3.47  | 3.32  | 2.69  | 2.50 | 0.67 | 4.53 | 35.78  |
| 1992        | 1.57 | 2.89 | 5.87 | 2.21 | 4.95 | 2.28 | 5.68  | 6.40  | 2.35  | 1.94 | 2.62 | 2.79 | 41.55  |
| 1993        | 4.48 | 2.88 | 7.24 | 3.23 | 4.66 | 1.75 | 1.91  | 3.89  | 2.97  | 2.23 | 3.24 | 3.77 | 42.25  |
| 1994        | 3.10 | 4.38 | 7.92 | 2.70 | 2.49 | 1.73 | 7.46  | 2.54  | 3.99  | 2.56 | 3.99 | 0.95 | 43.81  |
| Record Mean | 3.13 | 3.01 | 3.72 | 2.96 | 3.75 | 3.61 | 5.39  | 4.83  | 3.49  | 3.28 | 3.18 | 3.13 | 43.47  |

(!!) See Reference Notes on Page 6B

**AVERAGE TEMPERATURE (deg. F)**

**RICHMOND, VIRGINIA**

| YEAR        | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANNUAL |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1965        | 35.6 | 38.8 | 43.0 | 53.9 | 69.6 | 70.7 | 74.9 | 75.9 | 70.7 | 56.1 | 48.2 | 41.3 | 56.6   |
| 1966        | 31.1 | 37.7 | 47.5 | 52.8 | 63.1 | 71.4 | 76.4 | 74.6 | 67.2 | 55.5 | 49.5 | 38.0 | 55.4   |
| 1967        | 40.9 | 34.8 | 46.6 | 58.8 | 60.7 | 72.1 | 76.6 | 75.5 | 65.7 | 57.2 | 44.0 | 41.9 | 56.2   |
| 1968        | 33.9 | 34.2 | 52.0 | 58.8 | 64.7 | 74.7 | 78.9 | 78.9 | 70.9 | 61.9 | 51.3 | 37.0 | 58.1   |
| 1969        | 33.9 | 36.8 | 42.3 | 57.6 | 65.5 | 75.7 | 78.3 | 75.1 | 68.1 | 58.5 | 46.8 | 35.5 | 56.2   |
| 1970        | 30.1 | 37.1 | 42.9 | 58.2 | 69.1 | 75.7 | 78.3 | 78.0 | 74.8 | 62.9 | 49.9 | 40.4 | 58.1   |
| 1971        | 33.8 | 39.5 | 44.5 | 55.0 | 63.3 | 74.7 | 76.6 | 75.3 | 71.4 | 64.6 | 48.5 | 48.0 | 57.9   |
| 1972        | 40.7 | 37.6 | 47.2 | 56.2 | 64.6 | 70.1 | 77.1 | 75.2 | 70.1 | 55.8 | 47.9 | 45.9 | 57.4   |
| 1973        | 37.6 | 38.5 | 52.6 | 57.9 | 65.1 | 76.0 | 77.4 | 77.5 | 72.3 | 60.6 | 51.3 | 40.8 | 59.0   |
| 1974        | 45.8 | 40.1 | 50.4 | 59.9 | 65.8 | 70.6 | 76.9 | 75.7 | 67.4 | 55.4 | 48.5 | 41.7 | 58.2   |
| 1975        | 40.7 | 41.4 | 45.3 | 52.9 | 67.7 | 73.6 | 76.0 | 78.8 | 69.3 | 62.5 | 53.6 | 40.0 | 58.5   |
| 1976        | 35.1 | 48.5 | 52.6 | 60.5 | 65.2 | 74.6 | 77.3 | 75.7 | 68.7 | 54.4 | 42.7 | 36.7 | 57.7   |
| 1977        | 25.3 | 40.5 | 53.7 | 61.1 | 68.2 | 73.0 | 81.4 | 79.8 | 74.2 | 57.3 | 52.3 | 39.5 | 58.9   |
| 1978        | 33.4 | 30.3 | 44.5 | 57.3 | 65.5 | 74.7 | 77.5 | 80.1 | 72.9 | 58.3 | 52.5 | 42.5 | 57.5   |
| 1979        | 36.4 | 28.6 | 51.1 | 58.4 | 67.1 | 70.8 | 76.9 | 77.8 | 71.0 | 58.3 | 53.3 | 42.3 | 57.7   |
| 1980        | 38.8 | 36.0 | 47.4 | 61.1 | 68.3 | 72.8 | 80.0 | 80.7 | 74.7 | 56.9 | 46.2 | 38.6 | 58.5   |
| 1981        | 31.2 | 42.2 | 44.6 | 60.6 | 64.1 | 77.9 | 79.6 | 75.1 | 69.4 | 56.4 | 49.1 | 38.0 | 57.3   |
| 1982        | 31.6 | 41.7 | 49.1 | 55.9 | 70.4 | 73.4 | 78.6 | 75.0 | 69.8 | 59.2 | 51.9 | 46.1 | 58.6   |
| 1983        | 37.8 | 39.1 | 50.4 | 56.1 | 66.1 | 75.6 | 79.4 | 77.7 | 68.8 | 58.1 | 49.0 | 36.2 | 57.9   |
| 1984        | 32.6 | 44.5 | 43.6 | 55.8 | 65.4 | 77.7 | 76.0 | 77.0 | 67.5 | 66.1 | 46.6 | 47.7 | 58.4   |
| 1985        | 32.6 | 40.2 | 49.7 | 62.0 | 68.0 | 74.3 | 79.0 | 77.5 | 70.8 | 62.6 | 56.6 | 37.8 | 59.3   |
| 1986        | 36.2 | 39.3 | 50.0 | 59.2 | 66.9 | 76.1 | 80.9 | 74.2 | 70.8 | 61.8 | 49.1 | 40.9 | 58.8   |
| 1987        | 34.7 | 37.0 | 47.1 | 54.3 | 67.3 | 75.8 | 81.3 | 78.5 | 72.3 | 52.9 | 51.3 | 43.0 | 58.0   |
| 1988        | 32.3 | 39.1 | 47.9 | 56.0 | 65.8 | 72.8 | 79.9 | 79.8 | 68.4 | 53.6 | 50.6 | 39.2 | 57.1   |
| 1989        | 42.3 | 39.6 | 47.9 | 55.8 | 64.1 | 76.1 | 77.7 | 75.3 | 70.8 | 60.2 | 49.3 | 31.3 | 57.5   |
| 1990        | 46.3 | 48.0 | 52.1 | 57.9 | 65.8 | 75.0 | 79.9 | 76.3 | 69.5 | 63.1 | 52.6 | 46.3 | 61.1   |
| 1991        | 40.2 | 44.0 | 50.8 | 60.2 | 72.1 | 75.3 | 80.7 | 78.6 | 71.6 | 59.9 | 49.6 | 44.3 | 60.6   |
| 1992        | 40.7 | 42.7 | 47.2 | 57.8 | 61.7 | 70.8 | 79.5 | 73.7 | 70.3 | 56.3 | 50.6 | 40.9 | 57.7   |
| 1993        | 41.4 | 37.8 | 45.9 | 55.9 | 67.7 | 75.0 | 82.5 | 78.5 | 72.5 | 58.6 | 50.9 | 39.0 | 58.8   |
| 1994        | 33.4 | 40.2 | 48.9 | 63.2 | 63.2 | 78.0 | 81.1 | 75.4 | 69.2 | 57.6 | 52.6 | 45.6 | 59.0   |
| Record Mean | 37.4 | 39.5 | 47.4 | 57.2 | 66.3 | 74.2 | 78.1 | 76.5 | 70.1 | 58.8 | 49.2 | 40.0 | 57.9   |
| Max         | 47.2 | 50.2 | 58.7 | 69.6 | 78.1 | 85.3 | 88.4 | 86.6 | 80.9 | 70.6 | 60.6 | 50.0 | 68.9   |
| Min         | 27.5 | 28.9 | 36.0 | 44.8 | 54.4 | 63.0 | 67.7 | 66.3 | 59.3 | 46.9 | 37.7 | 29.9 | 46.9   |

(!!) See Reference Notes on Page 6B

**HEATING DEGREE DAYS Base 65 deg. F RICHMOND, VIRGINIA**

| SEASON  | JUL | AUG | SEP | OCT | NOV | DEC  | JAN  | FEB  | MAR | APR | MAY | JUN | TOTAL |
|---------|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|-------|
| 1965-66 | 0   | 6   | 25  | 275 | 498 | 726  | 1043 | 759  | 538 | 371 | 133 | 27  | 4401  |
| 1966-67 | 0   | 0   | 47  | 293 | 466 | 833  | 738  | 841  | 560 | 230 | 171 | 17  | 4196  |
| 1967-68 | 0   | 0   | 64  | 256 | 623 | 708  | 956  | 887  | 416 | 191 | 86  | 0   | 4187  |
| 1968-69 | 0   | 0   | 0   | 161 | 403 | 864  | 957  | 783  | 695 | 237 | 66  | 0   | 4166  |
| 1969-70 | 0   | 0   | 45  | 221 | 541 | 907  | 1076 | 778  | 677 | 231 | 51  | 0   | 4527  |
| 1970-71 | 0   | 0   | 12  | 124 | 445 | 756  | 960  | 709  | 627 | 295 | 104 | 3   | 4035  |
| 1971-72 | 0   | 0   | 11  | 69  | 512 | 526  | 748  | 788  | 554 | 286 | 58  | 21  | 3573  |
| 1972-73 | 0   | 0   | 17  | 285 | 513 | 588  | 843  | 735  | 394 | 247 | 79  | 0   | 3701  |
| 1973-74 | 0   | 0   | 5   | 163 | 414 | 744  | 589  | 691  | 455 | 204 | 75  | 5   | 3345  |
| 1974-75 | 0   | 0   | 62  | 310 | 513 | 715  | 746  | 654  | 604 | 368 | 44  | 1   | 4017  |
| 1975-76 | 0   | 0   | 27  | 121 | 356 | 770  | 917  | 480  | 386 | 227 | 78  | 11  | 3373  |
| 1976-77 | 0   | 1   | 15  | 332 | 660 | 869  | 1227 | 680  | 366 | 176 | 42  | 7   | 4375  |
| 1977-78 | 0   | 0   | 4   | 259 | 401 | 784  | 974  | 964  | 627 | 235 | 88  | 5   | 4341  |
| 1978-79 | 0   | 0   | 16  | 214 | 366 | 694  | 876  | 1011 | 439 | 218 | 44  | 4   | 3882  |
| 1979-80 | 0   | 0   | 8   | 242 | 353 | 698  | 806  | 835  | 541 | 135 | 47  | 2   | 3667  |
| 1980-81 | 0   | 0   | 14  | 267 | 557 | 813  | 1042 | 633  | 626 | 171 | 107 | 0   | 4230  |
| 1981-82 | 0   | 1   | 29  | 273 | 473 | 834  | 1029 | 645  | 486 | 280 | 6   | 1   | 4057  |
| 1982-83 | 0   | 6   | 10  | 213 | 399 | 585  | 836  | 718  | 445 | 282 | 69  | 2   | 3565  |
| 1983-84 | 0   | 1   | 86  | 236 | 475 | 887  | 994  | 589  | 657 | 282 | 93  | 3   | 4303  |
| 1984-85 | 0   | 0   | 73  | 57  | 546 | 531  | 997  | 692  | 484 | 177 | 35  | 5   | 3597  |
| 1985-86 | 0   | 0   | 31  | 114 | 257 | 838  | 886  | 713  | 465 | 187 | 78  | 3   | 3572  |
| 1986-87 | 0   | 16  | 24  | 172 | 476 | 741  | 931  | 777  | 550 | 317 | 57  | 0   | 4061  |
| 1987-88 | 0   | 0   | 5   | 370 | 409 | 677  | 1008 | 746  | 527 | 279 | 79  | 32  | 4132  |
| 1988-89 | 0   | 0   | 27  | 361 | 425 | 794  | 696  | 709  | 546 | 293 | 108 | 0   | 3959  |
| 1989-90 | 0   | 3   | 38  | 181 | 468 | 1036 | 574  | 472  | 436 | 258 | 50  | 3   | 3519  |
| 1990-91 | 0   | 0   | 33  | 146 | 365 | 574  | 762  | 582  | 443 | 193 | 27  | 1   | 3126  |
| 1991-92 | 0   | 0   | 25  | 190 | 458 | 637  | 749  | 640  | 545 | 261 | 142 | 10  | 3657  |
| 1992-93 | 0   | 0   | 37  | 275 | 427 | 739  | 724  | 757  | 585 | 280 | 24  | 0   | 3848  |
| 1993-94 | 0   | 0   | 26  | 213 | 436 | 799  | 973  | 687  | 497 | 130 | 120 | 0   | 3881  |
| 1994-95 | 0   | 0   | 11  | 232 | 365 | 595  |      |      |     |     |     |     |       |

(!) See Reference Notes on Page 6B

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**COOLING DEGREE DAYS Base 65 deg. F RICHMOND, VIRGINIA**

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1969 | 0   | 0   | 0   | 21  | 90  | 328 | 417 | 321 | 147 | 26  | 0   | 0   | 1350  |
| 1970 | 0   | 0   | 0   | 35  | 185 | 328 | 418 | 410 | 313 | 67  | 0   | 0   | 1756  |
| 1971 | 0   | 0   | 0   | 0   | 56  | 297 | 367 | 327 | 209 | 62  | 22  | 5   | 1345  |
| 1972 | 0   | 0   | 7   | 30  | 52  | 180 | 381 | 326 | 178 | 9   | 8   | 0   | 1171  |
| 1973 | 0   | 0   | 13  | 42  | 91  | 338 | 391 | 395 | 231 | 32  | 9   | 2   | 1544  |
| 1974 | 0   | 0   | 10  | 58  | 106 | 180 | 377 | 340 | 141 | 21  | 26  | 0   | 1259  |
| 1975 | 0   | 0   | 0   | 16  | 135 | 267 | 348 | 433 | 165 | 51  | 18  | 0   | 1433  |
| 1976 | 0   | 8   | 9   | 99  | 91  | 307 | 389 | 337 | 133 | 12  | 0   | 0   | 1385  |
| 1977 | 0   | 0   | 22  | 66  | 148 | 258 | 513 | 467 | 289 | 24  | 27  | 0   | 1814  |
| 1978 | 0   | 0   | 0   | 12  | 112 | 302 | 393 | 475 | 263 | 15  | 0   | 1   | 1573  |
| 1979 | 0   | 0   | 16  | 30  | 117 | 188 | 374 | 404 | 195 | 42  | 9   | 0   | 1375  |
| 1980 | 0   | 0   | 1   | 25  | 157 | 243 | 472 | 494 | 313 | 23  | 1   | 0   | 1729  |
| 1981 | 0   | 0   | 1   | 45  | 89  | 395 | 458 | 319 | 169 | 16  | 0   | 0   | 1492  |
| 1982 | 0   | 0   | 0   | 13  | 181 | 259 | 428 | 323 | 157 | 43  | 13  | 7   | 1424  |
| 1983 | 0   | 0   | 0   | 23  | 108 | 325 | 452 | 405 | 207 | 27  | 0   | 0   | 1547  |
| 1984 | 0   | 0   | 0   | 10  | 114 | 392 | 346 | 381 | 154 | 100 | 0   | 2   | 1499  |
| 1985 | 0   | 4   | 20  | 94  | 139 | 290 | 441 | 392 | 213 | 51  | 10  | 0   | 1654  |
| 1986 | 0   | 0   | 8   | 19  | 142 | 344 | 498 | 308 | 205 | 79  | 6   | 0   | 1609  |
| 1987 | 0   | 0   | 0   | 2   | 136 | 329 | 513 | 427 | 227 | 0   | 3   | 0   | 1637  |
| 1988 | 0   | 0   | 3   | 16  | 108 | 269 | 466 | 465 | 137 | 12  | 0   | 0   | 1476  |
| 1989 | 0   | 3   | 24  | 27  | 88  | 341 | 403 | 331 | 218 | 42  | 4   | 0   | 1481  |
| 1990 | 0   | 1   | 43  | 51  | 81  | 312 | 470 | 356 | 177 | 96  | 0   | 2   | 1589  |
| 1991 | 0   | 0   | 10  | 53  | 254 | 316 | 494 | 428 | 227 | 40  | 3   | 0   | 1825  |
| 1992 | 0   | 0   | 0   | 51  | 48  | 192 | 457 | 275 | 202 | 12  | 3   | 0   | 1240  |
| 1993 | 0   | 0   | 0   | 14  | 112 | 307 | 547 | 426 | 261 | 20  | 18  | 0   | 1705  |
| 1994 | 0   | 0   | 5   | 80  | 70  | 396 | 507 | 332 | 142 | 9   | 2   | 2   | 1545  |

(!) See Reference Notes on Page 6B

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SNOWFALL (inches)

RICHMOND, VIRGINIA

| SEASON      | JUL | AUG | SEP | OCT | NOV | DEC  | JAN  | FEB  | MAR  | APR | MAY | JUN | TOTAL |
|-------------|-----|-----|-----|-----|-----|------|------|------|------|-----|-----|-----|-------|
| 1965-66     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T    | 26.2 | 3.0  | 0.0  | 0.0 | 0.0 | 0.0 | 29.2  |
| 1966-67     | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 12.2 | 6.3  | 17.1 | T    | 0.0 | 0.0 | 0.0 | 35.8  |
| 1967-68     | 0.0 | 0.0 | 0.0 | 0.0 | T   | 5.6  | 2.3  | 2.4  | 2.8  | 0.0 | 0.0 | 0.0 | 13.1  |
| 1968-69     | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 2.8  | T    | T    | 11.9 | 0.0 | 0.0 | 0.0 | 15.9  |
| 1969-70     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8  | 5.4  | 0.4  | 0.0  | 0.0 | 0.0 | 0.0 | 7.6   |
| 1970-71     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9  | 3.3  | 2.0  | 8.4  | 0.6 | 0.0 | 0.0 | 15.2  |
| 1971-72     | 0.0 | 0.0 | 0.0 | 0.0 | T   | 0.0  | T    | 13.7 | 0.0  | T   | 0.0 | 0.0 | 13.7  |
| 1972-73     | 0.0 | 0.0 | 0.0 | T   | 0.6 | 0.0  | 4.3  | 0.4  | 1.4  | 0.0 | 0.0 | 0.0 | 6.7   |
| 1973-74     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.9  | T    | 5.0  | T    | 0.0 | 0.0 | 0.0 | 14.9  |
| 1974-75     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T    | 2.7  | 2.9  | 0.4  | 0.0 | 0.0 | 0.0 | 6.0   |
| 1975-76     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T    | 0.2  | T    | 1.0  | 0.0 | 0.0 | 0.0 | 1.2   |
| 1976-77     | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.7  | 11.1 | T    | 0.0  | 0.0 | 0.0 | 0.0 | 13.8  |
| 1977-78     | 0.0 | 0.0 | 0.0 | 0.0 | T   | T    | 1.3  | 5.1  | 5.0  | 0.0 | 0.0 | 0.0 | 11.4  |
| 1978-79     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0  | 0.7  | 19.5 | T    | 0.0 | 0.0 | 0.0 | 20.2  |
| 1979-80     | 0.0 | 0.0 | 0.0 | T   | 0.0 | T    | 16.6 | 7.0  | 15.0 | 0.0 | 0.0 | 0.0 | 38.6  |
| 1980-81     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2  | 0.6  | 0.0  | 0.2  | 0.0 | 0.0 | 0.0 | 1.0   |
| 1981-82     | 0.0 | 0.0 | 0.0 | 0.0 | T   | 1.9  | 8.3  | 10.8 | T    | 0.2 | 0.0 | 0.0 | 21.2  |
| 1982-83     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.9  | 0.1  | 21.4 | 0.0  | T   | 0.0 | 0.0 | 29.4  |
| 1983-84     | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | T    | 1.1  | 2.8  | 0.3  | 0.0 | 0.0 | 0.0 | 4.3   |
| 1984-85     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T    | 8.3  | T    | T    | 0.0 | 0.0 | 0.0 | 8.3   |
| 1985-86     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3  | 3.3  | 4.4  | T    | T   | 0.0 | 0.0 | 9.0   |
| 1986-87     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0  | 15.8 | 5.3  | 0.7  | T   | 0.0 | 0.0 | 21.8  |
| 1987-88     | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | T    | 8.1  | T    | T    | T   | 0.0 | 0.0 | 12.6  |
| 1988-89     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8  | T    | 13.6 | T    | T   | T   | 0.0 | 15.4  |
| 1989-90     | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 9.9  | 0.0  | T    | T    | 0.2 | 0.0 | 0.0 | 11.2  |
| 1990-91     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T    | T    | 1.9  | T    | 0.0 | 0.0 | 0.0 | 1.9   |
| 1991-92     | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | T    | 0.0  | 0.8  | T    | T   | 0.0 | 0.0 | 0.9   |
| 1992-93     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0  | 0.5  | 5.3  | 3.5  | T   | 0.0 | 0.0 | 9.3   |
| 1993-94     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.1  | 2.2  | 1.7  | 0.7  | 0.0 | T   | 0.0 | 9.7   |
| 1994-95     | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T    |      |      |      |     |     |     |       |
| Record Mean | 0.0 | 0.0 | 0.0 | T   | 0.4 | 2.0  | 4.8  | 4.1  | 2.4  | 0.1 | T   | 0.0 | 13.8  |

(!!) See Reference Notes on Page 6B

Page 6A

REFERENCE NOTES

RICHMOND, VIRGINIA

GENERAL

T - TRACE AMOUNT.

BLANK ENTRIES DENOTE MISSING/UNREPORTED DATA.

# INDICATES A STATION OR INSTRUMENT RELOCATION.

SEE STATION LOCATION TABLE ON PAGE 8.

4B, 6A

MEANS ARE THROUGH THE CURRENT YEAR,

NG IN 1930 FOR TEMPERATURE

1930 FOR PRECIPITATION

1938 FOR SNOWFALL

SPECIFIC

PAGE 2

PM - INCLUDES LAST DAY OF PREVIOUS MONTH

ASOS - AUTOMATED SURFACE OBSERVING SYSTEM IN OPERATION DURING THESE MONTHS.

PAGE 3

(a) - LENGTH OF RECORD IN YEARS, ALTHOUGH INDIVIDUAL MONTHS MAY BE MISSING.

0.\* OR \*. - THE VALUE IS BETWEEN 0.0 AND 0.05

NORMALS - BASED ON THE 1961-1990 RECORD PERIOD.

EXTREMES - DATES ARE THE MOST RECENT OCCURRENCE

WIND DIR. - NUMERALS SHOW TENS OF DEGREES CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM.

RESULTANT DIRECTIONS ARE GIVEN TO WHOLE DEGREES.

BOLD VALUES INDICATE EXTREME VALUES WHICH OCCURRED AFTER THE ASOS SYSTEM WAS COMMISSIONED.

PAGE 4B

RECORD = PERIOD OF RECORD

RECORD MEAN PRECIPITATION IS THE MEAN OF ALL DAILY

PRECIPITATION AMOUNTS DURING THE PERIOD OF RECORD.

RECORD MAX(MIN) TEMPERATURE IS THE MEAN OF ALL DAILY

MAX(MIN) TEMPERATURES DURING THE PERIOD OF RECORD.

RECORD MEAN TEMPERATURE IS THE SUM OF THE RECORD

MAX AND RECORD MIN DIVIDED BY 2.

AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY

MAX AND MIN TEMPERATURE DIVIDED BY 2.

# 1994 RICHMOND, VIRGINIA (RIC)

Richmond is located in east-central Virginia at the head of navigation on the James River and along a line separating the Coastal Plains (Tidewater Virginia) from the Piedmont. The Blue Ridge Mountains lie about 90 miles to the west and the Chesapeake Bay 60 miles to the east. Elevations range from a few feet above sea level along the river to a little over 300 feet in parts of the western section of the city.

The climate might be classified as modified continental. Summers are warm and humid and winters generally mild. The mountains to the west act as a partial barrier to outbreaks of cold, continental air in winter. The cold winter air is delayed long enough to be modified, then further warmed as it subsides in its approach to Richmond. The open waters of the Chesapeake Bay and Atlantic Ocean contribute to the humid summers and mild winters. The coldest weather normally occurs in late December and January, when low temperatures usually average in the upper 20s, and the high temperatures in the upper 40s. Temperatures seldom lower to zero, but there have been several occurrences of below zero temperatures. Summertime high temperatures above 100 degrees are not uncommon, but do not occur every year.

Precipitation is rather uniformly distributed throughout the year. However, dry periods lasting several weeks do occur, especially in autumn when long periods of pleasant, mild weather are most common. There is considerable variability in total monthly amounts from year to year. Snow usually remains on the ground only one or two days at a time. Ice storms (freezing rain or glaze) are not uncommon, but they are seldom severe enough to do any considerable damage. A notable exception was the spectacular glaze storm of January 27-28, 1943, when nearly 1 inch of ice accumulation caused heavy damage to trees and overhead transmission lines.

The James River reaches tidewater at Richmond where flooding may occur in every month of the year, most frequently in March and least in July. Hurricanes and tropical storms have been responsible for most of the flooding during the summer and early fall months. Hurricanes passing near Richmond have produced record rainfalls. In 1955, three hurricanes brought record rainfall to Richmond within a six-week period. The most noteworthy of these were Hurricanes Connie and Diane that brought heavy rains five days apart.

Damaging storms occur mainly from snow and freezing rain in winter and from hurricanes, tornadoes, and severe thunderstorms in other seasons. Damage may be from wind, flooding, or rain, or from any combination of these. Tornadoes are infrequent but some notable occurrences have been observed within the Richmond area.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 26 and the average last occurrence in the spring is April 10.

STATION LOCATION

RICHMOND, VIRGINIA

| LOCATION  | OCCUPIED FROM | OCCUPIED TO | AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION | LATITUDE NORTH | LONGITUDE WEST | ELEVATION ABOVE |                  |                      |              |                 |                |           |                    |                  |         | AUTOMATIC OBSERVING EQUIPMENT * | * Type<br>M = AMOS<br>T = AUTOB<br>S = ASOS<br>W = AWOS   | REMARKS |                   |
|---|---------------|-------------|---|----------------|----------------|-----------------|------------------|----------------------|--------------|-----------------|----------------|-----------|--------------------|------------------|---------|---------------------------------|---|---------|-------------------|
|   |               |             |   |                |                | SEA LEVEL       |                  | GROUND               |              |                 |                |           |                    |                  |         |                                 |   |         | HYDRO-THERMOMETER |
|   |               |             |   |                |                | GROUND          | WIND INSTRUMENTS | EXTREME THERMOMETERS | PSYCHROMETER | SUNSHINE SWITCH | TIPPING BUCKET | RAIN GAGE | WEIGHING RAIN GAGE | 8 INCH RAIN GAGE |         |                                 |   |         |                   |
| CITY - - NOTE: For per State Library Building Capitol Square                              | 9/18/95       | 5/22/97     | 4 mi. S   | 37°32'         | 77°27'         | 142             |                  |                      |              |                 |                |           |                    |                  |         |                                 | Section Center; no observations.  |         |                   |
| Chamber of Commerce Bldg., Ninth & Main Sts   | 5/22/97       | 5/31/00     | 3/8 mi. SW  | 37°32'         | 77°27'         | 104             | 107              | 98                   | 98           |                 | 89             |           | 89                 |                  |         |                                 | Observational Program begun 10/5/97.  |         |                   |
| Times Building 10th & Bank Streets  | 5/31/00       | 6/30/05     | 1/8 mi. NE  | 37°32'         | 77°27'         | 115             | 92               | 82                   | 82           |                 | 76             |           | 76                 |                  |         |                                 |   |         |                   |
| Mutual Assurance Bldg. Ninth & Main Streets   | 6/30/05       | 1/30/10     | 1/8 mi. SW  |                |                | 104             | 154              | 145                  | 145          |                 | 138            |           | 138                |                  |         |                                 |   |         |                   |
| Weather Bureau Building Chimborazo Park 3301 E Broad Street                               | 1/30/10       | 7/01/53     | 1-1/2 mi. E   | 37°32'         | 77°25'         | 162             | 53               | 11                   | 11           |                 | 3              | A4        | 3                  |                  |         |                                 | Climatological observations were continuous at City Office sites 10/5/97 through 6/30/53. A - At this site 9/24/42 to 4/19/46 and after 6/1/50.   |         |                   |
| AIRPORT WBAS Building   | 7/15/25       | 9/24/42     | None  | 37°30'         | 77°20'         | 158             | #                | 5                    | 5            |                 |                |           | 3                  |                  |         |                                 | CAA to 8/3/30. WBAS 8/3/30 to 5/26/35 and 7/14/38 to 9/24/42. # - 40 feet 8/3/30 to 5/26/35, estimated 40 feet 5/26/35 to 7/14/38 and estimated 50 feet to 9/24/42.   |         |                   |
| Army Hangar (Operations Annex)  | 9/24/42       | 4/19/46     | 1/2 mi. NNW   | 37°30'         | 77°20'         | 156             | 55               | 5                    | 5            |                 |                |           | 3                  |                  |         |                                 | AF operation.   |         |                   |
| Old Airport Administration Bldg.  | 4/19/46       | 6/01/50     | 1/3 mi. SSE   | 37°30'         | 77°20'         | 156             | 46               | 5                    | 5            |                 |                |           | 4                  |                  |         |                                 | WBAS reopened.  |         |                   |
| Byrd Field + New Terminal Building + R.E. Byrd International Airport effective 2/18/71 ++ | 6/01/50       | 8/19/88     | 4/5 mi. N   | 37°30'         | 77°20'         | c164            | b20<br>g33       | d6                   | d6           | %60<br>j30      | e19            | f19       | e19                | a4<br>h4<br>i4   | NA<br>M |                                 | a - Installed 2700 feet ENE of thermometer site 6/26/59.<br>b - 67 feet to 1/11/61.<br>c - 162 feet to 6/26/59.<br>d - Discontinued 6/26/59.<br>e - 3 feet to 10/9/69.<br>f - Commissioned 11/19/63.<br>g - Installed on roof 1/1/80.<br>h - Minor move 12/2/82.<br>i - Type change 7/9/84.<br>j - ASOS installed 10/1/85.<br>k - Type change 11/12/85.<br>l - Inactive summer 1985 until relocated 12/10/85. |         |                   |
| ++ Richmond International Airport effective 9/22/85.                                      |               |             |   |                |                |                 |                  |                      |              |                 |                |           |                    |                  |         |                                 |   |         |                   |
| Executive Terminal Richmond International Airport   | 8/19/88       | Present     | 1/4 mi. N   | 37°31'         | 77°20'         | 164             | k33              | NA                   | NA           | NA              | 3              | 3         | 3                  | k4               | M       |                                 | k - Not moved 8/19/88, other instruments moved 8/20-31/88.  |         |                   |

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801. INQUIRIES/COMMENTS CALL: (704) 271-4800 USCOMM-NOAA-ASHEVILLE, N.C. - 600

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