

NORMALS, MEANS, AND EXTREMES

DULUTH, MN (DLH)

LATITUDE: 46° 50' 38" N LONGITUDE: 92° 11' 39" W ELEVATION (FT): GRND: 1426 BARO: 1429 TIME ZONE: CENTRAL (UTC + 6) WBAN: 14913

| | ELEMENT | POR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR |
|----------------------|-----------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|
| TEMPERATURE °F | NORMAL DAILY MAXIMUM | 30 | 17.9 | 24.4 | 34.2 | 49.0 | 63.4 | 71.2 | 76.3 | 73.9 | 64.5 | 52.5 | 35.2 | 22.3 | 48.7 |
| | MEAN DAILY MAXIMUM | 58 | 16.9 | 22.7 | 32.6 | 48.0 | 61.5 | 70.6 | 76.2 | 74.0 | 64.4 | 52.4 | 35.2 | 21.9 | 48.0 |
| | HIGHEST DAILY MAXIMUM | 64 | 52 | 55 | 78 | 88 | 90 | 94 | 97 | 97 | 95 | 86 | 71 | 55 | 97 |
| | YEAR OF OCCURRENCE | | 1942 | 2000 | 1946 | 1952 | 1986 | 1995 | 1988 | 1947 | 1976 | 1953 | 1999 | 1962 | JUL 1988 |
| | MEAN OF EXTREME MAXS. | 58 | 36.4 | 41.7 | 51.5 | 71.0 | 81.4 | 86.0 | 88.7 | 87.3 | 81.6 | 73.4 | 54.8 | 39.6 | 66.1 |
| | NORMAL DAILY MINIMUM | 30 | -1.2 | 5.1 | 16.5 | 28.9 | 40.2 | 48.5 | 54.6 | 53.5 | 44.8 | 34.5 | 20.7 | 5.6 | 29.3 |
| | MEAN DAILY MINIMUM | 58 | -1.4 | 3.9 | 15.1 | 29.1 | 39.8 | 48.5 | 54.6 | 53.2 | 45.1 | 35.1 | 21.2 | 6.3 | 29.2 |
| | LOWEST DAILY MINIMUM | 64 | -3.9 | -3.9 | -2.9 | -5 | 17 | 27 | 35 | 32 | 22 | 8 | -23 | -34 | -3.9 |
| | YEAR OF OCCURRENCE | | 1972 | 1996 | 1989 | 1975 | 1967 | 1972 | 1988 | 1986 | 1942 | 1976 | 1964 | 1983 | FEB 1996 |
| | MEAN OF EXTREME MINS. | 58 | -26.5 | -20.6 | -9.8 | 12.3 | 26.6 | 35.8 | 42.7 | 40.9 | 29.6 | 20.1 | 0.2 | -17.4 | 11.2 |
| | NORMAL DRY BULB | 30 | 8.4 | 14.8 | 25.4 | 39.0 | 51.8 | 59.9 | 65.5 | 63.7 | 54.7 | 43.5 | 28.0 | 14.0 | 39.1 |
| | MEAN DRY BULB | 58 | 7.8 | 13.4 | 23.8 | 38.6 | 50.5 | 59.6 | 65.4 | 63.7 | 54.7 | 43.7 | 28.2 | 14.3 | 38.6 |
| | MEAN WET BULB | 20 | 10.0 | 14.5 | 23.2 | 34.3 | 45.3 | 54.7 | 59.7 | 59.3 | 51.4 | 39.0 | 24.8 | 14.0 | 35.8 |
| | MEAN DEW POINT | 20 | 5.2 | 8.7 | 16.7 | 26.3 | 38.1 | 50.0 | 55.9 | 55.8 | 47.5 | 33.8 | 20.4 | 9.9 | 30.7 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| MAXIMUM ≥ 90° | 30 | 0.0 | 0.0 | 0.0 | 0.0 | * | 0.2 | 1.1 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 2.0 | |
| MAXIMUM ≤ 32° | 30 | 28.2 | 21.4 | 14.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 13.2 | 26.1 | 106.1 | |
| MINIMUM ≤ 32° | 30 | 31.0 | 27.8 | 28.6 | 19.4 | 5.1 | 0.3 | 0.0 | * | 2.3 | 12.4 | 26.2 | 30.8 | 183.9 | |
| MINIMUM ≤ 0° | 30 | 16.8 | 11.1 | 4.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 11.7 | 45.4 | |
| H/C | NORMAL HEATING DEG. DAYS | 30 | 1771 | 1422 | 1244 | 787 | 421 | 180 | 69 | 106 | 331 | 682 | 1124 | 1587 | 9724 |
| | NORMAL COOLING DEG. DAYS | 30 | 0 | 0 | 0 | 0 | 7 | 28 | 82 | 60 | 12 | 0 | 0 | 0 | 189 |
| RH | NORMAL (PERCENT) | 30 | 75 | 73 | 71 | 63 | 63 | 71 | 73 | 76 | 77 | 72 | 77 | 78 | 72 |
| | HOUR 00 LST | 30 | 77 | 75 | 75 | 70 | 72 | 81 | 84 | 86 | 85 | 78 | 79 | 80 | 78 |
| | HOUR 06 LST | 30 | 78 | 79 | 80 | 76 | 76 | 83 | 86 | 90 | 89 | 83 | 82 | 81 | 82 |
| | HOUR 12 LST | 30 | 71 | 67 | 64 | 55 | 53 | 60 | 61 | 64 | 64 | 63 | 71 | 74 | 64 |
| | HOUR 18 LST | 30 | 71 | 66 | 64 | 54 | 52 | 59 | 61 | 65 | 69 | 67 | 73 | 75 | 65 |
| S | PERCENT POSSIBLE SUNSHINE | 47 | 48 | 53 | 55 | 56 | 57 | 58 | 65 | 61 | 52 | 46 | 35 | 39 | 52 |
| W/O | MEAN NO. DAYS WITH: | | | | | | | | | | | | | | |
| | HEAVY FOG (VISBY ≤ 1/4 MI) | 57 | 2.3 | 2.5 | 3.7 | 3.6 | 5.1 | 6.5 | 5.2 | 6.4 | 5.6 | 4.5 | 3.4 | 3.2 | 52.0 |
| | THUNDERSTORMS | 63 | 0.1 | 0.0 | 0.6 | 1.7 | 3.5 | 6.7 | 8.0 | 6.8 | 3.9 | 1.3 | 0.4 | 0.1 | 33.1 |
| CLOUDINESS | MEAN: | | | | | | | | | | | | | | |
| | SUNRISE-SUNSET (OKTAS) | 48 | 5.4 | 5.2 | 5.4 | 5.4 | 5.3 | 5.3 | 4.7 | 4.7 | 5.2 | 5.3 | 6.0 | 5.6 | 5.3 |
| | MIDNIGHT-MIDNIGHT (OKTAS) | 32 | 5.0 | 5.0 | 5.2 | 5.0 | 4.8 | 4.8 | 4.3 | 4.3 | 4.7 | 5.0 | 5.7 | 5.4 | 4.9 |
| | MEAN NO. DAYS WITH: | | | | | | | | | | | | | | |
| CLEAR | 49 | 7.4 | 7.3 | 7.0 | 6.2 | 6.2 | 5.1 | 6.7 | 7.2 | 6.3 | 6.4 | 4.4 | 6.0 | 76.2 | |
| PARTLY CLOUDY | 49 | 7.0 | 6.2 | 6.9 | 7.9 | 9.6 | 11.0 | 12.7 | 11.9 | 8.4 | 7.6 | 5.5 | 5.8 | 100.5 | |
| CLOUDY | 49 | 16.7 | 14.7 | 17.0 | 15.9 | 15.2 | 13.9 | 10.9 | 11.3 | 14.6 | 16.4 | 19.5 | 18.6 | 184.7 | |
| PR | MEAN STATION PRESSURE (IN) | 32 | 28.49 | 28.50 | 28.50 | 28.40 | 28.40 | 28.40 | 28.50 | 28.50 | 28.50 | 28.41 | 28.51 | 28.47 | 28.47 |
| | MEAN SEA-LEVEL PRES. (IN) | 20 | 30.08 | 30.07 | 30.05 | 29.97 | 29.96 | 29.99 | 29.96 | 30.01 | 30.02 | 30.02 | 30.07 | 30.02 | 30.02 |
| WINDS | MEAN SPEED (MPH) | 47 | 11.6 | 11.6 | 11.9 | 12.5 | 11.9 | 10.4 | 9.7 | 9.5 | 10.6 | 11.4 | 12.1 | 11.5 | 11.2 |
| | PREVAIL. DIR (TENS OF DEGS) | 31 | 30 | 32 | 09 | 09 | 09 | 11 | 10 | 11 | 30 | 31 | 31 | 31 | 31 |
| | MAXIMUM 2-MINUTE: | | | | | | | | | | | | | | |
| | SPEED (MPH) | 9 | 37 | 44 | 47 | 46 | 44 | 43 | 39 | 46 | 37 | 38 | 44 | 41 | 47 |
| | DIR. (TENS OF DEGS) | | 33 | 29 | 08 | 08 | 28 | 09 | 28 | 29 | 28 | 35 | 08 | 28 | 08 |
| | YEAR OF OCCURRENCE | | 2001 | 2002 | 1998 | 2003 | 2002 | 2005 | 1999 | 2001 | 2003 | 1999 | 1998 | 2001 | MAR 1998 |
| MAXIMUM 5-SECOND: | | | | | | | | | | | | | | | |
| SPEED (MPH) | 9 | 44 | 54 | 57 | 57 | 52 | 49 | 47 | 62 | 46 | 49 | 55 | 56 | 62 | |
| DIR. (TENS OF DEGS) | | 33 | 28 | 08 | 20 | 29 | 08 | 28 | 29 | 28 | 01 | 09 | 31 | 29 | |
| YEAR OF OCCURRENCE | | 2001 | 2002 | 1998 | 1998 | 2002 | 2005 | 1999 | 2001 | 2003 | 1999 | 1998 | 1999 | AUG 2001 | |
| PRECIPITATION | NORMAL (IN) | 30 | 1.12 | 0.83 | 1.69 | 2.09 | 2.95 | 4.25 | 4.20 | 4.22 | 4.13 | 2.46 | 2.12 | 0.94 | 31.00 |
| | MAXIMUM MONTHLY (IN) | 64 | 4.70 | 2.72 | 5.12 | 8.18 | 7.67 | 8.04 | 8.74 | 10.31 | 9.38 | 7.53 | 5.08 | 3.70 | 10.31 |
| | YEAR OF OCCURRENCE | | 1969 | 1998 | 1965 | 2001 | 1962 | 1986 | 1999 | 1972 | 1991 | 1949 | 2000 | 1968 | AUG 1972 |
| | MINIMUM MONTHLY (IN) | 64 | 0.14 | 0.13 | 0.22 | 0.24 | 0.15 | 0.55 | 0.82 | 0.71 | 0.19 | 0.13 | 0.19 | 0.13 | 0.13 |
| | YEAR OF OCCURRENCE | | 1961 | 1988 | 1959 | 1987 | 1976 | 1995 | 2005 | 1970 | 1952 | 1944 | 1976 | 1997 | DEC 1997 |
| | MAXIMUM IN 24 HOURS (IN) | 56 | 1.74 | 1.38 | 2.38 | 2.60 | 3.25 | 4.05 | 3.68 | 5.79 | 3.77 | 2.90 | 2.64 | 2.12 | 5.79 |
| | YEAR OF OCCURRENCE | | 1975 | 1965 | 1977 | 2001 | 1979 | 1958 | 1987 | 1978 | 1972 | 1973 | 1968 | 1950 | AUG 1978 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| PRECIPITATION ≥ 0.01 | 30 | 11.6 | 9.2 | 10.7 | 10.4 | 11.1 | 12.7 | 11.8 | 11.7 | 12.8 | 10.6 | 11.1 | 10.3 | 134.0 | |
| PRECIPITATION ≥ 1.00 | 30 | * | * | 0.2 | 0.1 | 0.4 | 0.9 | 1.3 | 1.3 | 1.0 | 0.4 | 0.4 | * | 6.0 | |
| SNOWFALL | NORMAL (IN) | 30 | 19.6 | 11.4 | 13.7 | 6.3 | 0.3 | 0.* | 0.0 | 0.0 | 0.1 | 1.6 | 15.2 | 14.9 | 83.1 |
| | MAXIMUM MONTHLY (IN) | 62 | 46.8 | 32.1 | 45.5 | 31.5 | 8.1 | 0.2 | T | T | 2.4 | 9.7 | 50.1 | 44.3 | 50.1 |
| | YEAR OF OCCURRENCE | | 1969 | 2001 | 1965 | 1950 | 1954 | 1945 | 1992 | 1995 | 1991 | 1995 | 1991 | 1950 | NOV 1991 |
| | MAXIMUM IN 24 HOURS (IN) | 62 | 23.2 | 17.0 | 19.4 | 11.6 | 4.3 | 0.2 | T | T | 2.4 | 7.9 | 24.1 | 25.4 | 25.4 |
| | YEAR OF OCCURRENCE | | 2004 | 1948 | 1965 | 1983 | 1954 | 1945 | 1992 | 1995 | 1991 | 1966 | 1991 | 1950 | DEC 1950 |
| | MAXIMUM SNOW DEPTH (IN) | 57 | 42 | 38 | 48 | 41 | 9 | 0 | 0 | 0 | 0 | 6 | 30 | 32 | 48 |
| | YEAR OF OCCURRENCE | | 1969 | 1969 | 1965 | 1965 | 1950 | | | | | 1966 | 1991 | 1983 | MAR 1965 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| SNOWFALL ≥ 1.0 | 30 | 4.5 | 3.6 | 3.9 | 1.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 3.7 | 4.1 | 22.2 | |