

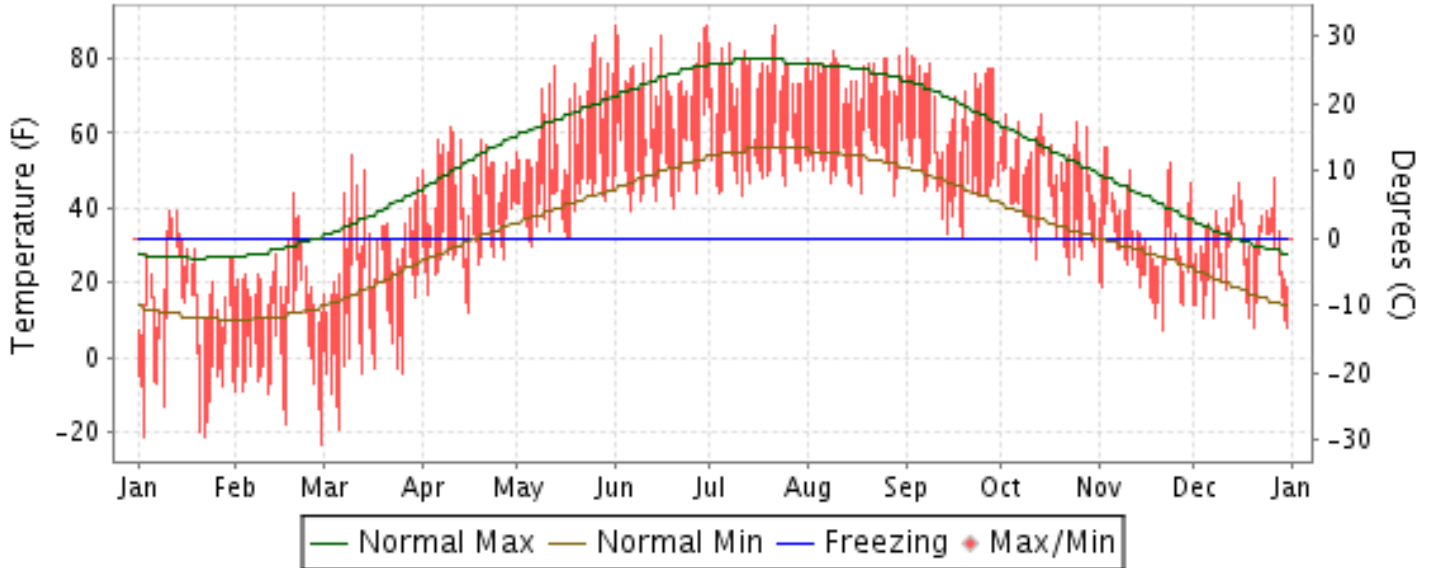


2014 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

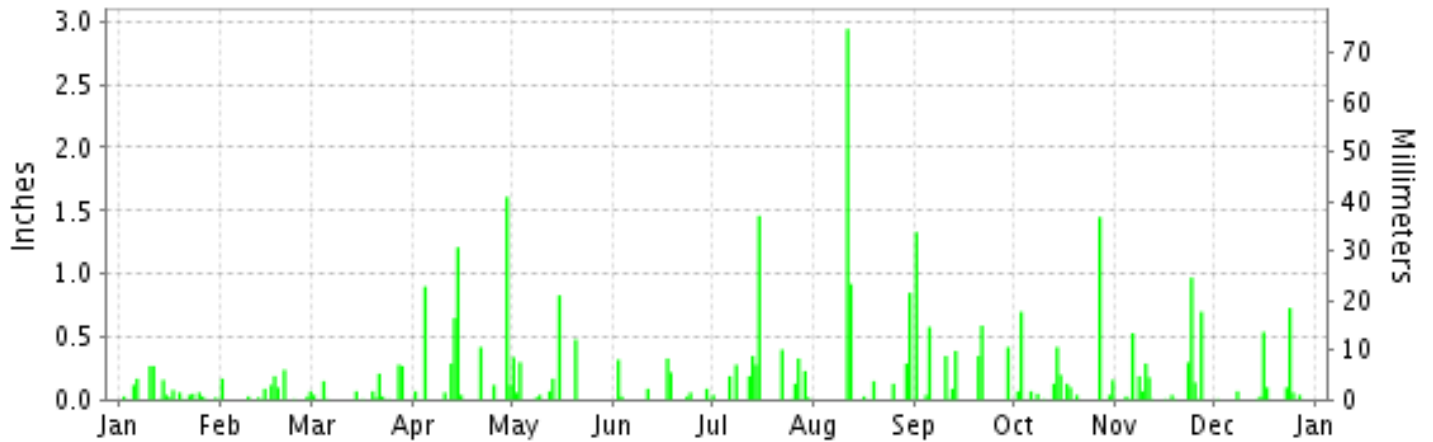
ISSN 0198-2494

ALPENA, MICHIGAN (KAPN)

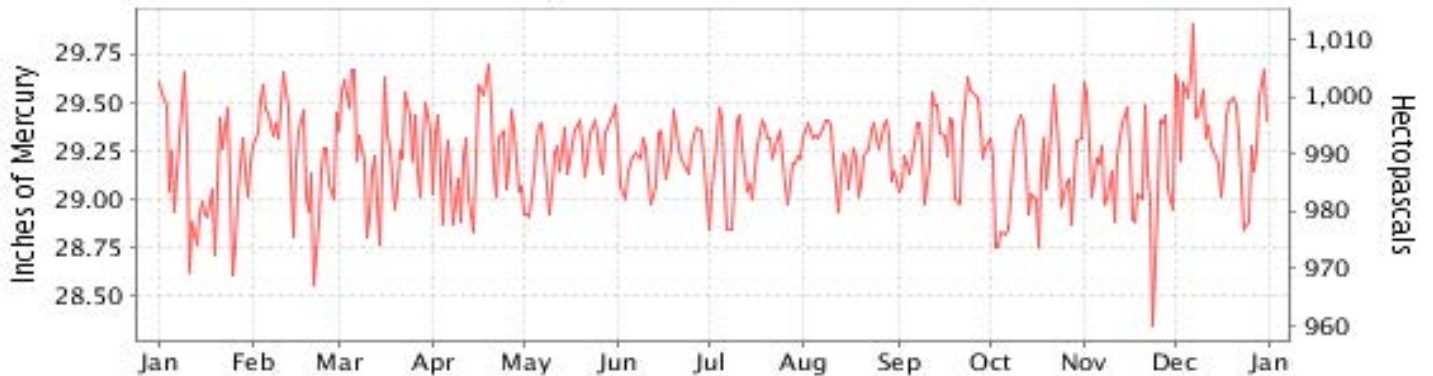
Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

NATIONAL
OCEANIC AND
ATMOSPHERIC ADMINISTRATION

NATIONAL
ENVIRONMENTAL SATELLITE, DATA
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2014

ALPENA (KAPN)

LATITUDE: 45° 4'N LONGITUDE: 83° 33'W ELEVATION (FT): GRND: 684 BARO: 680 TIME ZONE: EASTERN (UTC -5) WBAN: 94849

| ELEMENT | | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR | |
|----------------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-----------|---|
| TEMPERATURE °F | MEAN DAILY MAXIMUM | 20.3 | 21.5 | 31.2 | 48.5 | 63.9 | 74.9 | 76.0 | 75.4 | 69.3 | 54.7 | 37.7 | 33.8 | 50.6 | |
| | HIGHEST DAILY MAXIMUM | 39 | 44 | 54 | 62 | 86 | 89 | 89 | 82 | 83 | 65 | 56 | 48 | 89 | |
| | DATE OF OCCURRENCE | 13+ | 19 | 10 | 10 | 26 | 30+ | 22 | 09 | 01 | 14+ | 04+ | 27 | JUL 22 | |
| | MEAN DAILY MINIMUM | 3.8 | 0.2 | 8.2 | 28.9 | 41.2 | 50.7 | 52.3 | 52.9 | 46.4 | 37.9 | 24.3 | 22.3 | 30.8 | |
| | LOWEST DAILY MINIMUM | -21 | -23 | -19 | 12 | 30 | 39 | 43 | 43 | 32 | 22 | 7 | 8 | -23 | |
| | DATE OF OCCURRENCE | 22+ | 28 | 06 | 16 | 06 | 06 | 11 | 28 | 19 | 23 | 21 | 31+ | FEB 28 | |
| | AVERAGE DRY BULB | 12.0 | 10.8 | 19.7 | 38.7 | 52.5 | 62.8 | 64.1 | 64.2 | 57.9 | 46.3 | 31.0 | 28.0 | 40.7 | |
| | MEAN WET BULB | 11.9 | 10.5 | 18.1 | 34.7 | 47.3 | 56.8 | 58.6 | 59.9 | 53.8 | 44.2 | 29.3 | 26.9 | 37.7 | |
| | MEAN DEW POINT | 7.0 | 4.9 | 11.5 | 28.3 | 41.8 | 51.2 | 54.2 | 56.8 | 50.5 | 41.0 | 25.3 | 22.9 | 33.0 | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| | MAXIMUM >= 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | MAXIMUM <= 32° | 26 | 25 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 12 | 91 | |
| | MINIMUM <= 32° | 31 | 28 | 31 | 21 | 4 | 0 | 0 | 0 | 1 | 11 | 25 | 24 | 176 | |
| MINIMUM <= 0° | 15 | 16 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | | |
| H/C | HEATING DEGREE DAYS | 1636 | 1511 | 1398 | 782 | 384 | 112 | 69 | 55 | 223 | 572 | 1014 | 1138 | 8894 | |
| | COOLING DEGREE DAYS | 0 | 0 | 0 | 0 | 5 | 55 | 51 | 39 | 18 | 0 | 0 | 0 | 168 | |
| RH | MEAN (PERCENT) | 76 | 72 | 69 | 70 | 70 | 68 | 72 | 79 | 79 | 82 | 79 | 80 | 75 | |
| | HOUR 01 LST | 79 | 78 | 80 | 77 | 85 | 83 | 87 | 92 | 91 | 88 | 82 | 83 | 84 | |
| | HOUR 07 LST | 78 | 81 | 80 | 73 | 70 | 69 | 76 | 87 | 88 | 88 | 83 | 86 | 80 | |
| | HOUR 13 LST | 68 | 61 | 54 | 60 | 56 | 54 | 54 | 62 | 59 | 69 | 70 | 72 | 62 | |
| | HOUR 19 LST | 78 | 72 | 67 | 67 | 67 | 64 | 69 | 81 | 85 | 84 | 79 | 81 | 75 | |
| W/O | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| | HEAVY FOG(VISBY <= 1/4 MI) | 1 | 1 | 0 | 2 | 1 | 3 | 1 | 5 | 3 | 7 | 2 | 3 | 29 | |
| | THUNDERSTORMS | 0 | 0 | 0 | 1 | 4 | 4 | 9 | 3 | 6 | 1 | 0 | 0 | 28 | |
| PR | MEAN STATION PRESS. (IN.) | 29.12 | 29.25 | 29.29 | 29.22 | 29.24 | 29.22 | 29.19 | 29.26 | 29.31 | 29.12 | 29.16 | 29.37 | 29.23 | |
| | MEAN SEA-LEVEL PRESS. (IN.) | 29.91 | 30.04 | 30.07 | 29.97 | 29.99 | 29.96 | 29.94 | 30.00 | 30.07 | 29.88 | 29.93 | 30.15 | 29.99 | |
| WINDS | RESULTANT SPEED (MPH) | 4.3 | 3.3 | 2.2 | 0.9 | 0.4 | 1.2 | 2.4 | 0.3 | 1.5 | 1.9 | 4.5 | 2.6 | 1.7 | |
| | RES. DIR. (TENS OF DEGS.) | 24 | 25 | 30 | 06 | 33 | 15 | 26 | 29 | 25 | 26 | 24 | 26 | 26 | |
| | MEAN SPEED (MPH) | 8.7 | 7.8 | 7.9 | 8.7 | 7.2 | 6.4 | 6.6 | 5.7 | 6.2 | 7.5 | 8.3 | 7.2 | 7.4 | |
| | PREVAIL.DIR.(TENS OF DEGS.) | 24 | 25 | 31 | 12 | 11 | 10 | 22 | 12 | 21 | 22 | 23 | 31 | 24 | |
| | MAXIMUM 2-MINUTE WIND | | | | | | | | | | | | | | |
| | SPEED (MPH) | 26 | 29 | 26 | 25 | 28 | 33 | 23 | 25 | 26 | 28 | 23 | 23 | 33 | |
| | DIR. (TENS OF DEGS.) | 34 | 22 | 01 | 11 | 19 | 19 | 33 | 34 | 04 | 20 | 22 | 26 | 19 | |
| | DATE OF OCCURRENCE | 25 | 21 | 12 | 30 | 09 | 29 | 08 | 13 | 21 | 03 | 24 | 27 | JUN 29 | |
| | MAXIMUM 3-SECOND WIND: | | | | | | | | | | | | | | |
| SPEED (MPH) | 35 | 46 | 35 | 38 | 36 | 44 | 32 | 35 | 35 | 38 | 38 | 36 | 46 | | |
| DIR. (TENS OF DEGS.) | 23 | 23 | 33 | 07 | 21 | 19 | 22 | 32 | 14 | 36 | 22 | 25 | 23 | | |
| DATE OF OCCURRENCE | 24 | 21 | 15 | 29 | 09 | 29 | 01 | 13 | 10 | 31 | 24 | 27 | FEB 21 | | |
| PRECIPITATION | WATER EQUIVALENT: | | | | | | | | | | | | | | |
| | TOTAL (IN.) | 1.45 | 1.08 | 1.17 | 5.49 | 2.31 | 1.18 | 3.91 | 5.31 | 4.15 | 3.57 | 3.49 | 1.69 | 34.80 | |
| | GREATEST 24-HOUR (IN.) | 0.54 | 0.29 | 0.47 | 1.67 | 0.83 | 0.38 | 1.74 | 3.82 | 1.33 | 1.45 | 1.02 | 0.79 | 3.82 | |
| | DATE OF OCCURRENCE | 10-11 | 20-21 | 27-28 | 29-30 | 15 | 17-18 | 14-15 | 11-12 | 01 | 27 | 23-24 | 24-25 | AUG 11-12 | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| PRECIPITATION 0.01 | 18 | 12 | 12 | 11 | 9 | 9 | 13 | 7 | 10 | 14 | 16 | 10 | 141 | | |
| PRECIPITATION 0.10 | 5 | 5 | 4 | 8 | 5 | 3 | 10 | 6 | 7 | 8 | 8 | 4 | 73 | | |
| PRECIPITATION 1.00 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 6 | | |
| SNOWFALL | SNOW,ICE PELLETS,HAIL | | | | | | | | | | | | | | |
| | TOTAL (IN.) | 15.5 | 13.0 | 7.3 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 15.6 | 0.5 | 53.1 | |
| | GREATEST 24-HOUR (IN.) | 2.4 | 2.6 | 3.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 11.0 | 0.5 | 11.0 | |
| | DATE OF OCCURRENCE | 05 | 01 | 21 | 15+ | | | | | | 31 | 27 | 17 | NOV 27 | |
| | MAXIMUM SNOW DEPTH (IN.) | 14 | 18 | 18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 1 | 18 | |
| | DATE OF OCCURRENCE | 31+ | 18 | 06+ | 03+ | | | | | | | 28+ | 19+ | MAR 06+ | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| SNOWFALL >= 1.0 | 7 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 20 | | |

NORMALS, MEANS, AND EXTREMES

ALPENA (KAPN)

LATITUDE: 45° 4'N **LONGITUDE:** 83° 33'W **ELEVATION (FT):** GRND: 684 BARO: 680 **TIME ZONE:** EASTERN (UTC -5) **WBAN: 94849**

| | ELEMENT | POR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR |
|-----------------------|----------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|
| TEMPERATURE °F | NORMAL DAILY MAXIMUM | 30 | 26.8 | 29.3 | 38.3 | 52.3 | 64.5 | 74.5 | 79.4 | 77.0 | 68.9 | 55.9 | 43.1 | 31.7 | 53.5 |
| | MEAN DAILY MAXIMUM | 55 | 26.7 | 28.7 | 38.1 | 51.7 | 64.9 | 74.5 | 79.6 | 77.2 | 69.0 | 56.7 | 43.2 | 31.6 | 53.5 |
| | HIGHEST DAILY MAXIMUM | 56 | 57 | 65 | 87 | 90 | 94 | 103 | 102 | 102 | 95 | 90 | 76 | 65 | 103 |
| | YEAR OF OCCURRENCE | | 2013 | 1984 | 2012 | 2002 | 1962 | 1995 | 1983 | 1988 | 2013 | 2007 | 1978 | 2001 | JUN 1995 |
| | MEAN OF EXTREME MAXS. | 55 | 44.1 | 46.6 | 61.5 | 76.2 | 85.6 | 91.0 | 92.5 | 90.3 | 85.2 | 77.4 | 62.3 | 49.5 | 71.9 |
| | NORMAL DAILY MINIMUM | 30 | 11.5 | 11.4 | 19.2 | 31.0 | 40.5 | 49.7 | 55.3 | 53.7 | 46.5 | 36.4 | 28.3 | 18.4 | 33.5 |
| | MEAN DAILY MINIMUM | 55 | 10.3 | 9.7 | 18.2 | 30.2 | 40.0 | 49.1 | 54.6 | 53.3 | 46.0 | 36.7 | 27.9 | 17.6 | 32.8 |
| | LOWEST DAILY MINIMUM | 56 | -28 | -37 | -27 | -7 | 20 | 28 | 34 | 30 | 25 | 16 | -6 | -18 | -37 |
| | YEAR OF OCCURRENCE | | 1994 | 1979 | 1962 | 2003 | 1966 | 1966 | 1965 | 1982 | 1993 | 1997 | 1995 | 1985 | FEB 1979 |
| | MEAN OF EXTREME MINS. | 55 | -11.7 | -12.6 | -5.4 | 15.7 | 26.7 | 35.4 | 41.8 | 40.0 | 30.8 | 22.6 | 11.3 | -3.8 | 15.9 |
| | NORMAL DRY BULB | 30 | 19.1 | 20.3 | 28.7 | 41.6 | 52.5 | 62.1 | 67.4 | 65.4 | 57.7 | 46.2 | 35.7 | 25.0 | 43.5 |
| | MEAN DRY BULB | 55 | 18.5 | 19.2 | 28.2 | 41.0 | 52.5 | 61.9 | 67.1 | 65.3 | 57.5 | 46.7 | 35.6 | 24.6 | 43.2 |
| | MEAN WET BULB | 31 | 17.8 | 18.0 | 24.4 | 34.8 | 45.6 | 55.7 | 60.5 | 59.8 | 53.0 | 42.4 | 32.4 | 23.1 | 39.0 |
| | MEAN DEW POINT | 31 | 16.1 | 15.9 | 22.3 | 31.9 | 43.2 | 53.6 | 58.9 | 58.5 | 51.6 | 40.4 | 30.7 | 21.5 | 37.1 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| MAXIMUM >= 90 | 30 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 1.2 | 2.2 | 1.0 | 0.1 | 0.0 | 0.0 | 0.0 | 4.6 | |
| MAXIMUM <= 32 | 30 | 21.4 | 17.8 | 8.6 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 3.9 | 15.7 | 68.4 | |
| MINIMUM <= 32 | 30 | 30.0 | 26.7 | 27.9 | 17.0 | 4.5 | 0.1 | 0.0 | 0.0 | 1.1 | 9.6 | 20.6 | 28.3 | 165.8 | |
| MINIMUM <= 0 | 30 | 5.8 | 5.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 1.8 | 15.3 | |
| H/C | NORMAL HEATING DEG. DAYS | 30 | 1421 | 1250 | 1124 | 703 | 398 | 143 | 44 | 71 | 242 | 587 | 879 | 1238 | 8100 |
| | NORMAL COOLING DEG. DAYS | 30 | 0 | 0 | 0 | 2 | 11 | 56 | 116 | 81 | 23 | 2 | 0 | 0 | 291 |
| RH | NORMAL (PERCENT) | 30 | 78 | 76 | 73 | 67 | 68 | 71 | 73 | 77 | 79 | 77 | 79 | 80 | 75 |
| | HOUR 01 LST | 30 | 81 | 80 | 80 | 77 | 81 | 87 | 88 | 90 | 89 | 84 | 82 | 83 | 84 |
| | HOUR 07 LST | 30 | 83 | 82 | 84 | 80 | 79 | 82 | 86 | 91 | 92 | 87 | 84 | 84 | 85 |
| | HOUR 13 LST | 30 | 72 | 67 | 61 | 53 | 52 | 54 | 55 | 59 | 61 | 62 | 69 | 73 | 62 |
| | HOUR 19 LST | 30 | 77 | 73 | 68 | 60 | 58 | 61 | 62 | 69 | 76 | 76 | 78 | 80 | 70 |
| S | PERCENT POSSIBLE SUNSHINE | 37 | 36 | 45 | 53 | 53 | 59 | 63 | 63 | 57 | 50 | 41 | 27 | 27 | 48 |
| W/O | MEAN NO. DAYS WITH: | | | | | | | | | | | | | | |
| | HEAVY FOG(VISBY <= 1/4 MI) | 50 | 2.1 | 2.0 | 3.1 | 2.3 | 2.7 | 2.5 | 2.3 | 3.3 | 3.2 | 3.0 | 2.7 | 2.2 | 31.4 |
| | THUNDERSTORMS | 50 | 0.2 | 0.1 | 0.9 | 2.2 | 4.1 | 5.3 | 7.1 | 5.8 | 3.7 | 1.5 | 0.3 | 0.1 | 31.3 |
| CLOUDINESS | MEAN: | | | | | | | | | | | | | | |
| | SUNRISE-SUNSET (OKTAS) | 37 | 6.2 | 5.9 | 5.4 | 5.4 | 5.0 | 4.7 | 4.4 | 4.5 | 5.1 | 5.5 | 6.4 | 6.5 | 5.4 |
| | MIDNIGHT-MIDNIGHT (OKTAS) | 31 | 6.3 | 5.8 | 5.2 | 5.0 | 4.6 | 4.4 | 4.2 | 4.1 | 4.6 | 5.3 | 6.2 | 6.4 | 5.2 |
| | MEAN NO. DAYS WITH: | | | | | | | | | | | | | | |
| | CLEAR | 37 | 3.1 | 4.1 | 6.4 | 6.3 | 7.5 | 7.6 | 7.6 | 8.4 | 6.0 | 4.8 | 2.3 | 1.8 | 65.9 |
| PARTLY CLOUDY | 37 | 7.3 | 7.1 | 7.9 | 7.6 | 9.6 | 10.6 | 12.9 | 10.5 | 9.3 | 8.1 | 5.8 | 6.3 | 103.0 | |
| CLOUDY | 37 | 20.6 | 17.1 | 16.6 | 16.2 | 14.0 | 11.7 | 9.7 | 11.4 | 13.8 | 17.3 | 21.0 | 22.0 | 191.4 | |
| PR | MEAN STATION PRESSURE(IN) | 31 | 29.23 | 29.26 | 29.28 | 29.22 | 29.22 | 29.20 | 29.22 | 29.27 | 29.28 | 29.25 | 29.25 | 29.25 | 29.24 |
| | MEAN SEA-LEVEL PRES. (IN) | 31 | 30.01 | 30.05 | 30.05 | 29.98 | 29.97 | 29.95 | 29.96 | 30.01 | 30.03 | 30.01 | 30.02 | 30.03 | 30.01 |
| WINDS | MEAN SPEED (MPH) | 31 | 8.4 | 8.4 | 8.4 | 8.9 | 8.0 | 7.0 | 6.5 | 6.3 | 6.7 | 7.5 | 8.3 | 8.1 | 7.7 |
| | PREVAIL.DIR(TENS OF DEGS) | 39 | 30 | 31 | 31 | 31 | 12 | 12 | 31 | 31 | 24 | 25 | 25 | 25 | 25 |
| | MAXIMUM 2-MINUTE: | | | | | | | | | | | | | | |
| | SPEED (MPH) | 18 | 31 | 33 | 38 | 38 | 36 | 33 | 34 | 31 | 38 | 36 | 38 | 36 | 38 |
| | DIR. (TENS OF DEGS) | | 02 | 24 | 09 | 16 | 19 | 19 | 18 | 22 | 19 | 25 | 20 | 22 | 09 |
| | YEAR OF OCCURRENCE | | 2005 | 2001 | 2007 | 1997 | 2011 | 2014 | 1997 | 2001 | 2002 | 2009 | 1998 | 2008 | MAR 2007 |
| | MAXIMUM 3-SECOND | | | | | | | | | | | | | | |
| | SPEED (MPH) | 18 | 47 | 49 | 49 | 52 | 45 | 47 | 41 | 43 | 46 | 55 | 56 | 54 | 56 |
| DIR. (TENS OF DEGS) | | 27 | 22 | 10 | 28 | 24 | 32 | 24 | 25 | 30 | 24 | 22 | 23 | 22 | |
| YEAR OF OCCURRENCE | | 2008 | 2001 | 2007 | 2002 | 2011 | 2011 | 2005 | 2009 | 1998 | 2009 | 1998 | 2008 | NOV 1998 | |
| PRECIPITATION | NORMAL (IN) | 30 | 1.66 | 1.32 | 1.86 | 2.39 | 2.67 | 2.62 | 3.03 | 3.23 | 2.92 | 2.61 | 2.10 | 1.75 | 28.16 |
| | MAXIMUM MONTHLY (IN) | 56 | 4.12 | 3.88 | 7.37 | 6.54 | 8.29 | 8.37 | 7.17 | 6.26 | 7.12 | 6.53 | 7.45 | 5.07 | 8.37 |
| | YEAR OF OCCURRENCE | | 1997 | 1997 | 1998 | 2011 | 1983 | 1969 | 1975 | 1994 | 1986 | 1991 | 1966 | 1996 | JUN 1969 |
| | MINIMUM MONTHLY (IN) | 56 | 0.16 | 0.12 | 0.34 | 1.18 | 0.90 | 0.20 | 0.22 | 0.92 | 0.28 | 0.61 | 0.61 | 0.39 | 0.12 |
| | YEAR OF OCCURRENCE | | 1961 | 1982 | 1993 | 1978 | 2005 | 1991 | 1989 | 1970 | 1979 | 1971 | 1986 | 1994 | FEB 1982 |
| | MAXIMUM IN 24 HOURS (IN) | 56 | 1.83 | 1.51 | 1.97 | 1.67 | 2.50 | 2.65 | 3.15 | 3.82 | 3.02 | 3.56 | 1.93 | 1.63 | 3.82 |
| | YEAR OF OCCURRENCE | | 1978 | 1997 | 1998 | 2014 | 1973 | 1969 | 1974 | 2014 | 1968 | 1998 | 1966 | 1971 | AUG 2014 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| PRECIPITATION >= 0.01 | 30 | 14.9 | 11.2 | 11.2 | 11.4 | 11.8 | 10.8 | 10.5 | 10.2 | 12.0 | 13.4 | 13.8 | 14.2 | 145.4 | |
| PRECIPITATION >= 1.00 | 30 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.6 | 0.7 | 0.6 | 0.3 | 0.2 | 0.1 | 3.5 | |
| SNOWFALL | NORMAL (IN) | 30 | 21.3 | 17.5 | 12.2 | 5.8 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 7.7 | 19.2 | 84.3 |
| | MAXIMUM MONTHLY (IN) | 48 | 43.5 | 35.3 | 35.8 | 16.7 | 3.7 | T | T | T | T | 4.3 | 34.8 | 48.1 | 48.1 |
| | YEAR OF OCCURRENCE | | 1978 | 2006 | 1971 | 2007 | 1974 | 2011 | 2007 | 1996 | 1995 | 1969 | 1995 | 2008 | DEC 2008 |
| | MAXIMUM IN 24 HOURS (IN) | 48 | 16.3 | 13.7 | 17.3 | 12.2 | 4.2 | 0.9 | T | T | T | 3.8 | 16.1 | 16.4 | 17.3 |
| | YEAR OF OCCURRENCE | | 1978 | 1994 | 1985 | 1992 | 1994 | 1994 | 1996 | 1991 | 1995 | 1969 | 1966 | 1989 | MAR 1985 |
| | MAXIMUM SNOW DEPTH (IN) | 46 | 610 | 632 | 566 | 59 | 3 | 0 | 0 | 0 | 0 | 3 | 111 | 451 | 632 |
| | YEAR OF OCCURRENCE | | 1979 | 1985 | 1962 | 1972 | 1994 | | | | | 1969 | 1995 | 1989 | FEB 1985 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| SNOWFALL >= 1.0 | 30 | 7.7 | 5.7 | 3.6 | 1.8 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 2.3 | 6.2 | 27.5 | |

PRECIPITATION (inches) 2014 ALPENA (KAPN)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1985 | 1.71 | 2.77 | 2.77 | 2.63 | 2.70 | 1.00 | 3.80 | 4.74 | 3.07 | 2.80 | 3.24 | 2.60 | 33.83 |
| 1986 | 1.04 | 1.06 | 2.30 | 1.86 | 2.41 | 3.36 | 5.28 | 1.83 | 7.12 | 2.83 | 0.61 | 0.95 | 30.65 |
| 1987 | 0.94 | 0.87 | 0.94 | 1.20 | 1.75 | 3.38 | 1.17 | 4.77 | 3.29 | 2.00 | 2.21 | 2.17 | 24.69 |
| 1988 | 1.51 | 1.04 | 2.72 | 3.25 | 0.99 | 0.84 | 2.61 | 4.48 | 1.50 | 3.43 | 3.54 | 1.24 | 27.15 |
| 1989 | 1.42 | 0.61 | 2.68 | 2.20 | 1.89 | 2.67 | 0.22 | 2.29 | 1.90 | 2.20 | 2.27 | 1.53 | 21.88 |
| 1990 | 2.44 | 1.17 | 2.89 | 2.32 | 2.88 | 4.18 | 3.69 | 2.35 | 1.58 | 3.07 | 2.89 | 1.79 | 31.25 |
| 1991 | 0.96 | 0.49 | 3.04 | 2.57 | 6.26 | 0.20 | 5.16 | 3.38 | 2.24 | 6.53 | 1.50 | 1.44 | 33.77 |
| 1992 | 1.70 | 1.70 | 1.50 | 2.61 | 1.10 | 1.69 | 3.37 | 2.65 | 2.53 | 2.34 | 4.01 | 1.24 | 26.44 |
| 1993 | 1.33 | 0.81 | 0.34 | 3.16 | 2.49 | 4.00 | 1.71 | 5.67 | 1.51 | 1.98 | 2.56 | 0.41 | 25.97 |
| 1994 | 1.95 | 1.04 | 1.29 | 2.64 | 1.58 | 3.23 | 5.53 | 6.26 | 1.61 | 1.38 | 2.90 | 0.39 | 29.80 |
| 1995 | 1.77 | 0.84 | 0.99 | 3.16 | 1.29 | 2.01 | 2.96 | 2.34 | 1.72 | 1.89 | 4.17 | 1.36 | 24.50 |
| 1996 | 1.42 | 1.51 | 0.49 | 2.78 | 1.20 | 2.29 | 4.06 | 1.75 | 6.16 | 2.37 | .76 | 5.07 | 29.86 |
| 1997 | 4.12 | 3.88 | 2.49 | 1.77 | 2.66 | 0.42 | 3.05 | 5.83 | 2.86 | 1.82 | 1.31 | 0.73 | 30.94 |
| 1998 | 3.73 | 0.82 | 7.37 | 1.24 | 2.36 | 2.91 | 1.09 | 2.47 | 2.92 | 4.61 | 2.24 | 1.41 | 33.17 |
| 1999 | 2.32 | 1.39 | 0.73 | 1.39 | 1.56 | 3.32 | 2.07 | 1.32 | 2.30 | 1.39 | 0.78 | 1.64 | 20.21 |
| 2000 | 1.69 | 2.05 | 0.92 | 1.65 | 3.82 | 2.75 | 1.34 | 1.38 | 3.60 | 0.87 | 3.22 | 0.67 | 23.96 |
| 2001 | 0.78 | 1.37 | 0.36 | 2.46 | 4.19 | 2.01 | 0.39 | 2.74 | 6.46 | 3.32 | 1.48 | 1.46 | 27.02 |
| 2002 | 0.39 | 1.82 | 2.11 | 2.66 | 3.87 | 2.95 | 3.72 | 1.99 | 1.24 | 2.20 | 1.32 | 0.53 | 24.80 |
| 2003 | 0.19 | 0.31 | 1.61 | 2.16 | 3.05 | 2.45 | 4.68 | 1.70 | 2.58 | 1.15 | 3.18 | 1.39 | 24.45 |
| 2004 | 0.73 | 0.50 | 1.25 | 2.17 | 4.89 | 1.62 | 3.96 | 2.21 | 0.40 | 2.76 | 1.61 | 1.90 | 24.00 |
| 2005 | 2.44 | 1.37 | 1.08 | 2.16 | 0.90 | 2.66 | 2.83 | 4.93 | 2.45 | 0.74 | 2.74 | 1.62 | 25.92 |
| 2006 | 2.87 | 1.74 | 1.66 | 1.78 | 3.67 | 2.47 | 2.80 | 4.12 | 2.81 | 4.02 | 2.09 | 2.48 | 32.51 |
| 2007 | 1.08 | 0.57 | 1.81 | 4.13 | 1.75 | 2.59 | 4.38 | 2.05 | 1.86 | 3.28 | 1.27 | 2.10 | 26.87 |
| 2008 | 3.30 | 1.88 | 1.27 | 2.08 | 1.91 | 4.71 | 4.86 | 1.20 | 3.79 | 1.36 | 1.72 | 3.85 | 31.93 |
| 2009 | 1.39 | 2.69 | 1.78 | 2.95 | 2.90 | 3.30 | 3.78 | 6.08 | 2.68 | 4.91 | 0.82 | 2.21 | 35.49 |
| 2010 | 0.42 | 0.70 | 0.43 | 1.97 | 2.85 | 5.38 | 4.27 | 2.62 | 4.10 | 1.81 | 0.77 | 1.33 | 26.65 |
| 2011 | 1.41 | 0.78 | 2.07 | 6.54 | 2.95 | 5.15 | 1.89 | 3.58 | 4.83 | 4.13 | 1.87 | 1.00 | 36.20 |
| 2012 | 1.77 | 1.71 | 1.88 | 1.50 | 2.00 | 4.27 | 2.15 | 2.72 | 1.64 | 4.56 | 0.85 | 2.84 | 27.89 |
| 2013 | 2.77 | 1.71 | 1.38 | 4.81 | 4.26 | 2.03 | 3.53 | 1.58 | 1.59 | 3.79 | 2.02 | 2.14 | 31.61 |
| 2014 | 1.45 | 1.08 | 1.17 | 5.49 | 2.31 | 1.18 | 3.91 | 5.31 | 4.15 | 3.57 | 3.49 | 1.69 | 34.80 |
| POR= 55 YRS | 1.69 | 1.33 | 1.88 | 2.51 | 2.76 | 2.88 | 3.01 | 3.27 | 2.97 | 2.42 | 2.13 | 1.87 | 28.72 |

WBAN : 94849

AVERAGE TEMPERATURE (°F) 2014 ALPENA (KAPN)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1985 | 16.3 | 17.6 | 30.5 | 44.8 | 53.7 | 58.5 | 65.8 | 63.9 | 59.1 | 46.8 | 35.3 | 19.6 | 42.7 |
| 1986 | 18.3 | 19.3 | 30.1 | 45.0 | 54.6 | 58.7 | 68.2 | 62.4 | 57.2 | 45.9 | 33.3 | 29.2 | 43.5 |
| 1987 | 23.2 | 22.4 | 32.5 | 44.9 | 55.5 | 65.3 | 70.4 | 65.6 | 59.8 | 43.4 | 38.0 | 29.4 | 45.9 |
| 1988 | 18.6 | 15.4 | 27.6 | 41.6 | 56.0 | 64.8 | 71.6 | 68.1 | 58.0 | 43.1 | 37.4 | 23.9 | 43.8 |
| 1989 | 25.7 | 16.8 | 23.9 | 39.2 | 53.7 | 60.8 | 68.7 | 64.8 | 56.2 | 47.8 | 31.1 | 12.5 | 41.8 |
| 1990 | 26.9 | 22.1 | 31.1 | 44.3 | 50.4 | 61.9 | 66.8 | 65.8 | 57.1 | 45.4 | 38.5 | 26.7 | 44.8 |
| 1991 | 18.6 | 26.2 | 31.2 | 45.4 | 58.4 | 65.6 | 67.7 | 68.3 | 55.5 | 47.9 | 33.9 | 25.0 | 45.3 |
| 1992 | 22.3 | 23.5 | 26.8 | 38.5 | 52.6 | 58.5 | 61.3 | 62.0 | 55.7 | 44.3 | 34.1 | 27.9 | 42.3 |
| 1993 | 21.5 | 16.1 | 26.8 | 39.1 | 51.4 | 59.8 | 69.5 | 67.8 | 52.2 | 43.7 | 34.6 | 25.9 | 42.4 |
| 1994 | 8.1 | 11.6 | 28.9 | 43.1 | 53.1 | 64.1 | 66.9 | 63.5 | 59.9 | 49.0 | 38.9 | 32.1 | 43.3 |
| 1995 | 24.0 | 16.8 | 32.0 | 37.9 | 53.1 | 65.6 | 68.6 | 68.5 | 55.2 | 49.0 | 29.4 | 20.6 | 43.4 |
| 1996 | 15.8 | 17.5 | 24.7 | 36.9 | 48.4 | 62.0 | 64.2 | 66.4 | 59.6 | 46.5 | 31.4 | 26.0 | 41.6 |
| 1997 | 17.4 | 20.7 | 26.1 | 39.1 | 46.0 | 64.4 | 66.1 | 62.0 | 57.6 | 46.0 | 33.0 | 29.4 | 42.3 |
| 1998 | 24.3 | 29.7 | 29.9 | 43.4 | 58.1 | 62.0 | 67.4 | 67.2 | 59.9 | 47.9 | 38.4 | 29.0 | 46.4 |
| 1999 | 18.1 | 24.6 | 28.9 | 43.2 | 54.4 | 65.0 | 70.1 | 63.3 | 58.4 | 45.8 | 40.5 | 26.5 | 44.9 |
| 2000 | 19.5 | 24.1 | 36.8 | 40.7 | 54.4 | 60.9 | 64.8 | 63.8 | 56.6 | 48.8 | 35.9 | 16.6 | 43.6 |
| 2001 | 23.6 | 20.5 | 27.4 | 44.1 | 56.9 | 64.5 | 67.0 | 69.3 | 57.2 | 47.2 | 42.8 | 32.2 | 46.1 |
| 2002 | 26.3 | 24.9 | 25.5 | 41.6 | 48.0 | 62.7 | 71.1 | 65.9 | 63.2 | 42.1 | 33.0 | 26.3 | 44.2 |
| 2003 | 16.3 | 13.4 | 26.9 | 37.5 | 50.0 | 60.3 | 66.6 | 67.5 | 57.6 | 45.1 | 37.3 | 27.5 | 42.2 |
| 2004 | 12.5 | 21.0 | 32.2 | 42.0 | 50.4 | 59.4 | 64.8 | 62.0 | 62.7 | 48.9 | 37.6 | 22.1 | 43.0 |
| 2005 | 16.9 | 23.6 | 23.8 | 42.7 | 49.5 | 67.6 | 68.8 | 66.6 | 61.5 | 49.9 | 37.3 | 22.7 | 44.2 |
| 2006 | 27.5 | 20.2 | 31.1 | 44.3 | 56.2 | 64.2 | 71.2 | 65.3 | 56.5 | 43.8 | 38.1 | 32.1 | 45.9 |
| 2007 | 23.3 | 14.2 | 31.9 | 40.3 | 55.5 | 65.5 | 66.6 | 67.5 | 61.3 | 53.1 | 33.9 | 23.6 | 44.7 |
| 2008 | 22.5 | 18.1 | 25.5 | 45.2 | 49.4 | 64.0 | 67.3 | 65.1 | 58.4 | 45.8 | 35.0 | 20.2 | 43.0 |
| 2009 | 12.0 | 20.5 | 28.3 | 41.2 | 51.2 | 60.3 | 63.0 | 64.6 | 59.0 | 44.3 | 40.6 | 23.8 | 42.4 |
| 2010 | 21.8 | 22.4 | 35.6 | 46.6 | 57.0 | 61.8 | 70.1 | 69.8 | 57.1 | 47.9 | 37.8 | 23.5 | 46.0 |
| 2011 | 14.3 | 20.8 | 25.5 | 39.1 | 53.3 | 61.6 | 72.2 | 67.6 | 57.2 | 48.2 | 40.0 | 29.3 | 44.1 |
| 2012 | 24.0 | 27.9 | 40.9 | 41.5 | 56.7 | 66.0 | 71.0 | 67.2 | 56.9 | 47.4 | 35.9 | 30.1 | 47.1 |
| 2013 | 23.1 | 20.4 | 28.0 | 38.4 | 53.6 | 62.4 | 67.2 | 66.1 | 56.9 | 47.1 | 33.5 | 17.2 | 42.8 |
| 2014 | 12.0 | 10.8 | 19.7 | 38.7 | 52.5 | 62.8 | 64.1 | 64.2 | 57.9 | 46.3 | 31.0 | 28.0 | 40.7 |
| POR= 55 YRS | 18.5 | 19.2 | 28.2 | 41.0 | 52.5 | 61.9 | 67.1 | 65.3 | 57.5 | 46.7 | 35.6 | 24.6 | 43.2 |

HEATING DEGREE DAYS (base 65°F) 2014 ALPENA (KAPN)

| YEAR | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-----|-----|-----|-------|
| 1985-86 | 50 | 88 | 217 | 554 | 885 | 1401 | 1441 | 1272 | 1075 | 594 | 338 | 209 | 8124 |
| 1986-87 | 43 | 105 | 240 | 588 | 945 | 1100 | 1289 | 1188 | 1002 | 594 | 332 | 75 | 7501 |
| 1987-88 | 45 | 64 | 164 | 660 | 805 | 1096 | 1431 | 1433 | 1151 | 697 | 290 | 112 | 7948 |
| 1988-89 | 8 | 77 | 213 | 673 | 824 | 1269 | 1211 | 1342 | 1268 | 769 | 345 | 147 | 8146 |
| 1989-90 | 16 | 90 | 272 | 525 | 1010 | 1621 | 1173 | 1194 | 1045 | 639 | 443 | 131 | 8159 |
| 1990-91 | 39 | 38 | 259 | 600 | 787 | 1181 | 1433 | 1080 | 1040 | 595 | 262 | 63 | 7377 |
| 1991-92 | 34 | 40 | 304 | 525 | 927 | 1233 | 1317 | 1197 | 1177 | 784 | 392 | 213 | 8143 |
| 1992-93 | 123 | 136 | 286 | 639 | 919 | 1144 | 1341 | 1362 | 1178 | 772 | 418 | 170 | 8488 |
| 1993-94 | 9 | 39 | 378 | 655 | 902 | 1207 | 1767 | 1491 | 1114 | 655 | 376 | 105 | 8698 |
| 1994-95 | 37 | 90 | 177 | 488 | 774 | 1014 | 1264 | 1344 | 1018 | 805 | 369 | 74 | 7454 |
| 1995-96 | 25 | 21 | 303 | 490 | 1059 | 1369 | 1518 | 1373 | 1243 | 839 | 521 | 137 | 8898 |
| 1996-97 | 53 | 32 | 191 | 564 | 1004 | 1202 | 1469 | 1231 | 1198 | 771 | 584 | 85 | 8384 |
| 1997-98 | 73 | 125 | 225 | 583 | 952 | 1097 | 1255 | 984 | 1081 | 640 | 235 | 156 | 7406 |
| 1998-99 | 24 | 36 | 171 | 525 | 790 | 1109 | 1448 | 1125 | 1110 | 645 | 339 | 100 | 7422 |
| 1999-00 | 18 | 89 | 208 | 586 | 727 | 1188 | 1404 | 1180 | 867 | 725 | 347 | 157 | 7496 |
| 2000-01 | 76 | 80 | 267 | 495 | 863 | 1493 | 1276 | 1242 | 1161 | 620 | 254 | 100 | 7927 |
| 2001-02 | 55 | 20 | 255 | 543 | 661 | 1011 | 1192 | 1115 | 1219 | 710 | 520 | 144 | 7445 |
| 2002-03 | 21 | 45 | 132 | 709 | 950 | 1192 | 1503 | 1439 | 1173 | 819 | 455 | 167 | 8605 |
| 2003-04 | 23 | 40 | 223 | 608 | 824 | 1153 | 1623 | 1270 | 1011 | 685 | 460 | 184 | 8104 |
| 2004-05 | 65 | 130 | 126 | 497 | 815 | 1322 | 1484 | 1151 | 1269 | 663 | 472 | 54 | 8048 |
| 2005-06 | 32 | 32 | 138 | 488 | 824 | 1303 | 1118 | 1251 | 1042 | 614 | 285 | 77 | 7204 |
| 2006-07 | 6 | 62 | 259 | 647 | 800 | 1011 | 1286 | 1417 | 1021 | 733 | 323 | 76 | 7641 |
| 2007-08 | 43 | 41 | 164 | 382 | 928 | 1275 | 1310 | 1357 | 1219 | 587 | 475 | 95 | 7876 |
| 2008-09 | 33 | 62 | 198 | 594 | 890 | 1382 | 1638 | 1241 | 1130 | 709 | 428 | 185 | 8490 |
| 2009-10 | 80 | 83 | 175 | 634 | 729 | 1271 | 1333 | 1186 | 901 | 546 | 284 | 114 | 7336 |
| 2010-11 | 10 | 25 | 251 | 522 | 811 | 1281 | 1566 | 1232 | 1221 | 769 | 368 | 123 | 8179 |
| 2011-12 | 2 | 14 | 254 | 519 | 746 | 1097 | 1265 | 1068 | 744 | 697 | 269 | 84 | 6759 |
| 2012-13 | 5 | 37 | 261 | 537 | 861 | 1075 | 1291 | 1243 | 1141 | 790 | 359 | 136 | 7736 |
| 2013-14 | 53 | 58 | 273 | 546 | 938 | 1474 | 1636 | 1511 | 1398 | 782 | 384 | 112 | 9165 |
| 2014- | 69 | 55 | 223 | 572 | 1014 | 1138 | | | | | | | |

WBAN : 94849

COOLING DEGREE DAYS (base 65°F) 2014 ALPENA (KAPN)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1985 | 0 | 0 | 0 | 14 | 9 | 8 | 81 | 61 | 46 | 0 | 0 | 0 | 219 |
| 1986 | 0 | 0 | 0 | 0 | 24 | 26 | 150 | 34 | 10 | 0 | 0 | 0 | 244 |
| 1987 | 0 | 0 | 0 | 0 | 46 | 91 | 218 | 88 | 13 | 0 | 0 | 0 | 456 |
| 1988 | 0 | 0 | 0 | 0 | 18 | 113 | 217 | 179 | 9 | 0 | 0 | 0 | 536 |
| 1989 | 0 | 0 | 0 | 0 | 1 | 26 | 134 | 89 | 16 | 0 | 0 | 0 | 266 |
| 1990 | 0 | 0 | 0 | 25 | 0 | 45 | 101 | 70 | 30 | 0 | 0 | 0 | 271 |
| 1991 | 0 | 0 | 0 | 11 | 65 | 88 | 125 | 150 | 25 | 2 | 0 | 0 | 466 |
| 1992 | 0 | 0 | 0 | 0 | 13 | 25 | 14 | 51 | 16 | 4 | 0 | 0 | 123 |
| 1993 | 0 | 0 | 0 | 0 | 3 | 21 | 153 | 130 | 5 | 0 | 0 | 0 | 312 |
| 1994 | 0 | 0 | 0 | 2 | 17 | 83 | 107 | 51 | 30 | 0 | 0 | 0 | 290 |
| 1995 | 0 | 0 | 0 | 0 | 7 | 99 | 146 | 136 | 15 | 2 | 0 | 0 | 405 |
| 1996 | 0 | 0 | 0 | 0 | 10 | 51 | 36 | 82 | 36 | 0 | 0 | 0 | 215 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 75 | 114 | 41 | 9 | 1 | 0 | 0 | 240 |
| 1998 | 0 | 0 | 0 | 0 | 28 | 71 | 105 | 111 | 26 | 0 | 0 | 0 | 341 |
| 1999 | 0 | 0 | 0 | 0 | 18 | 108 | 185 | 41 | 14 | 0 | 0 | 0 | 366 |
| 2000 | 0 | 0 | 0 | 0 | 28 | 42 | 75 | 49 | 22 | 0 | 0 | 0 | 216 |
| 2001 | 0 | 0 | 0 | 0 | 13 | 94 | 125 | 161 | 28 | 0 | 0 | 0 | 421 |
| 2002 | 0 | 0 | 0 | 16 | 2 | 82 | 218 | 83 | 85 | 10 | 0 | 0 | 496 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 33 | 83 | 122 | 9 | 0 | 0 | 0 | 247 |
| 2004 | 0 | 0 | 0 | 0 | 8 | 20 | 65 | 47 | 62 | 2 | 0 | 0 | 204 |
| 2005 | 0 | 0 | 0 | 0 | 2 | 138 | 155 | 89 | 40 | 29 | 0 | 0 | 453 |
| 2006 | 0 | 0 | 0 | 0 | 26 | 59 | 206 | 77 | 8 | 0 | 0 | 0 | 376 |
| 2007 | 0 | 0 | 0 | 0 | 35 | 97 | 98 | 125 | 60 | 23 | 0 | 0 | 438 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 72 | 111 | 74 | 7 | 3 | 0 | 0 | 267 |
| 2009 | 0 | 0 | 0 | 0 | 7 | 50 | 27 | 78 | 5 | 0 | 0 | 0 | 167 |
| 2010 | 0 | 0 | 0 | 0 | 42 | 23 | 178 | 184 | 20 | 0 | 0 | 0 | 447 |
| 2011 | 0 | 0 | 0 | 0 | 13 | 26 | 233 | 101 | 26 | 6 | 0 | 0 | 405 |
| 2012 | 0 | 0 | 6 | 0 | 20 | 118 | 201 | 113 | 24 | 0 | 0 | 0 | 482 |
| 2013 | 0 | 0 | 0 | 0 | 13 | 64 | 129 | 101 | 36 | 0 | 0 | 0 | 343 |
| 2014 | 0 | 0 | 0 | 0 | 5 | 55 | 51 | 39 | 18 | 0 | 0 | 0 | 168 |

SNOWFALL (inches) 2014 ALPENA (KAPN)

| YEAR | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|----------------|-----|-----|-----|-----|------|------|------|------|------|------|-----|-----|-------|
| 1985-86 | 0.0 | 0.0 | 0.0 | T | 15.4 | 27.7 | 17.2 | 16.0 | 12.6 | 3.6 | T | 0.0 | 92.5 |
| 1986-87 | 0.0 | 0.0 | 0.0 | 0.1 | 4.1 | 11.1 | 12.3 | 17.2 | 3.5 | 7.9 | 0.0 | 0.0 | 56.2 |
| 1987-88 | 0.0 | 0.0 | 0.0 | 0.7 | 6.6 | 16.2 | 13.6 | 22.7 | 21.5 | 5.2 | 0.0 | 0.0 | 86.5 |
| 1988-89 | 0.0 | 0.0 | 0.0 | 0.9 | 3.3 | 15.3 | 17.0 | 12.7 | 29.8 | 8.0 | 0.1 | 0.0 | 87.1 |
| 1989-90 | 0.0 | 0.0 | T | 0.7 | 19.1 | 41.3 | 25.0 | 16.4 | 2.8 | 10.3 | 0.3 | 0.0 | 115.9 |
| 1990-91 | 0.0 | T | 0.0 | 0.3 | 10.2 | 19.7 | 17.1 | 12.8 | 6.5 | 1.7 | 0.0 | 0.0 | 68.3 |
| 1991-92 | 0.0 | T | T | T | 2.7 | 26.6 | 16.5 | 21.3 | 5.3 | 12.7 | 0.0 | 0.0 | 85.1 |
| 1992-93 | 0.0 | 0.0 | 0.0 | 2.8 | 10.2 | 8.1 | 16.3 | 19.3 | 7.9 | 12.5 | T | 0.0 | 77.1 |
| 1993-94 | 0.0 | 0.0 | T | 0.2 | 2.7 | 4.7 | 43.0 | 21.3 | 9.4 | 4.8 | 0.2 | 0.0 | 86.3 |
| 1994-95 | 0.0 | 0.0 | 0.0 | T | 11.9 | 1.8 | 18.1 | 18.5 | 8.7 | 2.9 | 0.0 | 0.0 | 61.9 |
| 1995-96 | 0.0 | 0.0 | T | 0.2 | 34.8 | 25.0 | 20.8 | 15.8 | 8.4 | 8.1 | 0.9 | 0.0 | 114.0 |
| 1996-97 | T | T | 0.0 | 0.2 | 6.6 | | | | | | | | |
| 1997-98 | | | | | | | | | | | | | |
| 1998-99 | | | | | 4.7 | | | | | | | | |
| 1999-00 | | | | | 2.2 | 6.5 | 19.4 | 15.6 | 2.0 | | | | |
| 2000-01 | | | | | | | | | | | | | |
| 2001-02 | | | | | | | | | | | | | |
| 2002-03 | | | | | | | | | | | | | |
| 2003-04 | | | | | | | | | | | | | |
| 2004-05 | | | | | | | | | | | | | |
| 2005-06 | | | 0.0 | 0.0 | 8.5 | 23.1 | 15.3 | 35.3 | 0.9 | 1.7 | T | T | |
| 2006-07 | 0.0 | 0.0 | 0.0 | T | 5.2 | 12.1 | 22.9 | 13.0 | 11.6 | 16.7 | 0.0 | 0.0 | 81.5 |
| 2007-08 | T | 0.0 | 0.0 | 0.0 | 8.3 | 24.1 | 16.7 | 21.2 | 3.8 | 1.1 | 0.0 | 0.0 | 75.2 |
| 2008-09 | 0.0 | 0.0 | 0.0 | T | 12.4 | 48.1 | 30.0 | 22.6 | 10.5 | 0.1 | T | 0.0 | 123.7 |
| 2009-10 | 0.0 | 0.0 | 0.0 | T | 0.1 | 21.1 | 10.5 | 11.8 | T | T | 0.3 | 0.0 | 43.8 |
| 2010-11 | 0.0 | 0.0 | 0.0 | T | 0.6 | 22.9 | 25.9 | 12.6 | 21.1 | 11.1 | 0.0 | T | 94.2 |
| 2011-12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 5.0 | 20.7 | 20.2 | 7.2 | T | 0.0 | 0.0 | 53.3 |
| 2012-13 | 0.0 | 0.0 | 0.0 | T | 2.2 | 11.5 | 7.3 | 17.3 | 7.2 | 2.9 | T | 0.0 | 48.4 |
| 2013-14 | 0.0 | 0.0 | 0.0 | T | 2.6 | 24.4 | 15.5 | 13.0 | 7.3 | 1.2 | 0.0 | 0.0 | 64.0 |
| 2014- | 0.0 | 0.0 | 0.0 | T | 15.6 | 0.5 | | | | | | | |
| POR= 56 YRS | T | T | T | 0.4 | 7.3 | 17.0 | 18.4 | 14.5 | 10.2 | 4.1 | 0.2 | T | 72.1 |

WBAN : 94849

REFERENCE NOTES :

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| <p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.</p> <p>GENERAL CONTINUED: WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN</p> | <p>PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65 F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY. ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED STATION HISTORY INFORMATION GO TO "Historical Observing Metadata Repository", URL IS: http://www.ncdc.noaa.gov/homr/ SNOWFALL STOPPED MONTH & YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p>NOTE: The "Period of Record:(POR)" for all "averages" is based on "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p> |
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2014 ALPENA MICHIGAN (KAPN)

The city of Alpena lies on the northwest shore of Thunder Bay, 8 miles from the open waters of Lake Huron. Lake Huron and Thunder Bay lie at an elevation of 580 feet above sea level. Generally, the land slopes up westward from the lakeshore to 689 feet at the airport. Farther to the west and southwest the land becomes higher and more rolling. A range of hills with tops 1,000 to 1,350 feet lies northwest to southeast about 25 miles southwest of the station.

Summer showers moving from the southwest weaken and sometimes dissipate as they approach Alpena. Winter storms often bring winds with an easterly component. Precipitation from these is increased by moisture and instability picked up from Lake Huron and by forced upslope flow.

The climate of Alpena is influenced by its location with respect to major storm tracks and the effects of the Great Lakes. The normal wintertime storm track is south of the city, and most passing storms bring snow. Rain, freezing rain, and sleet are uncommon, but not unknown, in winter. In summer, most storms pass to the north, often bringing brief showers to the area, but occasionally, heavy thunderstorms with damaging winds occur. The Great Lakes modify most climatic extremes. Precipitation amounts are distributed evenly throughout the year. The lake effect is most pronounced in early winter, before ice forms. Minimum temperatures during this season are higher than would be expected at this latitude. But as nearby waters, particularly the Straits of Mackinac, freeze over, sub-zero temperatures become fairly common by February.

Summers in Alpena are warm and sunny. Brief showers usually occur every few days, often falling on only part of the area. Hailstorms average less than one a year. During prolonged heat waves the highest temperatures in Michigan often occur in the forest area southwest of Alpena. Winter months are cloudy and marked by frequent snow flurries. Storms bring heavier snowfall. Snow cover is sufficiently deep and persistent to provide good protection for grasses and winter grains.

The climate along the immediate Lake Huron shore is semi-maritime and lacks the temperature extremes experienced just a few miles inland. Maximum temperatures near the lake shore average 1.6 degrees lower than those at the airport, minimum temperatures average 5 degrees higher. Afternoon lake breezes which are strongest in the late spring and early summer cause lake shore maximum temperatures to average 3.6 degrees lower during the month of May.

Freezing temperatures have occurred as late as late June and as early as late August. Principal crops in the area are hay, potatoes, berries, and apples.

Prevailing winds are from the northwest except during May and June when southeast winds predominate. Southeast winds are common in the afternoon during all the summer months.

Station History

ALPENA, MI

| NAME | Begin Date | End Date | Latitude | Longitude | Elevation Feet | Relocation | Platform |
|-----------------------------|------------|------------|----------|-----------|----------------|------------|---------------|
| ALPENA PHELPS COLLINS AP | 1976-10-01 | 1981-12-31 | 45° 4' | -83° 34' | 689 | | COOP, WXSVC |
| ALPENA PHELPS COLLINS FIELD | 1959-08-25 | 1973-01-01 | 45° 4' | -83° 34' | 689 | | AIRWAYS, COOP |
| ALPENA COUNTY REGIONAL AP | 1996-04-01 | 2003-11-23 | 45° 4' | -83° 33' | 684 | 800 FT NE | ASOS, COOP |
| ALPENA COUNTY REGIONAL AP | 1993-01-01 | 1996-04-01 | 45° 4' | -83° 34' | 689 | | COOP |
| ALPENA AP | 1959-01-01 | 1959-08-25 | 45° 4' | -83° 34' | 689 | | AIRWAYS, COOP |
| ALPENA COUNTY REGIONAL AP | 2003-11-23 | 2007-04-17 | 45° 4' | -83° 33' | 684 | | ASOS, COOP |
| ALPENA PHELPS COLLINS FIELD | 1973-01-01 | 1976-10-01 | 45° 4' | -83° 34' | 689 | | COOP, WXSVC |
| ALPENA PHELPS COLLINS AP | 1981-12-31 | 1993-01-01 | 45° 4' | -83° 34' | 689 | | COOP |
| ALPENA COUNTY REGIONAL AP | 2007-04-17 | Present | 45° 4' | -83° 33' | 684 | | ASOS, COOP |

Element History

| Element | Begin Date | End Date | Frequency | Time Of Observation | Equipment * | Equipment * Modifications | Equipment Exposure |
|---------|------------|------------|-----------|---------------------|-------------|---------------------------|--------------------|
| PRECIP | 1982-01-01 | 1992-02-26 | HOURLY | 2400 | | | |
| PRECIP | 1995-07-01 | 1996-04-01 | DAILY | 2400 | UNIV | SHLD;RCRD | |
| TEMP | 2007-04-17 | 2007-05-04 | DAILY | 2400 | ATEMP | | |
| TEMP | 2010-09-30 | Present | DAILY | 2400 | ATEMP | | |
| TEMP | 1995-07-01 | 1996-04-01 | DAILY | 2400 | HYGR | | |
| PRECIP | 2007-04-17 | 2007-05-04 | DAILY | 2400 | PCPNX | | |
| PRECIP | 2007-04-17 | 2007-05-04 | HOURLY | 2400 | AWPAG | RCRD;HTD | |
| WIND | 2010-09-30 | Present | HOURLY | UNKN | ANEMSONIC | | |
| PRECIP | 1992-02-26 | 1992-07-23 | HOURLY | 2400 | | | |
| TEMP | 1992-07-23 | 1995-07-01 | DAILY | 2400 | HYGR | | |
| PRECIP | 1996-04-01 | 2007-04-17 | DAILY | 2400 | PCPNX | | |
| PRECIP | 1996-04-01 | 2007-04-17 | HOURLY | 2400 | AHTB | RCRD;HTD | |
| WIND | 2007-04-17 | 2007-05-04 | HOURLY | UNKN | ANEMCUP | | |
| PRECIP | 1992-02-26 | 1992-07-23 | DAILY | 2400 | UNIV | RCRD | |
| TEMP | 1959-01-01 | 1982-01-01 | DAILY | 2400 | | | |
| TEMP | 1992-02-26 | 1992-07-23 | DAILY | 2400 | HYGR | | |
| PRECIP | 1992-07-23 | 1995-07-01 | HOURLY | 2400 | | | |
| TEMP | 1996-04-01 | 2007-04-17 | DAILY | 2400 | ATEMP | | |
| PRECIP | 1982-01-01 | 1992-02-26 | DAILY | 2400 | UNIV | RCRD | |
| PRECIP | 1992-07-23 | 1995-07-01 | DAILY | 2400 | UNIV | SHLD;RCRD | |
| PRECIP | 1995-07-01 | 1996-04-01 | HOURLY | 2400 | UNIV | SHLD;RCRD | |
| WIND | 1996-04-01 | 2007-04-17 | HOURLY | UNKN | ANEMCUP | | |
| PRECIP | 2007-05-04 | 2010-09-30 | HOURLY | 2400 | AWPAG | RCRD;HTD | |
| PRECIP | 2007-05-04 | 2010-09-30 | DAILY | 2400 | PCPNX | | |
| PRECIP | 2010-09-30 | Present | HOURLY | 2400 | AWPAG | SHLD;RCRD;HTD | |
| TEMP | 1982-01-01 | 1992-02-26 | DAILY | 2400 | | | |
| PRECIP | 1959-01-01 | 1982-01-01 | DAILY | 2400 | UNIV | RCRD | |
| WIND | 2007-05-04 | 2010-09-30 | HOURLY | UNKN | ANEMSONIC | | |
| TEMP | 2007-05-04 | 2010-09-30 | DAILY | 2400 | ATEMP | | |
| PRECIP | 2010-09-30 | Present | DAILY | 2400 | PCPNX | SHLD | |

* For explanation of codes and abbreviations see Station Metadata link below.

Other Station Information can be found at:

ASOS Implementation by NWS: <http://www.nws.noaa.gov/ops2/Surface/asos2implementation.htm>

Station Metadata website: <http://www.ncdc.noaa.gov/homr>

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Fax Number : (828) 271-4876

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NOAA/National Climatic Data Center

Attn: User Engagement & Services Branch

151 Patton Avenue

Asheville, NC 28801-5001

Visit our Web Site for other weather data: www.ncdc.noaa.gov