

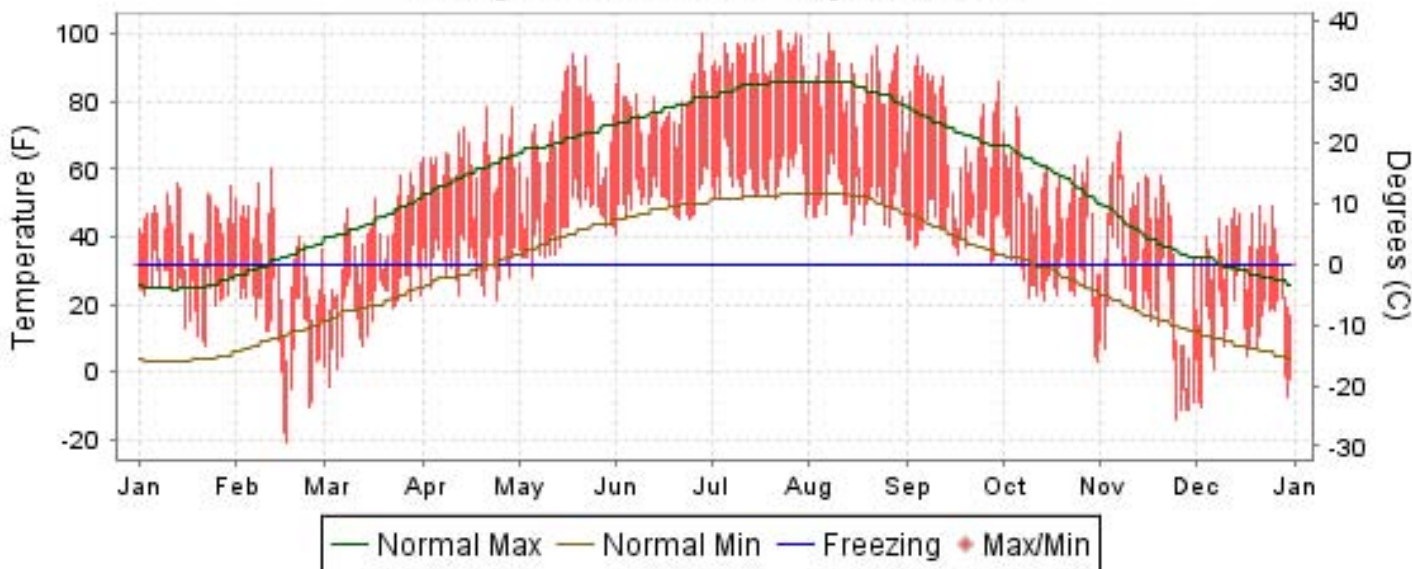


2006 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

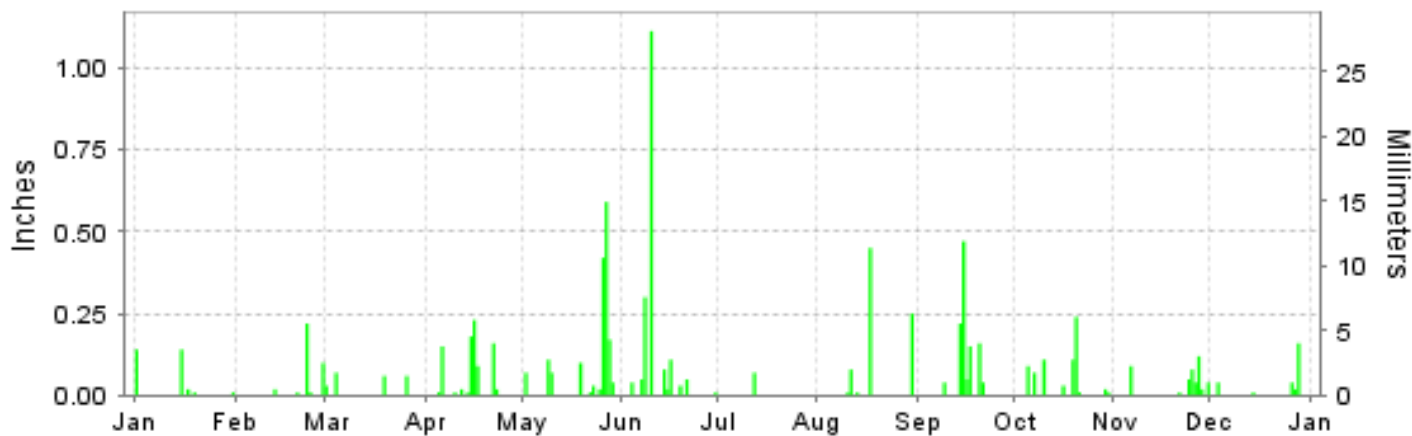
ISSN 0198-3008

HAVRE, MONTANA (KHVR)

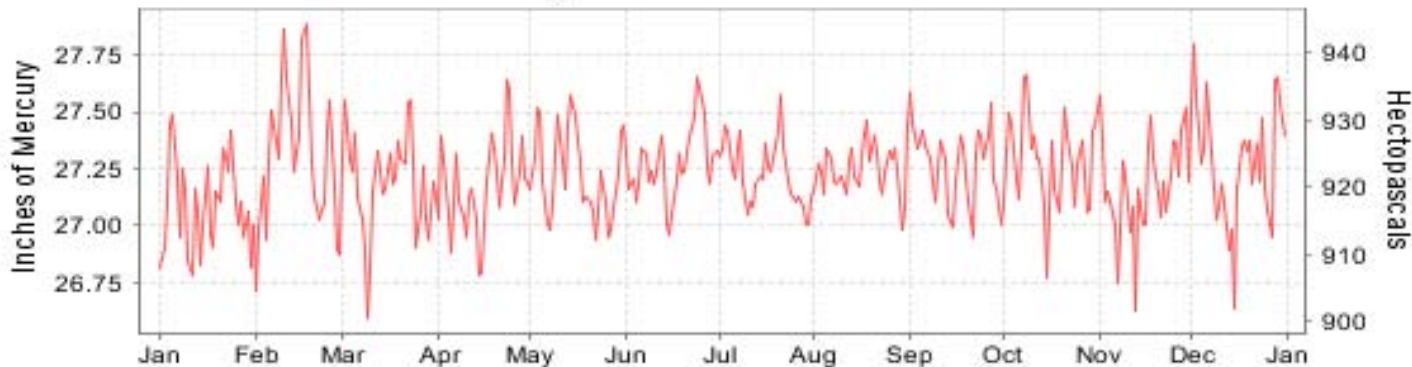
Daily Max/Min Temperature



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 2006

HAVRE (KHVR)

LATITUDE: 48° 33'N LONGITUDE: -109° 46'W ELEVATION (FT): GRND: 2585 BARO: 2584 TIME ZONE: MOUNTAIN (UTC -7) WBAN: 94012

| ELEMENT | | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR | |
|--------------------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----|
| TEMPERATURE °F | MEAN DAILY MAXIMUM | 44.0 | 35.4 | 40.4 | 62.6 | 71.3 | 79.2 | 93.5 | 85.5 | 73.1 | 53.7 | 42.0 | 35.3 | 59.7 | |
| | HIGHEST DAILY MAXIMUM | 56 | 60 | 62 | 78 | 94 | 100 | 101 | 100 | 93 | 78 | 71 | 49 | 101 | |
| | DATE OF OCCURRENCE | 13 | 12 | 31 | 29+ | 18 | 28 | 23+ | 07 | 04 | 05 | 07 | 25+ | JUL 23+ | |
| | MEAN DAILY MINIMUM | 23.5 | 11.8 | 19.0 | 32.1 | 42.6 | 50.8 | 57.5 | 51.1 | 41.7 | 28.2 | 17.7 | 12.5 | 32.4 | |
| | LOWEST DAILY MINIMUM | 8 | -21 | -4 | 21 | 28 | 41 | 46 | 41 | 32 | 3 | -14 | -10 | -21 | |
| | DATE OF OCCURRENCE | 22 | 17 | 02 | 24 | 05 | 01 | 31 | 14 | 27 | 31 | 25 | 03 | FEB 17 | |
| | AVERAGE DRY BULB | 33.8 | 23.6 | 29.7 | 47.4 | 57.0 | 65.0 | 75.5 | 68.3 | 57.4 | 41.0 | 29.9 | 23.9 | 46.0 | |
| | MEAN WET BULB | 29.7 | | 26.5 | 40.5 | | 55.2 | 58.3 | 53.8 | 47.4 | 35.7 | 26.0 | 21.8 | | |
| | MEAN DEW POINT | 23.7 | | 21.2 | 31.6 | | 47.1 | 44.3 | 40.1 | 37.9 | 29.2 | 18.2 | 16.3 | | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| | MAXIMUM >= 90° | 0 | 0 | 0 | 0 | 0 | 3 | 23 | 11 | 3 | 0 | 0 | 0 | 0 | 40 |
| | MAXIMUM <= 32° | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 11 | 32 | |
| MINIMUM <= 32° | 30 | 28 | 30 | 15 | 1 | 0 | 0 | 0 | 1 | 24 | 24 | 31 | 184 | | |
| MINIMUM <= 0° | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 18 | | |
| H/C | HEATING DEGREE DAYS | 962 | 1154 | 1087 | 523 | 277 | 58 | 1 | 28 | 233 | 739 | 1047 | 1266 | 7375 | |
| | COOLING DEGREE DAYS | 0 | 0 | 0 | 0 | 36 | 64 | 334 | 138 | 14 | 0 | 0 | 0 | 586 | |
| RH | MEAN (PERCENT) | 69 | 65 | 74 | 59 | 55 | 58 | 37 | 41 | 56 | 67 | 63 | 72 | 60 | |
| | HOUR 05 LST | 78 | 73 | 84 | 82 | 77 | 76 | 57 | 64 | 78 | 81 | 68 | 77 | 75 | |
| | HOUR 11 LST | 60 | 52 | 62 | 40 | 38 | 40 | 23 | 28 | 41 | 54 | 54 | 62 | 46 | |
| | HOUR 17 LST | 68 | 61 | 64 | 39 | 38 | 44 | 22 | 24 | 42 | 60 | 63 | 71 | 50 | |
| | HOUR 23 LST | 72 | 73 | 82 | 72 | 67 | 70 | 47 | 51 | 64 | 78 | 67 | 78 | 68 | |
| S | PERCENT POSSIBLE SUNSHINE | | | | | | | | | | | | | | |
| W/O | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| | HEAVY FOG(VISBY <= 1/4 MI) | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 3 | 13 | |
| | THUNDERSTORMS | 0 | 0 | 0 | 1 | 4 | 8 | 15 | 8 | 3 | 2 | 0 | 0 | 41 | |
| CLOUDNESS | SUNRISE-SUNSET: (OKTAS) | | | | | | | | | | | | | | |
| | CEILOMETER (<= 12,000 FT.) | | | | | | | | | | | | | | |
| | SATELLITE (> 12,000 FT.) | | | | | | | | | | | | | | |
| | MIDNIGHT-MIDNIGHT: (OKTAS) | | | | | | | | | | | | | | |
| | CEILOMETER (<= 12,000 FT.) | | | | | | | | | | | | | | |
| SATELLITE (> 12,000 FT.) | | | | | | | | | | | | | | | |
| NUMBER OF DAYS WITH: | | | | | | | | | | | | | | | |
| CLEAR | | | | | | | | | | | | | | | |
| PARTLY CLOUDY | | | | | | | | | | | | | | | |
| CLOUDY | | | | | | | | | | | | | | | |
| PR | MEAN STATION PRESS. (IN.) | 27.09 | 27.31 | 27.21 | 27.18 | 27.22 | 27.27 | 27.24 | 27.25 | 27.27 | 27.28 | 27.18 | 27.29 | 27.23 | |
| | MEAN SEA-LEVEL PRESS. (IN.) | 29.86 | 30.13 | 30.00 | 29.91 | | 29.96 | 29.89 | 29.92 | 29.97 | 30.03 | 29.98 | 30.10 | | |
| WINDS | RESULTANT SPEED (MPH) | 8.7 | 5.9 | 2.8 | 2.3 | | 1.7 | 1.5 | 2.2 | 2.4 | 3.4 | 7.3 | 7.2 | | |
| | RES. DIR. (TENS OF DEGS.) | 23 | 24 | 07 | 25 | | 22 | 24 | 25 | 28 | 25 | 23 | 24 | | |
| | MEAN SPEED (MPH) | 10.9 | 11.3 | 10.8 | 9.5 | 10.2 | 11.0 | 9.8 | 8.1 | 9.4 | 10.1 | 12.3 | 10.7 | 10.3 | |
| | PREVAIL.DIR.(TENS OF DEGS.) | 21 | 22 | 07 | 22 | 22 | 22 | 26 | 23 | 22 | 22 | 22 | 23 | 21 | |
| | MAXIMUM 2-MINUTE WIND | | | | | | | | | | | | | | |
| | SPEED (MPH) | 37 | 44 | 35 | 37 | 38 | 58 | 41 | 36 | 35 | 38 | 52 | 46 | 58 | |
| | DIR. (TENS OF DEGS.) | 25 | 26 | 24 | 21 | 30 | 21 | 22 | 27 | 24 | 25 | 25 | 26 | 21 | |
| | DATE OF OCCURRENCE | 26 | 01 | 09 | 15 | 08 | 04 | 12 | 30 | 30 | 26 | 13 | 13 | JUN 04 | |
| | MAXIMUM 5-SECOND WIND: | | | | | | | | | | | | | | |
| | SPEED (MPH) | 41 | 54 | 41 | 47 | 45 | 76 | 51 | 43 | 39 | 45 | 59 | 52 | 76 | |
| DIR. (TENS OF DEGS.) | 21 | 26 | 23 | 21 | 28 | 22 | 22 | 27 | 25 | 25 | 26 | 26 | 22 | | |
| DATE OF OCCURRENCE | 30 | 01 | 09 | 15 | 02 | 04 | 12 | 30 | 30 | 26 | 13 | 13 | JUN 04 | | |
| PRECIPITATION | WATER EQUIVALENT: | | | | | | | | | | | | | | |
| | TOTAL (IN.) | 0.32 | 0.36 | 0.22 | 0.88 | 1.63 | 1.80 | 0.07 | 0.80 | 1.13 | 0.69 | 0.45 | 0.27 | 8.62 | |
| | GREATEST 24-HOUR (IN.) | 0.14 | 0.23 | 0.07 | 0.30 | 0.74 | 1.11 | 0.07 | 0.45 | 0.69 | 0.35 | 0.15 | 0.18 | 1.11 | |
| | DATE OF OCCURRENCE | 15 | 23-24 | 04 | 16-17 | 27-28 | 10 | 12 | 17 | 14-15 | 19-20 | 26-27 | 27-28 | JUN 10 | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| PRECIPITATION 0.01 | 5 | 5 | 4 | 10 | 11 | 10 | 1 | 5 | 7 | 9 | 8 | 5 | 80 | | |
| PRECIPITATION 0.10 | 2 | 2 | 1 | 4 | 5 | 3 | 0 | 2 | 4 | 3 | 1 | 1 | 28 | | |
| PRECIPITATION 1.00 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | |
| SNOWFALL | SNOW,ICE PELLETS,HAIL | | | | | | | | | | | | | | |
| | TOTAL (IN.) | 5.5 | 7.5 | 5.7 | T | T | 0.0 | 0.0 | 0.0 | T | 1.2 | 7.3 | 5.4 | 32.6 | |
| | GREATEST 24-HOUR (IN.) | 4.2 | 3.4 | 2.0 | T | T | 0.0 | 0.0 | 0.0 | T | 0.5 | 3.0 | 5.0 | 5.0 | |
| | DATE OF OCCURRENCE | 15 | 24 | 01 | 17 | 02 | | | | 17 | 29+ | 27 | 28 | DEC 28 | |
| | MAXIMUM SNOW DEPTH (IN.) | 4 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | T | 5 | 5 | 6 | |
| | DATE OF OCCURRENCE | 15 | 24 | 05+ | | | | | | | 30 | 30+ | 31+ | FEB 24 | |
| NUMBER OF DAYS WITH: | | | | | | | | | | | | | | | |
| SNOWFALL >= 1.0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | | |

NORMALS, MEANS, AND EXTREMES HAVRE (KHVR)

LATITUDE:
48 ° 33'N

LONGITUDE:
-109 ° 46'W

ELEVATION (FT):
GRND: 2585 BARO: 2584

TIME ZONE:
MOUNTAIN (UTC -7)

WBAN: 94012

| | ELEMENT | POR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR |
|--|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|
| TEMPERATURE °F | NORMAL DAILY MAXIMUM | 30 | 25.5 | 33.4 | 44.9 | 58.5 | 68.8 | 77.4 | 84.6 | 83.9 | 71.9 | 59.4 | 40.8 | 30.1 | 56.6 |
| | MEAN DAILY MAXIMUM | 39 | 26.0 | 32.9 | 43.5 | 57.1 | 67.4 | 75.8 | 84.2 | 83.0 | 70.6 | 58.9 | 41.8 | 30.5 | 56.0 |
| | HIGHEST DAILY MAXIMUM | 7 | 64 | 64 | 79 | 91 | 96 | 100 | 105 | 109 | 96 | 84 | 78 | 61 | 109 |
| | YEAR OF OCCURRENCE | | 2005 | 2002 | 2004 | 2001 | 2001 | 2006 | 2003 | 2001 | 2003 | 2004 | 1999 | 2002 | AUG 2001 |
| | MEAN OF EXTREME MAXS. | 39 | 51.4 | 54.9 | 67.1 | 78.3 | 86.4 | 93.8 | 99.0 | 98.5 | 91.1 | 80.8 | 65.3 | 53.3 | 76.7 |
| | NORMAL DAILY MINIMUM | 30 | 3.7 | 10.4 | 20.0 | 30.0 | 40.2 | 48.0 | 52.0 | 51.3 | 40.7 | 29.8 | 17.3 | 7.8 | 29.3 |
| | MEAN DAILY MINIMUM | 39 | 4.5 | 10.4 | 20.0 | 30.7 | 40.6 | 48.4 | 53.0 | 51.8 | 41.3 | 30.9 | 18.3 | 8.4 | 29.9 |
| | LOWEST DAILY MINIMUM | 7 | -34 | -31 | -27 | 4 | 14 | 35 | 39 | 34 | 21 | -2 | -14 | -30 | -34 |
| | YEAR OF OCCURRENCE | | 2005 | 2003 | 2002 | 2002 | 2005 | 2004 | 2000 | 2002 | 2000 | 2003 | 2006 | 2000 | JAN 2005 |
| | MEAN OF EXTREME MINS. | 39 | -22.4 | -15.1 | -4.1 | 14.0 | 27.6 | 36.7 | 42.7 | 40.2 | 27.6 | 12.9 | -6.5 | -20.1 | 11.1 |
| | NORMAL DRY BULB | 30 | 14.6 | 21.9 | 32.5 | 44.3 | 54.5 | 62.7 | 68.3 | 67.6 | 56.3 | 44.6 | 29.1 | 19.0 | 43.0 |
| | MEAN DRY BULB | 7 | 20.2 | 22.4 | 31.7 | 45.1 | 53.6 | 61.9 | 71.3 | 68.7 | 56.8 | 43.6 | 32.2 | 23.4 | 44.2 |
| | MEAN WET BULB | 17 | 18.1 | 19.5 | 29.0 | 37.5 | 45.0 | 51.4 | 54.6 | 53.3 | 45.4 | 36.1 | 26.0 | 19.9 | 36.3 |
| | MEAN DEW POINT | 17 | 12.9 | 13.0 | 22.9 | 29.1 | 35.4 | 43.9 | 46.0 | 44.7 | 37.8 | 28.8 | 20.5 | 14.3 | 29.1 |
| | NORMAL NO. DAYS WITH: MAXIMUM >= 90 | 30 | 0.0 | 0.0 | 0.0 | * | 0.3 | 3.3 | 9.1 | 9.4 | 2.0 | * | 0.0 | 0.0 | 24.1 |
| | MAXIMUM <= 32 | 30 | 16.7 | 11.3 | 5.8 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 7.6 | 14.4 | 57.6 |
| | MINIMUM <= 32 | 30 | 29.5 | 26.3 | 27.2 | 15.7 | 2.9 | 0.1 | 0.0 | 0.0 | 3.6 | 17.0 | 26.5 | 29.6 | 178.4 |
| MINIMUM <= 0 | 30 | 12.7 | 7.6 | 2.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 3.5 | 8.5 | 35.1 | |
| H/C | NORMAL HEATING DEG. DAYS | 30 | 1547 | 1201 | 999 | 613 | 324 | 113 | 33 | 49 | 270 | 622 | 1067 | 1412 | 8250 |
| | NORMAL COOLING DEG. DAYS | 30 | 0 | 0 | 0 | 1 | 10 | 59 | 146 | 141 | 19 | 1 | 0 | 0 | 377 |
| RH | NORMAL (PERCENT) | 30 | 72 | 70 | 68 | 56 | 54 | 54 | 50 | 49 | 56 | 61 | 71 | 70 | 61 |
| | HOURLY 05 LST | 30 | 75 | 76 | 80 | 74 | 73 | 75 | 72 | 70 | 73 | 74 | 76 | 74 | 74 |
| | HOURLY 11 LST | 30 | 70 | 66 | 60 | 47 | 45 | 43 | 38 | 40 | 46 | 51 | 64 | 68 | 53 |
| | HOURLY 17 LST | 30 | 69 | 63 | 52 | 40 | 38 | 37 | 31 | 30 | 36 | 44 | 62 | 68 | 48 |
| | HOURLY 23 LST | 30 | 74 | 75 | 74 | 63 | 61 | 64 | 58 | 54 | 62 | 66 | 74 | 74 | 67 |
| S | PERCENT POSSIBLE SUNSHINE | | | | | | | | | | | | | | |
| W/O | MEAN NO. DAYS WITH: HEAVY FOG (VISBY <= 1/4 MI) | 31 | 1.1 | 1.4 | 1.7 | 1.0 | 0.4 | 0.1 | 0.1 | 0.2 | 0.3 | 1.1 | 1.4 | 1.1 | 9.9 |
| | THUNDERSTORMS | 33 | 0.0 | 0.0 | 0.1 | 0.7 | 2.7 | 6.0 | 7.1 | 5.6 | 1.6 | 0.3 | 0.0 | 0.0 | 24.1 |
| CLOUDNESS | MEAN: SUNRISE-SUNSET (OKTAS) | | | | | | | | | | | | | | |
| | MIDNIGHT-MIDNIGHT (OKTAS) | | | | | | | | | | | | | | |
| | MEAN NO. DAYS WITH: CLEAR | | | | | | | | | | | | | | |
| | PARTLY CLOUDY CLOUDY | | | | | | | | | | | | | | |
| PR | MEAN STATION PRESSURE (IN) | 17 | 27.29 | 27.28 | 27.23 | 27.22 | 27.20 | 27.21 | 27.24 | 27.27 | 27.27 | 27.27 | 27.26 | 27.26 | 27.25 |
| | MEAN SEA-LEVEL PRES. (IN) | 17 | 30.12 | 30.10 | 30.01 | 29.96 | 29.91 | 29.90 | 29.92 | 29.95 | 29.99 | 30.02 | 30.05 | 30.08 | 30.00 |
| WINDS | MEAN SPEED (MPH) | 17 | 9.0 | 8.6 | 9.3 | 9.8 | 10.1 | 9.4 | 8.2 | 8.1 | 8.5 | 8.7 | 9.3 | 9.6 | 9.1 |
| | PREVAIL. DIR. (TENS OF DEGS) | 1 | 21 | 22 | 07 | 22 | 22 | 22 | 26 | 23 | 22 | 22 | 22 | 23 | 21 |
| | MAXIMUM 2-MINUTE: SPEED (MPH) | 7 | 46 | 45 | 45 | 49 | 46 | 58 | 51 | 49 | 44 | 60 | 52 | 46 | 60 |
| | DIR. (TENS OF DEGS) | | 25 | 30 | 26 | 28 | 31 | 21 | 21 | 26 | 31 | 27 | 25 | 26 | 27 |
| | YEAR OF OCCURRENCE | | 2003 | 2002 | 2004 | 2002 | 2001 | 2006 | 2002 | 2004 | 2002 | 1999 | 2006 | 2006 | OCT 1999 |
| | MAXIMUM 5-SECOND SPEED (MPH) | 7 | 55 | 54 | 53 | 60 | 61 | 76 | 62 | 63 | 55 | 69 | 59 | 53 | 76 |
| | DIR. (TENS OF DEGS) | | 25 | 26 | 25 | 32 | 32 | 22 | 22 | 26 | 24 | 26 | 26 | 30 | 22 |
| YEAR OF OCCURRENCE | | 2003 | 2006 | 2004 | 2003 | 2001 | 2006 | 2001 | 2004 | 2004 | 1999 | 2006 | 2001 | JUN 2006 | |
| PRECIPITATION | NORMAL (IN) | 30 | 0.47 | 0.36 | 0.70 | 0.87 | 1.84 | 1.90 | 1.51 | 1.20 | 1.03 | 0.62 | 0.45 | 0.51 | 11.46 |
| | MAXIMUM MONTHLY (IN) | 7 | 0.32 | 0.36 | .62 | 1.96 | 3.50 | 5.13 | 2.97 | 2.40 | 1.36 | .98 | .70 | .42 | 5.13 |
| | YEAR OF OCCURRENCE | | 2006 | 2006 | 2005 | 2003 | 2004 | 2005 | 2001 | 2002 | 2003 | 2005 | 2005 | 2005 | JUN 2005 |
| | MINIMUM MONTHLY (IN) | 7 | 0.03 | 0.01 | 0.07 | 0.18 | 0.61 | 0.59 | 0.07 | 0.13 | 0.33 | 0.40 | 0.04 | 0.01 | 0.01 |
| | YEAR OF OCCURRENCE | | 2005 | 2005 | 2001 | 2002 | 2001 | 2000 | 2006 | 2000 | 2001 | 2002 | 2001 | 2001 | FEB 2005 |
| | MAXIMUM IN 24 HOURS (IN) | 7 | 0.16 | 0.23 | 0.19 | 0.94 | 1.09 | 1.66 | 1.79 | 1.40 | 0.89 | 0.58 | .41 | 0.18 | 1.79 |
| | YEAR OF OCCURRENCE | | 2003 | 2006 | 2000 | 2003 | 2004 | 2002 | 2002 | 2002 | 2003 | 1999 | 2005 | 2006 | JUL 2002 |
| | NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01 | 30 | 7.4 | 5.8 | 7.9 | 7.5 | 9.7 | 10.4 | 7.9 | 7.8 | 7.0 | 5.4 | 6.1 | 7.0 | 89.9 |
| PRECIPITATION >= 1.00 | 30 | 0.0 | 0.0 | * | * | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 1.0 | |
| SNOWFALL | NORMAL (IN) | 30 | 8.8 | 6.5 | 8.1 | 4.8 | 1.5 | 0.0 | 0.0 | 0.* | 0.3 | 2.4 | 5.4 | 7.6 | 45.4 |
| | MAXIMUM MONTHLY (IN) | 2 | 5.5 | 7.5 | 12.1 | 2.7 | 3.6 | 0.0 | 0.0 | 0.0 | T | 2.8 | 7.3 | 9.5 | 12.1 |
| | YEAR OF OCCURRENCE | | 2006 | 2006 | 2005 | 2004 | 2004 | | | | 2006 | 2004 | 2006 | 2004 | MAR 2005 |
| | MAXIMUM IN 24 HOURS (IN) | 2 | 2.1 | .2 | 3.8 | 2.7 | 3.1 | 0.0 | 0.0 | 0.0 | T | 1.7 | 4.0 | 4.8 | 4.8 |
| | YEAR OF OCCURRENCE | | 2005 | 2005 | 2005 | 2004 | 2004 | | | | 2006 | 2004 | 2005 | 2005 | DEC 2005 |
| | MAXIMUM SNOW DEPTH (IN) | 2 | 6 | 6 | 4 | 2 | 3 | 0 | 0 | 0 | 0 | 2 | 5 | 9 | 9 |
| | YEAR OF OCCURRENCE | | 2005 | 2006 | 2006 | 2004 | 2004 | | | | 2004 | 2006 | 2005 | 2005 | DEC 2005 |
| NORMAL NO. DAYS WITH: SNOWFALL >= 1.0 | 30 | 2.7 | 2.4 | 2.2 | 1.4 | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.8 | 2.0 | 2.7 | 14.6 | |

PRECIPITATION (inches) 2006 HAVRE (KHVR)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1999 | | | 0.19 | 1.39 | 1.80 | 3.27 | 0.39 | 1.01 | 1.21 | 0.87 | 0.18 | 0.02 | |
| 2000 | 0.15 | 0.11 | 0.44 | 0.54 | 2.06 | 0.59 | 1.79 | 0.13 | 0.93 | 0.64 | 0.18 | 0.15 | 7.71 |
| 2001 | 0.23 | 0.09 | 0.07 | 0.62 | 0.61 | 1.45 | 2.97 | 0.18 | 0.33 | 0.34 | 0.04 | 0.01 | 6.94 |
| 2002 | 0.25 | 0.19 | 0.20 | 0.18 | 1.59 | 4.64 | 2.31 | 2.40 | 1.16 | 0.40 | 0.29 | 0.08 | 13.69 |
| 2003 | 0.22 | 0.14 | 0.20 | 1.96 | 1.65 | 2.39 | 0.42 | 0.77 | 1.36 | 0.37 | 0.09 | 0.24 | 9.81 |
| 2004 | 0.19 | 0.05 | 0.09 | 0.76 | 3.50 | 2.06 | 1.08 | 1.50 | 1.36 | 0.67 | 0.10 | 0.16 | 11.52 |
| 2005 | 0.03 | 0.01 | 0.62 | 0.49 | 0.85 | 5.13 | 0.37 | 1.10 | 0.50 | 0.98 | 0.70 | 0.42 | 11.20 |
| 2006 | 0.32 | 0.36 | 0.22 | 0.88 | 1.63 | 1.80 | 0.07 | 0.80 | 1.13 | 0.69 | 0.45 | 0.27 | 8.62 |
| POR= 7 YRS | 0.20 | 0.14 | 0.25 | 0.85 | 1.71 | 2.67 | 1.18 | 0.99 | 1.00 | 0.62 | 0.25 | 0.17 | 10.03 |

WBAN : 94012

AVERAGE TEMPERATURE (°F) 2006 HAVRE (KHVR)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1999 | | | 37.7 | 42.7 | 52.5 | 60.1 | 65.5 | 69.8 | 54.0 | 45.8 | 38.2 | 32.4 | |
| 2000 | 16.1 | 23.7 | 36.1 | 45.0 | 54.2 | 60.7 | 71.2 | 69.3 | 56.9 | 42.8 | 25.8 | 13.6 | 43.0 |
| 2001 | 24.9 | 11.4 | 36.7 | 46.7 | 60.2 | 65.5 | 74.2 | 74.6 | 60.7 | 43.9 | 36.4 | 21.2 | 46.4 |
| 2002 | 21.6 | 28.0 | 12.6 | 39.1 | 49.9 | 61.4 | 70.8 | 63.5 | 56.7 | 37.7 | 36.2 | 27.8 | 42.1 |
| 2003 | 20.8 | 19.6 | 27.7 | 47.2 | 52.7 | 62.6 | 73.0 | 73.3 | 55.9 | 49.2 | 21.2 | 24.0 | 43.9 |
| 2004 | 11.3 | 17.9 | 38.5 | 47.2 | 49.8 | 58.9 | 69.2 | 65.2 | 56.1 | 42.8 | 34.6 | 26.1 | 43.1 |
| 2005 | 12.7 | 28.3 | 34.9 | 45.5 | 52.0 | 61.3 | 70.6 | 65.5 | 56.6 | 46.1 | 35.3 | 18.4 | 43.9 |
| 2006 | 33.8 | 23.6 | 29.7 | 47.4 | 57.0 | 65.0 | 75.5 | 68.3 | 57.4 | 41.0 | 29.9 | 23.9 | 46.0 |
| POR= 7 YRS | 20.2 | 22.4 | 31.7 | 45.1 | 53.6 | 61.9 | 71.3 | 68.7 | 56.8 | 43.6 | 32.2 | 23.4 | 44.2 |

HEATING DEGREE DAYS (base 65°F) 2006 HAVRE (KHVR)

| YEAR | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-----|-----|-----|-------|
| 1998-99 | | | | | | | | | 841 | 660 | 389 | 153 | |
| 1999-00 | 85 | 17 | 333 | 586 | 799 | 1002 | 1508 | 1192 | 889 | 593 | 330 | 147 | 7481 |
| 2000-01 | 9 | 38 | 254 | 683 | 1170 | 1585 | 1236 | 1496 | 870 | 545 | 187 | 72 | 8145 |
| 2001-02 | 4 | 2 | 146 | 646 | 848 | 1352 | 1340 | 1032 | 1617 | 771 | 464 | 165 | 8387 |
| 2002-03 | 20 | 90 | 259 | 840 | 859 | 1146 | 1365 | 1262 | 1152 | 525 | 384 | 127 | 8029 |
| 2003-04 | 10 | 21 | 303 | 495 | 1306 | 1262 | 1656 | 1358 | 814 | 530 | 465 | 189 | 8409 |
| 2004-05 | 23 | 62 | 272 | 681 | 906 | 1197 | 1617 | 1023 | 928 | 577 | 397 | 137 | 7820 |
| 2005-06 | 11 | 82 | 257 | 581 | 883 | 1438 | 962 | 1154 | 1087 | 523 | 277 | 58 | 7313 |
| 2006- | 1 | 28 | 233 | 739 | 1047 | 1266 | | | | | | | |

WBAN : 94012

COOLING DEGREE DAYS (base 65°F) 2006 HAVRE (KHVR)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1999 | | | 0 | 0 | 9 | 12 | 108 | 175 | 10 | 0 | 0 | 0 | |
| 2000 | 0 | 0 | 0 | 0 | 3 | 25 | 205 | 178 | 15 | 0 | 0 | 0 | 426 |
| 2001 | 0 | 0 | 0 | 6 | 46 | 92 | 298 | 308 | 25 | 0 | 0 | 0 | 775 |
| 2002 | 0 | 0 | 0 | 0 | 2 | 64 | 209 | 51 | 17 | 0 | 0 | 0 | 343 |
| 2003 | 0 | 0 | 0 | 0 | 11 | 60 | 263 | 286 | 37 | 9 | 0 | 0 | 666 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 15 | 161 | 76 | 11 | 0 | 0 | 0 | 263 |
| 2005 | 0 | 0 | 0 | 0 | 1 | 32 | 192 | 105 | 12 | 0 | 0 | 0 | 342 |
| 2006 | 0 | 0 | 0 | 0 | 36 | 64 | 334 | 138 | 14 | 0 | 0 | 0 | 586 |

SNOWFALL (inches) 2006 HAVRE (KHVR)

| YEAR | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-------|
| 2003-04 | | | | | | | 0.0 | 0.0 | 0.0 | 2.7 | 3.6 | 0.0 | |
| 2004-05 | 0.0 | 0.0 | 0.0 | 2.8 | 1.2 | 0.9 | 4.5 | 0.2 | 12.1 | T | T | 0.0 | 21.7 |
| 2005-06 | 0.0 | 0.0 | 0.0 | T | 6.0 | 9.5 | 5.5 | 7.5 | 5.7 | T | T | 0.0 | 34.2 |
| 2006- | 0.0 | 0.0 | T | 1.2 | 7.3 | 5.4 | | | | | | | |
| POR= 3 YRS | 0.0 | 0.0 | T | 1.3 | 4.8 | 5.3 | 3.3 | 2.0 | 5.9 | 0.9 | 1.2 | 0.0 | 24.7 |

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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. NORMALS ARE 30-YEAR AVERAGES (1971 - 2000). 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 AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p> | <p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. 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 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.</p> <p>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 EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p> <p>NOTE: The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p> |
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2006 HAVRE MONTANA (KHVR)

Havre, Montana, is located in a level valley formed by the Milk River, which courses through the city from west to east. Most of the city lies on the south side of the river. On the north side, hills rise abruptly to about 200 feet above the valley floor. The land mass north to the Canadian border is gently rolling and increases slightly in elevation. During winter months, frequent invasions of cold polar continental air move down across these rolling plains, bringing snow and sub-zero temperatures.

The Bearpaw Mountains extend from 15 to 30 miles south of Havre. Most of the peaks are from 4,000 to 5,000 feet above sea level, and several are above 6,000 feet. The highest is Old Baldy, 6,916 feet above sea level.

Winters are cold in the Havre area, but snow cover is seldom more than a few inches, and usually some ground is bare. Spells of mild weather do occur at least a few times each winter, arriving with sometimes fresh to strong southwest to west foehn winds. During winter months, rain rarely falls. Winter precipitation is almost always in the form of snow. The transition from winter to spring conditions is fairly rapid in the usual year, but cold snaps and snow can occur as late as early May or as early as September.

Summers are characterized by warm weather, seldom exceeding 95 degrees. Daytime warmest readings usually run from the 80s to the mid-90s during most of July and August, but summer relative humidities are seldom as high as 50 percent during afternoon hours. Summertime night temperatures are rarely oppressively warm. Most spring and summer precipitation falls as showers, but occasionally steady rains lasting several hours are observed in May and June, and again in September. Fall seasons are characterized by much clear weather, although cold snaps of a day or two, with some snow, can occur as early as mid-September.

Station Location

HAVRE

| LOCATION | Occupied From | Occupied To | Airline Distances and Directions from previous Location | Latitude | | Longitude | | ELEVATION ABOVE | | | | | | | | REMARKS | | |
|---------------------------------------|---------------|-------------|---|----------|----------|-----------|-------------------------|-----------------|----------------------|--------------|-----------------|---------------------------|---------------------|---------------------------------|-------------------|---------|------------------|---|
| | | | | NORTH | WEST | SEA LEVEL | GROUND | | | | | | | AUTOMATIC OBSERVING EQUIPMENT * | | | | |
| | | | | | | | GROUND TEMPERATURE SITE | WIND INSTRUMENT | EXTREME THERMOMETERS | PSYCHROMETER | SUNSHINE SWITCH | TIPPING BUCKET RAIN GAUGE | WEIGHING RAIN GAUGE | | 8 INCH RAIN GAUGE | | HYGROTHERMOMETER | |
| <u>AIRPORT</u> City-County Airport | 04/01/94 | Present | NA | 48° 34' | 109° 47' | a2581 | | | | | | | | | | | S | ASOS Commissioned 04/01/94. a. Ground elevation. |

* TYPE
M = AMOS
T = AUTOB
S = ASOS
W = AWOS

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