

# 2012 Des Moines Monthly Precipitation, Temperature and Yearly Summary

## 2012 Des Moines Temperature

| <i>Month</i>  | <i>Average Max</i> | <i>Average Min</i> | <i>Mean</i> | <i>Normal</i> | <i>Departure</i> | <i>Ranking*</i>               | <i>Above/Below</i> |
|---------------|--------------------|--------------------|-------------|---------------|------------------|-------------------------------|--------------------|
| January       | 40.0               | 21.0               | 30.5        | 22.6          | +7.9             | 10 <sup>th</sup> Warmest      | Above              |
| February      | 40.9               | 24.0               | 32.5        | 27.4          | +5.1             | 17 <sup>th</sup> Warmest      | Above              |
| March         | 66.8               | 44.5               | 55.7        | 39.3          | +16.4            | 1 <sup>st</sup> Warmest       | Above              |
| April         | 66.8               | 45.5               | 56.1        | 51.7          | +4.4             | 9 <sup>th</sup> Warmest       | Above              |
| May           | 79.5               | 57.5               | 68.5        | 62.3          | +6.2             | 4 <sup>th</sup> Warmest       | Above              |
| June          | 86.4               | 65.0               | 75.7        | 71.8          | +3.9             | 8 <sup>th</sup> Warmest       | Above              |
| July          | 96.2               | 72.5               | 84.3        | 76.3          | +8.0             | 2 <sup>nd</sup> Warmest       | Above              |
| August        | 87.5               | 63.5               | 75.5        | 74.3          | +1.2             | 31 <sup>st</sup> Warmest      | Above              |
| September     | 79.6               | 53.3               | 66.5        | 65.6          | +0.9             | 48 <sup>th</sup> Warmest      | Above              |
| October       | 63.0               | 42.5               | 52.7        | 53.1          | -0.4             | 56 <sup>th</sup> Coolest      | Below              |
| November      | 54.0               | 32.9               | 43.5        | 39.2          | +4.2             | 10 <sup>th</sup> Warmest      | Above              |
| December      | 39.1               | 22.5               | 30.8        | 26.0          | +4.8             | 26 <sup>th</sup> Warmest      | Above              |
| <b>Annual</b> | <b>66.6</b>        | <b>45.4</b>        | <b>56.0</b> | <b>50.9</b>   | <b>+5.1</b>      | <b>1<sup>st</sup> Warmest</b> | <b>Above</b>       |

\*Ranking based on period of record from August 1878 – December 2012

## 2012 Des Moines Precipitation

| <i>Month</i>  | <i>Precipitation</i> | <i>Normal</i> | <i>Departure</i> | <i>Ranking*</i>               | <i>Above/Below</i> | <i>Snowfall</i> | <i>Normal</i> | <i>Departure</i> | <i>Above/Below</i> |
|---------------|----------------------|---------------|------------------|-------------------------------|--------------------|-----------------|---------------|------------------|--------------------|
| January       | 0.44                 | 1.00          | -0.56            | 21 <sup>st</sup> Driest       | Below              | 4.4             | 8.5           | -4.1             | Below              |
| February      | 1.77                 | 1.28          | +0.51            | 30 <sup>th</sup> Wettest      | Above              | 10.5            | 7.9           | +2.6             | Above              |
| March         | 1.73                 | 2.30          | -0.54            | 67 <sup>th</sup> Driest       | Below              | 0.3             | 5.2           | -4.9             | Below              |
| April         | 5.89                 | 3.86          | +2.03            | 8 <sup>th</sup> Wettest       | Above              | 0.0             | 1.8           | -1.8             | Below              |
| May           | 3.15                 | 4.74          | -1.59            | 47 <sup>th</sup> Driest       | Below              | 0.0             | 0.0           | 0.0              | -                  |
| June          | 2.17                 | 4.94          | -2.77            | 18 <sup>th</sup> Driest       | Below              | 0.0             | 0.0           | 0.0              | -                  |
| July          | 1.24                 | 4.47          | -3.23            | 21 <sup>st</sup> Driest       | Below              | 0.0             | 0.0           | 0.0              | -                  |
| August        | 2.32                 | 4.13          | -1.81            | 47 <sup>th</sup> Driest       | Below              | 0.0             | 0.0           | 0.0              | -                  |
| September     | 0.98                 | 3.05          | -2.07            | 15 <sup>th</sup> Driest       | Below              | 0.0             | 0.0           | 0.0              | -                  |
| October       | 3.34                 | 2.64          | +0.70            | 36 <sup>th</sup> Wettest      | Above              | 0.0             | 0.4           | -0.4             | Below              |
| November      | 1.33                 | 2.19          | -0.86            | 65 <sup>th</sup> Driest       | Below              | Trace           | 2.5           | -2.5             | Below              |
| December      | 1.93                 | 1.42          | +0.51            | 28 <sup>th</sup> Wettest      | Above              | 15.5            | 9.0           | +6.5             | Above              |
| <b>Annual</b> | <b>26.29</b>         | <b>36.02</b>  | <b>-9.73</b>     | <b>25<sup>th</sup> Driest</b> | <b>Below</b>       | <b>30.7</b>     | <b>35.3</b>   | <b>-4.6</b>      | <b>Below</b>       |

\*Ranking based on period of record from August 1878 – December 2012

## 2012 Climate Factoids for Des Moines

- With an average temperature of 56.0 degrees, 2012 was the warmest year on record in Des Moines. This smashes the old record of 54.5 degrees set back in 1931.
- There were 42 daily records set this year, this ties the number of daily records in a year also set 1936. The next highest of any year is 35 set in 1991. These records include 2 for daily record snowfall, 4 for daily record precipitation, 16 for daily high minimum temperature and 20 for daily record high temperature.
- The 20 daily record high temperatures for 2012 is the most of any year on record. Two years have 19 daily record high temperatures – 1934 and 1936.
- There were 279 days without measurable snowfall starting on March 5<sup>th</sup> and extending through December 8<sup>th</sup>. This is the longest streak on record without measurable snowfall. The old record was 277 days set in 1889.
- There were 244 days that had above normal temperatures, 100 days of below normal temperatures with 22 days recording normal temperatures.
- There were 120 days this year that had a departure of 10 degrees or more above normal compared to 15 days of 10 degrees or more below normal. In other words, almost one-third of all days this year were 10 degrees or more above normal.
- There were 60 days this year that had a departure of 15 degrees or more above normal compared to 2 days of 15 degrees or more below normal.
- There were 21 days this year that had a departure of 20 degrees or more above normal compared to no days of 20 degrees or more below normal.
- There were twelve days this year with an average temperature of 25 degree or more above normal. Seven of these occurred in March and early April during the extraordinary warmth during that time.
- From February 15<sup>th</sup> to August 14<sup>th</sup>, there were 72 days that were 10 degrees or more above normal compared to just one day of 10 degrees or more below normal.
- 2012 was the first year ever in Des Moines to not reach zero degrees. The lowest temperature during the year was 1 degree which occurred on January 18<sup>th</sup>. This also ties 1931 as the only years to not go below zero.
- There was incredible warmth in March when the average temperature was 55.7 degrees or 4.2 degrees warmer than the previous record warm March. The monthly departure of +16.4 degrees was the greatest positive monthly departure on record in Des Moines.
- There were eleven days which reach 100 degrees or more in Des Moines. This is the most number of days since 1983 when thirteen days reached 100 or more.

2012 was an extraordinary year in terms of warmth in Des Moines. All months were above normal except for October, which was only slightly cooler than normal. Drier than normal conditions were also common from May through September which contributed to widespread drought conditions across Iowa. One upside to the dry conditions was the overall lack of severe thunderstorms and tornadoes in central Iowa. Overall, 2012 will go down as one of the more extreme years in recent memory.

...THE DES MOINES CLIMATE SUMMARY FOR THE YEAR OF 2012...

CLIMATE NORMAL PERIOD 1981 TO 2010

CLIMATE RECORD PERIOD 1878 TO 2012

| WEATHER                      | OBSERVED<br>VALUE | DATE(S)                  | NORMAL<br>VALUE | DEPART<br>FROM<br>NORMAL |
|------------------------------|-------------------|--------------------------|-----------------|--------------------------|
| .....                        |                   |                          |                 |                          |
| TEMPERATURE (F)              |                   |                          |                 |                          |
| RECORD                       |                   |                          |                 |                          |
| HIGH                         | 110               | 07/25/1936<br>08/04/1918 |                 |                          |
| LOW                          | -30               | 01/05/1884               |                 |                          |
| HIGHEST                      | 106               | 07/25                    | 98              | 8                        |
| LOWEST                       | 1                 | 01/18                    | -13             | 14                       |
| AVG. MAXIMUM                 | 66.6              |                          | 60.4            | 6.2                      |
| AVG. MINIMUM                 | 45.4              |                          | 41.5            | 3.9                      |
| MEAN                         | 56.0              |                          | 50.9            | 5.1                      |
| DAYS MAX >= 90               | 60                |                          | 18.4            | 41.6                     |
| DAYS MAX <= 32               | 24                |                          | 44.2            | -20.2                    |
| DAYS MIN <= 32               | 102               |                          | 124.7           | -22.7                    |
| DAYS MIN <= 0                | 0                 |                          | 11.1            | -11.1                    |
| PRECIPITATION (INCHES)       |                   |                          |                 |                          |
| RECORD                       |                   |                          |                 |                          |
| MAXIMUM                      | 56.81             | 1881                     |                 |                          |
| MINIMUM                      | 17.07             | 1956                     |                 |                          |
| TOTALS                       | 26.29             |                          | 36.02           | -9.73                    |
| DAILY AVG.                   | 0.07              |                          | 0.10            | -0.03                    |
| DAYS >= .01                  | 92                |                          | 113.4           | -21.4                    |
| DAYS >= .10                  | 52                |                          | 66.0            | -14.0                    |
| DAYS >= .50                  | 17                |                          | 23.0            | -6.0                     |
| DAYS >= 1.00                 | 3                 |                          | 8.5             | -5.5                     |
| GREATEST                     |                   |                          |                 |                          |
| 24 HR. TOTAL                 | 3.43              | 04/14                    |                 |                          |
| SNOWFALL (INCHES)            |                   |                          |                 |                          |
| TOTALS                       | 30.7              |                          | 35.3            | -4.6                     |
| DEGREE_DAYS                  |                   |                          |                 |                          |
| HEATING TOTAL                | 4786              |                          | 6203            | -1417                    |
| COOLING TOTAL                | 1613              |                          | 1068            | 545                      |
| WIND (MPH)                   |                   |                          |                 |                          |
| AVERAGE WIND SPEED           |                   |                          | 9.5             |                          |
| HIGHEST WIND SPEED/DIRECTION |                   |                          | 46/300          | DATE 08/08               |
| HIGHEST GUST SPEED/DIRECTION |                   |                          | 58/260          | DATE 04/14               |
| AVERAGE RH (PERCENT)         | 61                |                          |                 |                          |