Decorah Weather - September 2023 Summary

 $\label{eq:constraint} by Richard Bernatz \\ Weather data available online at http://faculty.luther.edu/~bernatzr/DecWx/$

1. Temperatures

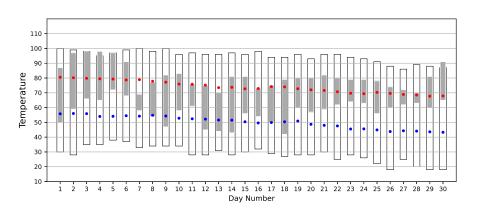


Figure 1: Grey Bar: Observed temperature range for 2023, White Bar: Record temperature range, Average temperature range: Red circle for average high, blue circle for average low.

Item	September 2023 Average	Historical Average	Deviation
High temperature (°F):	81.2	74.1	7.1
Low temperature $(^{\circ}F)$:	57.4	50.4	7.0
Daily temperature (°F):	69.3	62.2	7.1

Table 1: September 2023 Temperatures compared with September History.

- September 2023
 - Five record temperatures. maximum of 98° F on the 3rd (tied with 1939), maximum of 98° F on the 4th (old record of 95° F in 1913), maximum of 97° F on the 5th (tied with 1913), maximum of 91° F on the 30th (old record of 90° F in 2019), a maximum minimum (the highest 24-hour minimum) of 65° F on the 30th (old record of 64° F in 1982)
 - Average temperature : 69.3° F (7.1° F warmer than average)
 - Above average maximum temperature recorded on 22 days.
 - Above average minimum temperature recorded on 22 days.
 - Warmest temperature : 98° F on the 3rd and 4th,
 - Coldest temperature : 42° F on the 18th
 - Cooling degree days : 155.5, 83.2 greater than average
 - Heating degree days : 26.5, 128.0 less than average
- All Septembers Since 1894 (130 years no missing years)
 - Compared with September 2023, 1 September was the same 128 Septembers were cooler
 - Warmest average : 69.3° F in 1931 and 2023
 - Coldest average : 55.0° F in 1924
 - Warmest temperature : 100° F on the 1st of 1913, 7th of 1939, and the 9th of 1955
 - Coldest temperature : 18° F on the 26th of 1926, the 29th of 1949, and the 30th of 1899

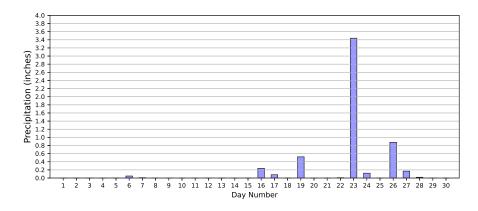


Figure 2: Precipitation for Decorah.

- September 2023
 - Total precipitation for September 2023 : 5.54 inches, 1.84 inches more than average
 - Greatest 24-hour total: 3.44 inches on September 23rd
 - Eleven days with measurable precipitation (average is 9 days).
- All Septembers since 1894 (130 years no missing years)
 - Compared with September 2023, 25 Septembers were wetter and 104 Septembers were drier
 - Wettest September : 11.66 inches in 2016
 - Driest September: 0.30 inches in 1979

		Ave Temp	Deviation	Rank†	Precip	Deviation	Rank‡
Month	Year	$(^{o}\mathbf{F})$	$(^{o}\mathbf{F})$	(#/Total)	(inches)	(inches)	(#/Total)
October	2022	50.7	+0.4	56/129	1.34	-0.98	95/129
November	2022	38.5	+3.3	31/130	2.31	+0.46	36/130
December	2022	21.8	+0.5	64/130	1.81	+0.60	27/130
January	2023	24.4	+8.1	11/130	2.17	+1.12	12/130
February	2023	26.6	+6.5	21/113	2.00	+1.04	9/129
March	2023	36.2	+3.4	36/131	1.89	-0.11	70/131
April	2023	50.5	+3.2	23/130	2.84	-0.26	66/130
May	2023	63.0	+4.1	17/128	4.19	-0.04	58/127
June	2023	71.1	+2.8	22/129	2.36	-2.39	109/129
July	2023	72.5	-0.1	63/129	3.32	-0.76	69/130
August	2023	74.9	+4.5	11/131	0.91	-3.14	125/131
September	2023	69.3	+7.0	1/130	5.54	+1.84	26/130

3. TWELVE-MONTH SUMMARY

Table 2: A summary of the last twelve months. \dagger - The smaller the number (#), the warmer the month. \ddagger - The smaller the number (#), the wetter the month. Boxed entries are within the historical top or bottom ten.

- Nine of the last twelve months were warmer than average.
- September had a precipitation excess of 1.84 inches. The previous six months were all drier than average.
- Precipitation deviations (in inches) from average. last three months: -2.08, last six months: -4.78, last nine months: -2.72, last twelve months: -2.65