Decorah Weather - September 2024 Summary

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

1. Temperatures

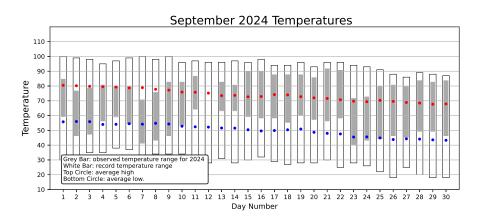
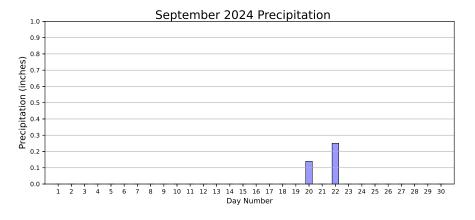


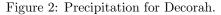
Figure 1: Grey Bar: Observed temperature range for 2024, White Bar: Record temperature range, Average temperature range: Red circle for average high, blue circle for average low.

Item	September 2024 Average	Historical Average	Deviation
High temperature (°F):	82.6	74.2	8.4
Low temperature $(^{\circ}F)$:	52.3	50.4	1.9
Daily temperature (°F):	67.5	62.3	5.2

Table 1: September 2024 Temperatures compared with September History.

- September 2024
 - Record Temperatures: none
 - Average temperature : 67.5° F (5.2° F warmer than average)
 - Above average maximum temperature recorded on 25 days.
 - Above average minimum temperature recorded on 20 days.
 - Warmest temperature : 92° F on the 21st,
 - Coldest temperature : 40° F on the 23rd
 - Cooling degree days : 115.5, 42.4 greater than average
 - Heating degree days : 43.5, 110.2 less than average
- All Septembers Since 1894 (131 years no missing years)
 - Compared with September 2024, 8 Septembers were warmer, and 122 Septembers were cooler
 - Warmest average : 69.3° F in 1931 and 2024
 - 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





- September 2024
 - Total precipitation for September 2024 : 0.39 inches, 3.29 inches less than average
 - Greatest 24-hour total: 0.25 inches on September 22nd
 - Two days with measurable precipitation (average is 9 days).
- All Septembers since 1894 (131 years no missing years)
 - Compared with September 2024, 129 Septembers were wetter and 1 September (1979) was drier
 - Wettest September : 11.66 inches in 2016
 - Driest September: 0.30 inches in 1979

		Ave Temp	Deviation	Rank [†]	Precip	Deviation	Rank‡
Month	Year	(°F)	$(^{o}\mathbf{F})$	(#/Total)	(inches)	(inches)	(#/Total)
October	2023	54.3	+4.0	19/130	2.78	+0.45	46/130
November	2023	40.0	+4.7	19/131	0.18	-1.65	128/131
December	2023	36.0	+14.1	1/131	1.07	-0.14	71/131
January	2024	24.0	+7.6	14/131	1.56	+0.51	24/131
February	2024	38.1	+17.9	1/131	0.37	-0.59	107/130
March	2024	42.4	+9.5	3/132	2.18	+0.28	49/132
April	2024	50.5	+3.1	26/131	3.97	+0.85	31/131
May	2024	62.7	+3.8	20/129	9.11	+4.85	6/129
June	2024	71.9	+3.6	18/130	7.38	+2.60	22/130
July	2024	73.8	+1.2	45/130	3.13	-0.94	79/131
August	2024	73.8	+3.4	108/132	1.87	-2.16	108/132
September	2024	67.5	+5.2	9/131	0.39	-3.29	130/131

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.

- September 2024 is the 14th consecutive month with an above average temperature average.
- September 2024 is the third consecutive month with a below average precipitation total. It is one of five of the last 12 with a below average precipitation total.
- Four of the last twelve months rank among the top ten warmest for their respective month. December and February are the warmest for their respective months.
- Precipitation deviations (in inches) from average. last three months: -6.41, last six months: +1.91, last nine months: +2.11, last twelve months: +0.78