

The New Mexico State Fair

September 5-15, 2024

Weather Forecast Office
Albuquerque, NM

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September 2015



Photo courtesy NM State Fair



Photo courtesy NM State Fair



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September 2015



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Groth-flickr 2006



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Photo courtesy
NM State Fair

September can be a fickle month for outdoor events as we transition from summer to fall. The wet phase of monsoon season is either still going strong, experiencing fits and starts, or ending altogether as drier westerly winds kick moisture out of the region. Remnants of tropical systems from the eastern Pacific or western Gulf of Mexico can bring surges of moisture into the state anytime during the month. Weather systems moving far enough south through the Rocky Mountains can also bring strong winds, cooler than normal temperatures and widespread precipitation, including severe weather. A tornado was even captured during the 1985 State Fair! Spectacular weather can also occur for prolonged stretches with dry air, crisp blue skies, and light winds. The length of the state fair has changed considerably over the years and has run anywhere from early September into early October. This variability can impact the type of weather that may be observed during the fair. Many folks associate the state fair with the near certainty of inclement weather on many days but is this actually true? Let's take a look at the NM State Fair weather since 1938 and see if this old adage is worth its weight in rodeo bulls.



State Fair Climate Data (Precipitation)



State Fair Average Rainfall (1991-2020)	0.73"	
Max Daily Rainfall	1.92"	September 24, 1955
Greatest Number of Days w/ Rain (\geq Trace)	9	2011, 2002, 1997, 1995
Greatest Number of Days w/ Measurable Rain (\geq 0.01")	8	2002
Average Number of Days w/ Rain (\geq Trace)	5.2	(1991-2020)
Average Number of Days w/ Measurable Rain (\geq 0.01")	3.2	(1991-2020)
Percentage of Days w/ No Rain (State Fair)	64%	(1938-2023)
Percentage of Days w/ No Rain (Entire Year)	84%	(1938-2023)

Top 5 Wettest	
2.91"	2013
2.07"	1997
1.98"	1955
1.89"	1988
1.87"	2010

Least Rainfall	
0.00"	1973, 1953, 1942
Trace	1998, 1968, 1956, 1952, 1947, 1938
0.01"	1981, 1939
0.02"	1940
0.03"	1977

September is the 3rd wettest month of the year with an average of 1.15" of rain over the 30-day period (1991-2020). The all-time daily rainfall record of 2.08" in the Albuquerque area occurred on September 28, 1893. The 2nd heaviest daily rainfall on record of 1.92" occurred on September 24, 1955. The 8th heaviest daily rainfall on record of 1.77" occurred on September 22, 2010. September 2013 is the 5th wettest month on record with 3.97". One can see that September is no stranger to record rainfall events. Five of the top 9 wettest Septembers on record have occurred since the state fair was extended to 17 days in 1992.



State Fair Climate Data (Temperature)



Average Temperature (1991-2020)	70.1°	
Average High Temperature (1991-2020)	82.3°	
Average Low Temperature (1991-2020)	58.0°	
Coolest Low Temperature	37°	September 18, 1971
Warmest Low Temperature	69°	September 7, 2019 / September 9&10, 2023
Coolest High Temperature	44°	September 18, 1971
Warmest High Temperature	97°	September 7, 2023

Top 5 Warmest	
2021	77.5°
2019	75.5°
2017	74.5°
2018	74.5°
2015	74.0°

Top 5 Coolest	
2006	63.0°
2009	65.0°
1996	65.5°
1991	66.5°
1993	67.5°

Temperature Distribution (1991-2020)	
Ave High	Ave Low
70-74°: 3%	50-54°: 13%
75-79°: 23%	55-59°: 50%
80-84°: 44%	60-64°: 37%
85-90°: 30%	65-70°: 0%

September is the 4th warmest month of the year with an average temperature of 70.3° over the 30-day period (1991-2020). High temperatures in the low 80s with low temperatures in the upper 50s can make state fair a great time to enjoy being outdoors. However, a record 12 consecutive days of 90° high temperatures occurred during the 2021 State Fair. The Albuquerque Sunport recorded a record high of 93° on the 13th. It has only reached 100° once in September and that occurred before the start of the state fair on September 5, 1979. Cold weather is not common during the state fair but a strong storm system that moved through the area in mid-September 1971 produced rain, snow, and record cold temperatures across NM. The high temperature of 44° in the Albuquerque area on September 18, 1971 is the all-time record minimum high temperature for the month of September dating back to 1891.



State Fair Climate Data (Wind)



Average Wind Speed (1991-2020)	7.3 mph	
Average Peak Wind Speed (1991-2020)	43 mph	
Max Peak Wind Speed	61 mph	September 5, 2024
Min Peak Wind Speed	20 mph	September 13, 19, and 20 th in 1980
Min Average Wind Speed	4.8 mph	1994
Max Average Wind Speed	12.5 mph	1971

Top 5 Peak Wind Gusts & Direction			Bottom 5 Peak Wind Gusts & Direction			Peak Wind Gust Direction Frequency	
1958	57 mph	East	1980	20 mph	South	1938-2023	
2011	55 mph	West	1942	22 mph	South	North	13%
2012	53 mph	North	1977	24 mph	East	East	45%
2000	53 mph	East	1952	24 mph	South	South	20%
2016	51 mph	East	1954	25 mph	North	West	22%

September is tied with October as the 5th least windy month of the year with a prevailing wind direction from the east (1991-2020). However, a peak wind gust of 71 mph from the east on September 9, 2020 was the 4th strongest wind gust recorded at the Sunport for the 1991-2020 climate period and tied as the 12th strongest wind gust ever recorded at the Sunport (1938-2021). This event fortunately did not occur during the state fair and events in 2020 were actually virtual. There have been numerous wind gusts in excess of 50 mph at the state fair and some have produced damage. Peak wind gusts from the east occur 45% of the time due to backdoor cold fronts surging through Tijeras Canyon or from thunderstorm outflows over the Sandia & Manzano mountains. Wind direction indicates where the wind is blowing from.



- **September 13, 2023:** A strong thunderstorm produced very heavy rain over parts of Albuquerque. Serious flooding impacted 2 lanes of I-25 near Avenida Caesar Chavez. Traffic was backed up 9 miles to Paseo del Norte. Flooding also impacted Taylor Ranch.
- **September 13, 2021:** A record 12 consecutive days of 90° temperatures occurred during the 2021 State Fair. The Albuquerque Sunport recorded a record high temperature of 93° on the 13th.
- **September 14, 2019:** A strong thunderstorm produced very heavy rain and small hail from Rio Rancho to Albuquerque and the East Mountains. A spotter south of Tijeras reported hail up to the size of nickels.
- **September 10, 2016:** East canyon winds gusted up to 60 mph on the east side of Albuquerque. A large tree limb was downed at the UNM north campus golf course.
- **September 15, 2015:** A 55 mph wind gust from a thunderstorm microburst lofted a trampoline into a nearby powerline in the Albuquerque South Valley.
- **September 15, 2014:** A severe thunderstorm over the Albuquerque South Valley downed large tree limbs, toppled power lines, and resulted in minor flooding across Albuquerque.
- **September 14, 2013:** A slow-moving storm system moving through NM produced widespread flooding. A mudslide covered a localized area of Paradise Hills with up to 3 feet of mud and debris. The total rainfall of 2.91" during the 2013 state fair was the wettest on record.
- **September 17, 2012:** Severe east canyon winds from nearby thunderstorm outflow gusted up to 70 mph at Kirtland AFB. Several fair tents were toppled by strong wind gusts.
- **September 22, 2010:** A 40-year old man was killed from thunderstorm flood waters while walking in the I-40 drainage channel. The state fair was forced to close for the day at 3:30pm. The 1.77" of rain that fell at the Sunport was the greatest one-day total in just over 30 years (1.75" on August 14, 1980).



- **September 18, 2000:** A powerful windstorm blew in from the northwest with gusts up to 53 mph. This storm resulted in blowing sand, downed utility poles, downed power lines, and minor damage across the metro area. Officials closed down the state fair early for safety concerns. Damage occurred to one show tent and a 40-ft ski jump slide was toppled into nearby trees. Two people were treated for injuries due to falling tree branches.
- **September 19-21, 1997:** The final weekend of state fair ended with widespread heavy rainfall and flooding as a backdoor cold front interacted with remnant moisture from Hurricane Nora. Minor flooding was reported throughout the fairgrounds.
- **September 20, 1985:** A F-0 tornado produced a 2 mile path of damage near the state fairgrounds with damage to trees, vehicles, and buildings. Fortunately, no injuries or fatalities were reported.
- **September 9, 1980:** Major flash flooding slammed the northeast heights the day before the state fair opened. Significant damage occurred to several roadways and cleanup efforts were required citywide.
- **September 17-20, 1971:** Unusually cold and windy weather with rain and even some light snow hampered state fair festivities for several days, including the gala parade and livestock events. The trace of snow reported on the 18th at the Sunport was the only time in state fair history with snow reported in the immediate vicinity. The high temperature of 44° on the 18th was also the coldest day in state fair history and the coldest high temperature ever observed in the month of September.
- **September 26, 1954:** A powerful storm dumped large amounts of damaging hail with major flash flooding across parts of the Albuquerque metro, particularly in areas from the South Valley to near Bernardo.
- **October 1, 1951:** Thunderstorm outflow winds up to 49 mph pushed a dense cloud of dust through the state fair.
- **September 25, 1939:** Strong winds, thick blowing dust, and rain slammed fairgoers. The livestock show tent was leveled to the ground, one end of the hog tent fell, and two concession tents were lowered.
- **October 9, 1938:** Fierce winds swept into the state fair on it's inaugural opening day. A swine tent collapsed onto hogs below.



"NM State Fair Tornado" September 20, 1985



On Friday, September 20, 1985, an upper level low pressure system was positioned over AZ with moist, south-southwest flow aloft across NM. A stationary front was draped from the TX/OK panhandles southwest into far southeast NM while a weak surface boundary stretched from near Farmington, NM into the ABQ metro area eastward across eastern NM. Showers and thunderstorms were present across the metro area through much of the day with broken to overcast cloud cover. Temperatures warmed in the upper 60s and lower 70s with high humidity and north to northwest breezes around 10 to 20 mph. Click the graphics for larger images, or, right click and select open in new tab.

A thunderstorm near the Albuquerque Sunport shortly after 3pm MDT was observed producing a tornado at 3:18pm MDT. The tornado moved to the northeast through 3:26pm MDT before dissipating. The [NOAA Storm Events](#) database indicates the tornado was rated an F-0 (Fujita Scale) with a 2 mile path in the vicinity of the state fairgrounds. The storm produced an estimated \$250,000 in damage (\$602,500 in 2022 dollars). Fortunately, there were no injuries or fatalities with this event however significant damage was reported to trees, vehicles, and buildings.

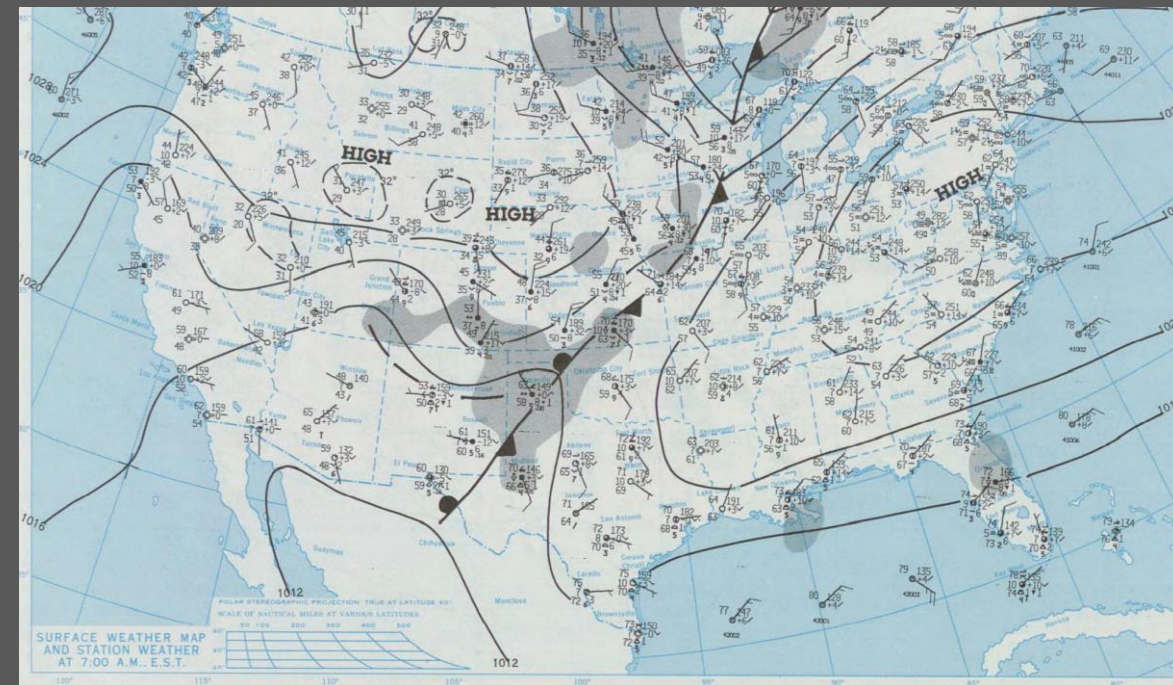
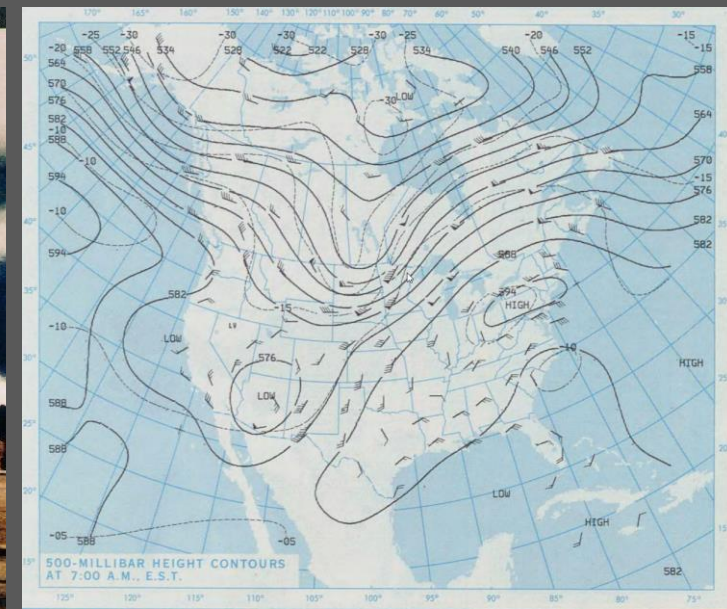


Photo courtesy of Rick Morrow



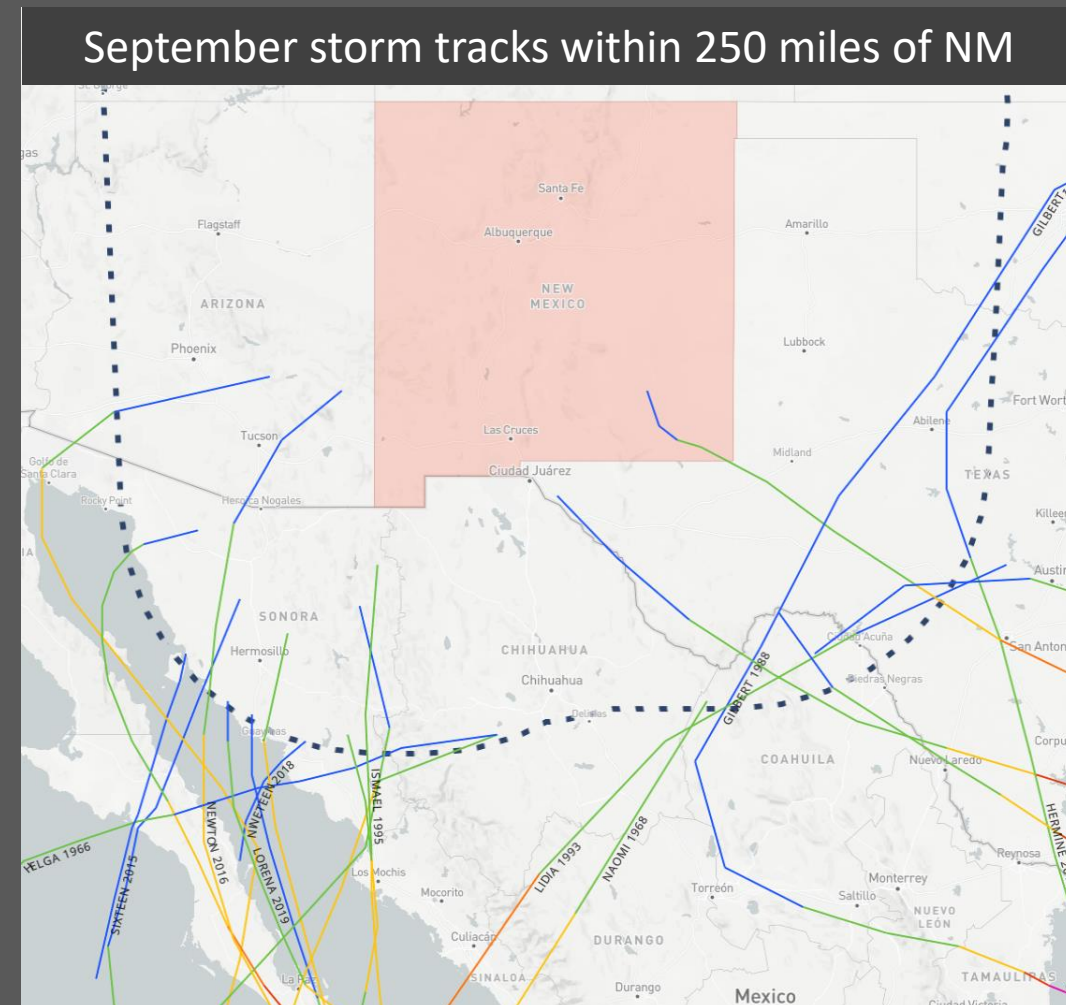


Remnant Tropical Systems



The storms listed below were retrieved from the [NOAA Historical Hurricane Tracks](#) webpage for events that passed within 250 miles of New Mexico during the month of September. Some of these storms spread no more than increased cloud cover over the area while some others resulted in widespread heavy rainfall. Click the storms listed to access more information on the historical track, or, right click and select open in new tab.

- [Hurricane Lorena](#) – September 17-22, 2019
- [Tropical Depression Nineteen](#) – September 19-20, 2018
- [Hurricane Newton](#) – September 4-8, 2016
- [Tropical Depression Sixteen](#) – September 20-21, 2015
- [Hurricane Odile](#) – September 9-18, 2014
- [Tropical Storm Georgette](#) – September 20-23, 2010
- [Tropical Storm Hermine](#) – September 4-10, 2010
- [Hurricane Henriette](#) – Aug 30 – Sep 6, 2007
- [Hurricane Javier](#) – September 10-20, 2004
- [Hurricane Isis](#) – September 1-3, 1998
- [Hurricane Fausto](#) – September 10-14, 1996
- [Hurricane Ismael](#) – September 12-15, 1995
- [Hurricane Lidia](#) – September 8-14, 1993
- [Hurricane Gilbert](#) – September 8-20, 1988
- [Tropical Storm Delia](#) – September 1-7, 1973
- [Hurricane Naomi](#) – September 9-13, 1968
- [Hurricane Katrina](#) – Aug 30-Sep 3, 1967
- [Tropical Storm Kirsten](#) – September 26-29, 1966
- [Hurricane Helga](#) – September 9-17, 1966
- [Hurricane Unnamed](#) – Aug 23-Sep 1, 1942



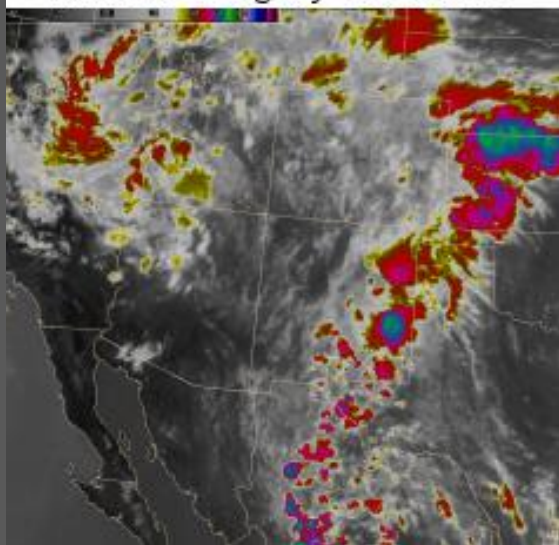


Heavy Rainfall September 2013



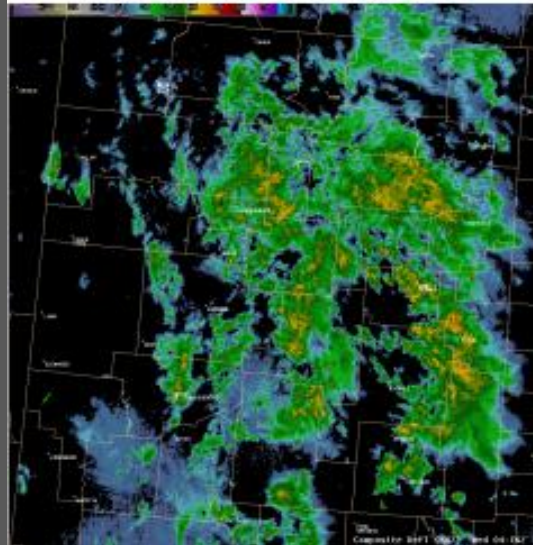
The September 2013 heavy rainfall was actually not related to tropical remnants from the eastern Pacific or Gulf of Mexico. A deep upper level low pressure system that became relatively stationary over the Great Basin beginning on September 10th provided a steady stream of near record monsoon moisture over New Mexico. Multiple upper level disturbances pushed north and northeast across the region within the monsoon moisture plume through the 18th producing widespread historic rainfall amounts. Total rainfall amounts over the 9-day period averaged 3 to 6" with locally higher amounts around 10". This unprecedented heavy rain event resulted in saturated ground over much of New Mexico and directly contributed to an additional flooding event from strong to severe thunderstorms from September 18, 2013 through September 22, 2013. Significant improvements to drought conditions occurred over the entire state from this event.

Satellite Imagery 9/11/2103



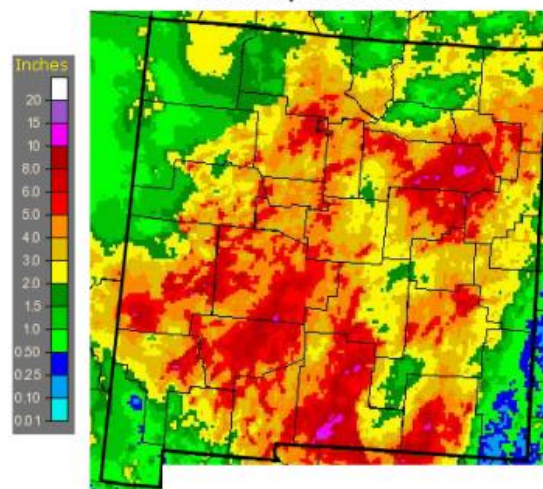
[10-day Loop](#)

Radar Imagery 9/12/2103

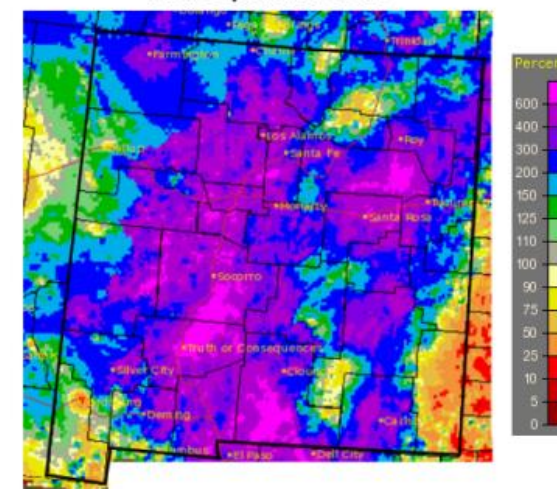


[7-day Loop](#)

Observed Precipitation
1-21 September 2013

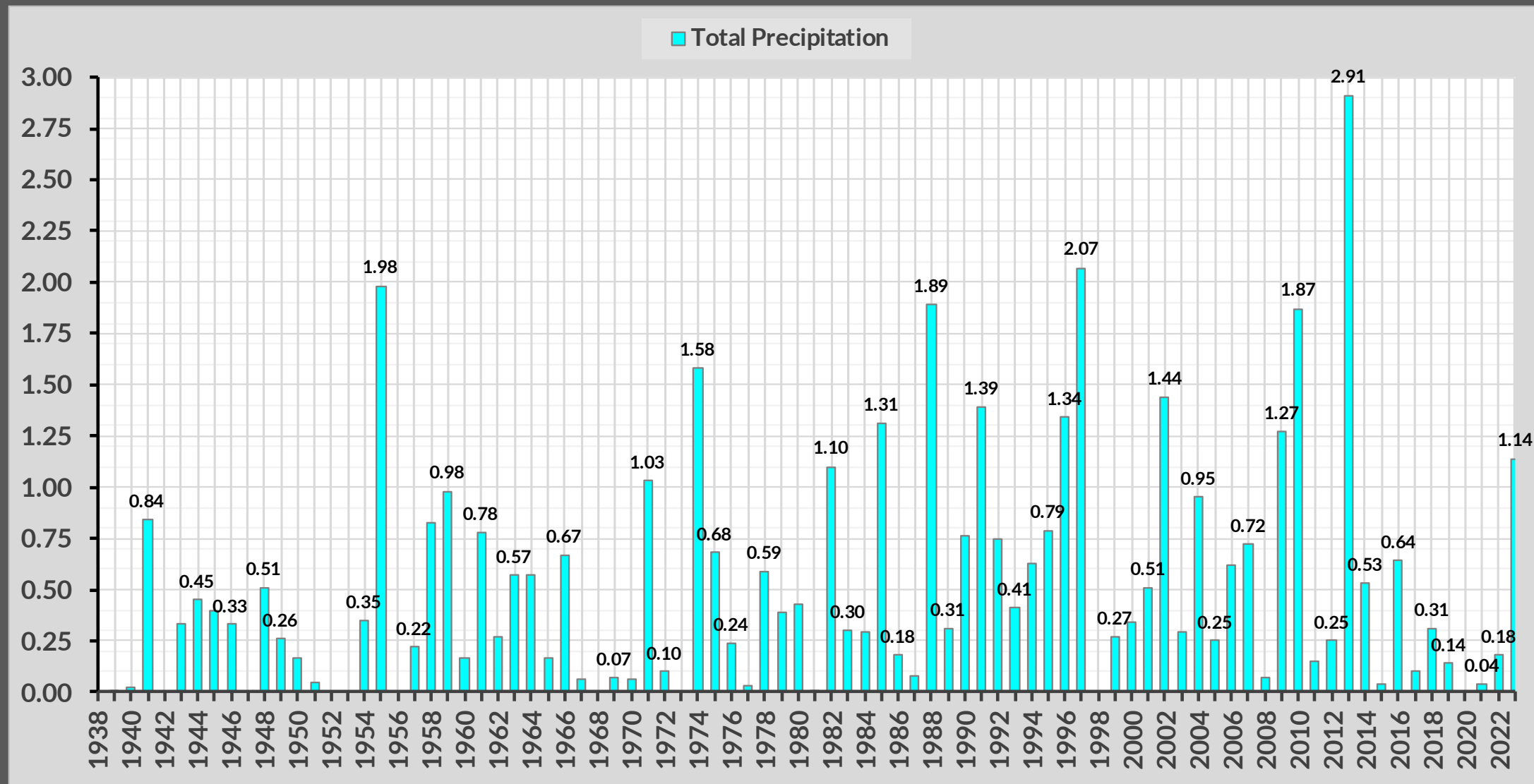


Percent of Normal Precipitation
1-21 September 2013





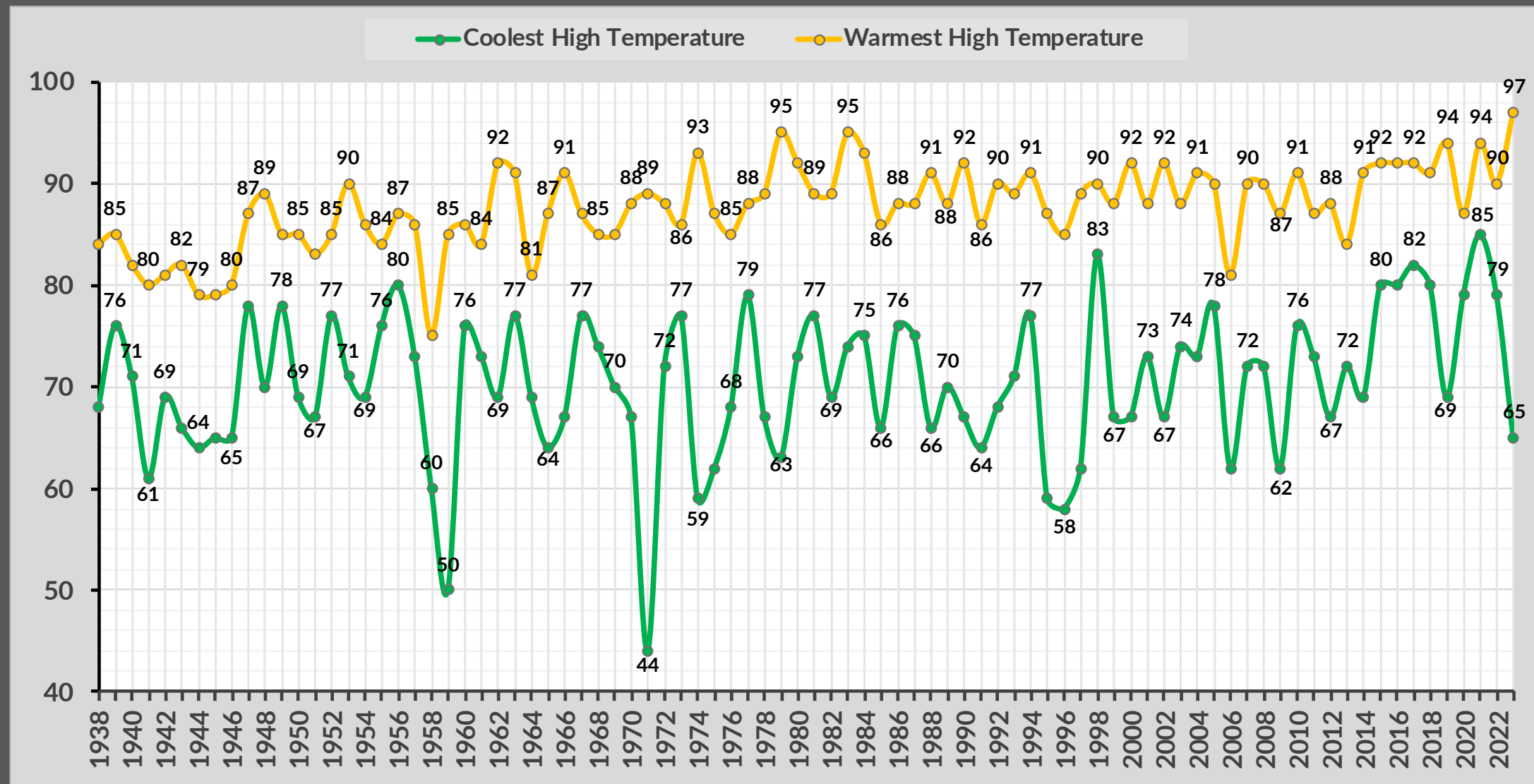
Total Precipitation 1938-2023



Average Rainfall: 0.73" (1991-2020)



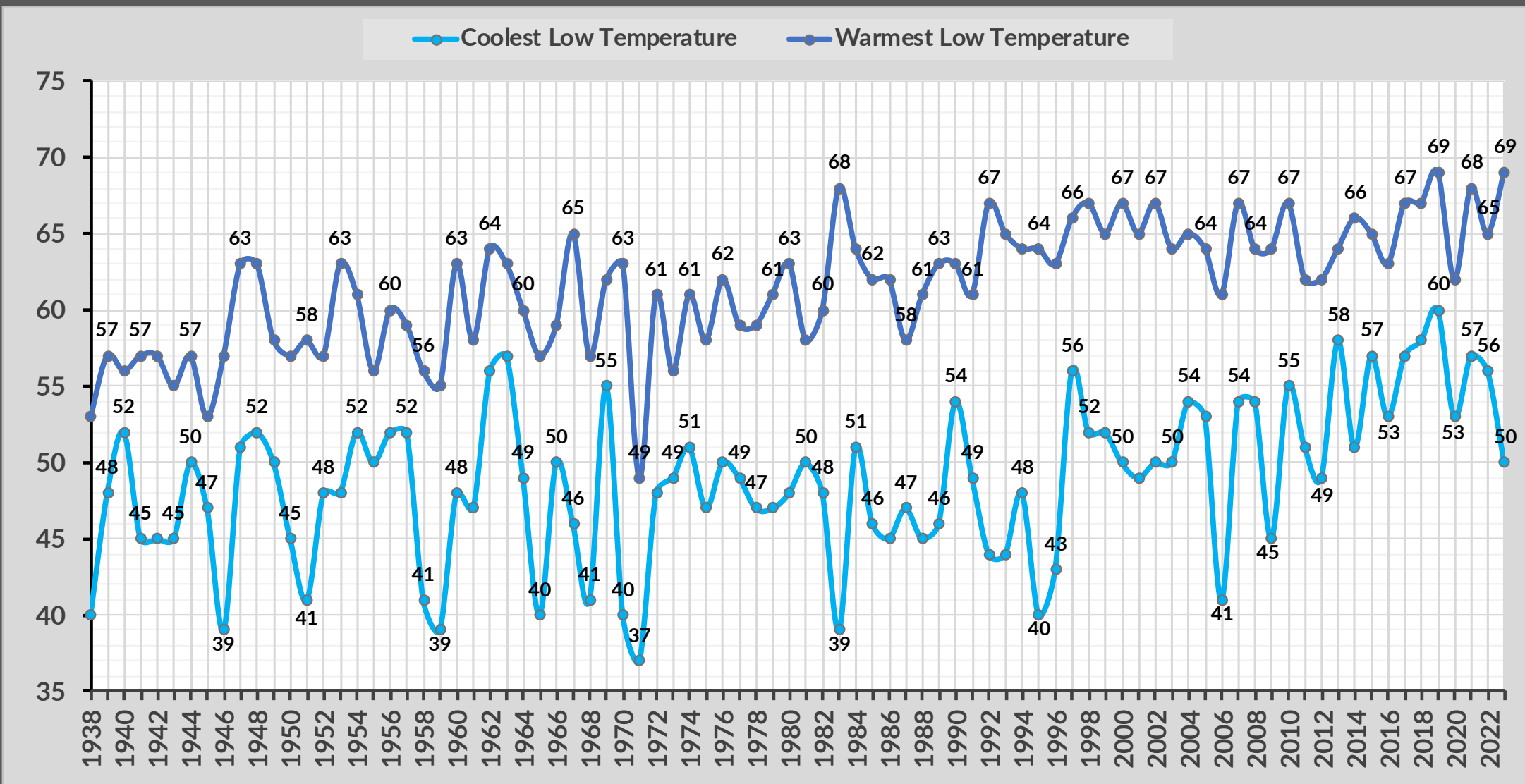
Coollest & Warmest High Temperatures 1938-2023



Average High: 82.3° (1991-2020)



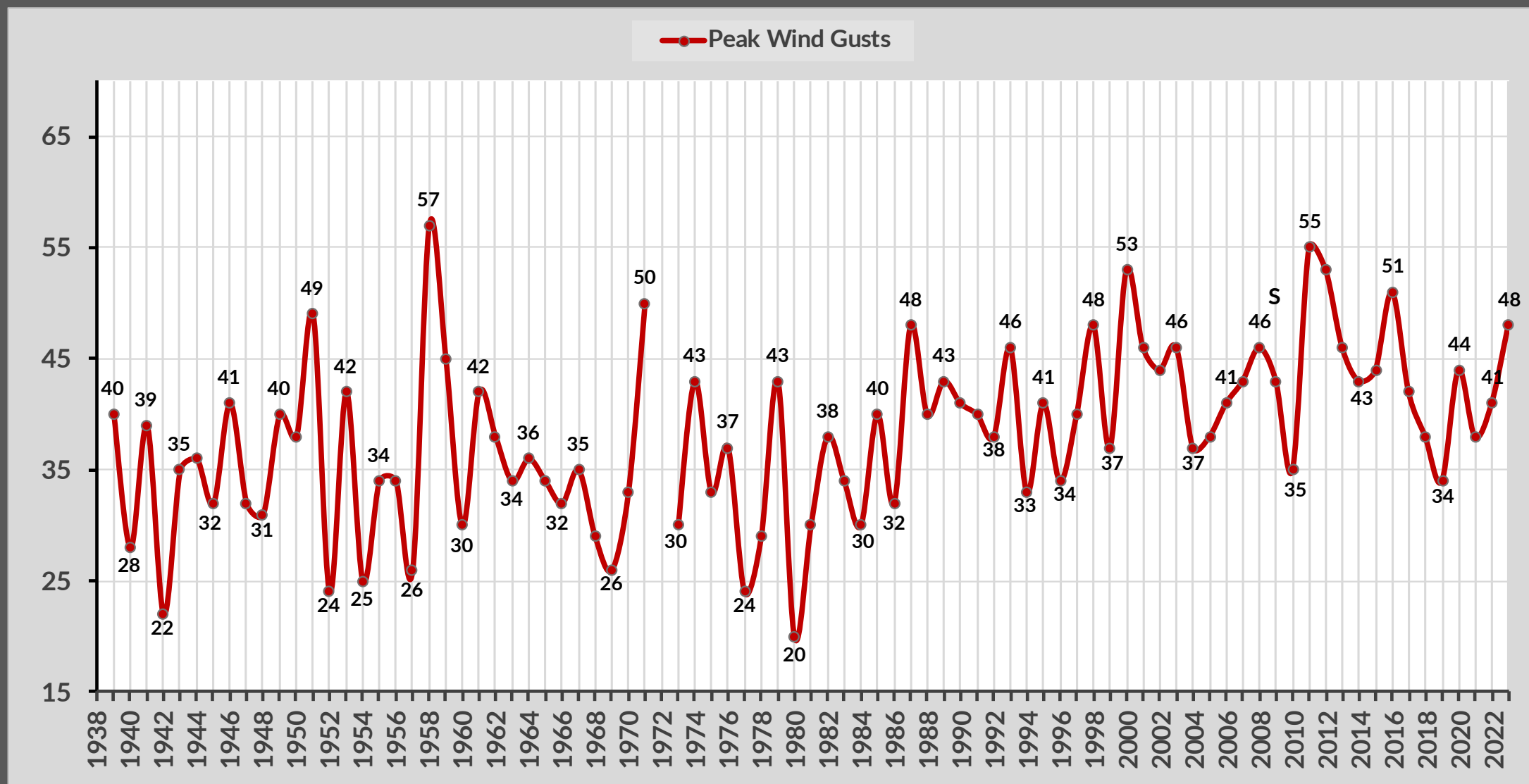
Cooler & Warmer Low Temperatures 1938-2023



Average Low: 58.0° (1991-2020)



Peak Wind Gusts 1939-2023



Average Peak Wind: 43 mph (1991-2020)



NM State Fair Dates



❖ Sep 5-15, 2024	❖ Sep 6-22, 2002	❖ Sep 10-21, 1980	❖ Sep 27-Oct 5, 1958
❖ Sep 7-17, 2023	❖ Sep 7-23, 2001	❖ Sep 12-23, 1979	❖ Sep 28-Oct 6, 1957
❖ Sep 8-18, 2022	❖ Sep 8-24, 2000	❖ Sep 13-24, 1978	❖ Sep 29-Oct 7, 1956
❖ Sep 9-19, 2021	❖ Sep 10-26, 1999	❖ Sep 14-25, 1977	❖ Sep 24-Oct 2, 1955
❖ Sep 14-20, 2020*	❖ Sep 11-27, 1998	❖ Sep 15-26, 1976	❖ Sep 25-Oct 3, 1954
❖ Sep 5-15, 2019	❖ Sep 5-21, 1997	❖ Sep 10-21, 1975	❖ Sep 26-Oct 4, 1953
❖ Sep 6-16, 2018	❖ Sep 6-22, 1996	❖ Sep 11-22, 1974	❖ Sep 27-Oct 5, 1952
❖ Sep 7-17, 2017	❖ Sep 8-24, 1995	❖ Sep 12-23, 1973	❖ Sep 29-Oct 7, 1951
❖ Sep 8-18, 2016	❖ Sep 9-25, 1994	❖ Sep 13-24, 1972	❖ Sep 23-Oct 1, 1950
❖ Sep 10-20, 2015	❖ Sep 10-26, 1993	❖ Sep 16-26, 1971	❖ Sep 25-Oct 2, 1949
❖ Sep 10-21, 2014	❖ Sep 11-27, 1992	❖ Sep 17-27, 1970	❖ Sep 19-26, 1948
❖ Sep 11-22, 2013	❖ Sep 6-22, 1991	❖ Sep 11-21, 1969	❖ Sep 28-Oct 5, 1947
❖ Sep 12-23, 2012	❖ Sep 7-23, 1990	❖ Sep 12-22, 1968	❖ Sep 29-Oct 6, 1946
❖ Sep 9-25, 2011	❖ Sep 8-24, 1989	❖ Sep 14-24, 1967	❖ Oct 7-14, 1945
❖ Sep 10-26, 2010	❖ Sep 9-25, 1988	❖ Sep 15-25, 1966	❖ Sep 24-Oct 1, 1944
❖ Sep 11-27, 2009	❖ Sep 11-27, 1987	❖ Sep 16-26, 1965	❖ Sep 26-Oct 3, 1943
❖ Sep 5-21, 2008	❖ Sep 5-21, 1986	❖ Sep 17-27, 1964	❖ Sep 27-Oct 4, 1942
❖ Sep 7-23, 2007	❖ Sep 6-22, 1985	❖ Sep 12-22, 1963	❖ Sep 21-28, 1941
❖ Sep 8-24, 2006	❖ Sep 7-23, 1984	❖ Sep 13-23, 1962	❖ Sep 22-29, 1940
❖ Sep 9-25, 2005	❖ Sep 9-25, 1983	❖ Sep 14-24, 1961	❖ Sep 24-Oct 1, 1939
❖ Sep 3-19, 2004	❖ Sep 14-26, 1982	❖ Sep 17-25, 1960	❖ Oct 9-16, 1938
❖ Sep 5-21, 2003	❖ Sep 16-27, 1981	❖ Sep 26-Oct 4, 1959	

*events virtual due to COVID-19



Climate data and historical information provided in this summary were compiled for each set of state fair dates using the National Centers for Environmental Information, the Applied Climate Information System, and the Albuquerque Journal online archives. Data at the Albuquerque International Sunport should be considered a proxy to weather observed at the state fairgrounds since conditions can vary greatly across the metro area. Temperatures are generally similar at the fairgrounds compared to the Sunport since the observing platform is only three miles away and near the same elevation. Wind and precipitation can however vary considerably between the Sunport and the fairgrounds since complex terrain features to the east of Albuquerque often result in microscale weather patterns. The [latest weather forecast](#) is available for the NM State Fair at the NWS point-n-click database.

- ABQ Journal archives via <https://abqjournal.newspapers.com/>
 - National Centers for Environmental Information - Image and Publications System (NCEI IPS)
 - Applied Climate Information System by the NOAA Regional Climate Centers
 - NCEI Storm Events Database
 - NOAA NWS Performance Management Portal
 - *Special Thanks:* Oona Gonzales, Media & Marketing Manager, NM State Fair
-
- Questions? Contact SR-ABQ.Webmaster@noaa.gov