



NEBRASKA STATE  
CLIMATE OFFICE

# Nebraska Climate Update

CARC Meeting  
26 July 2024

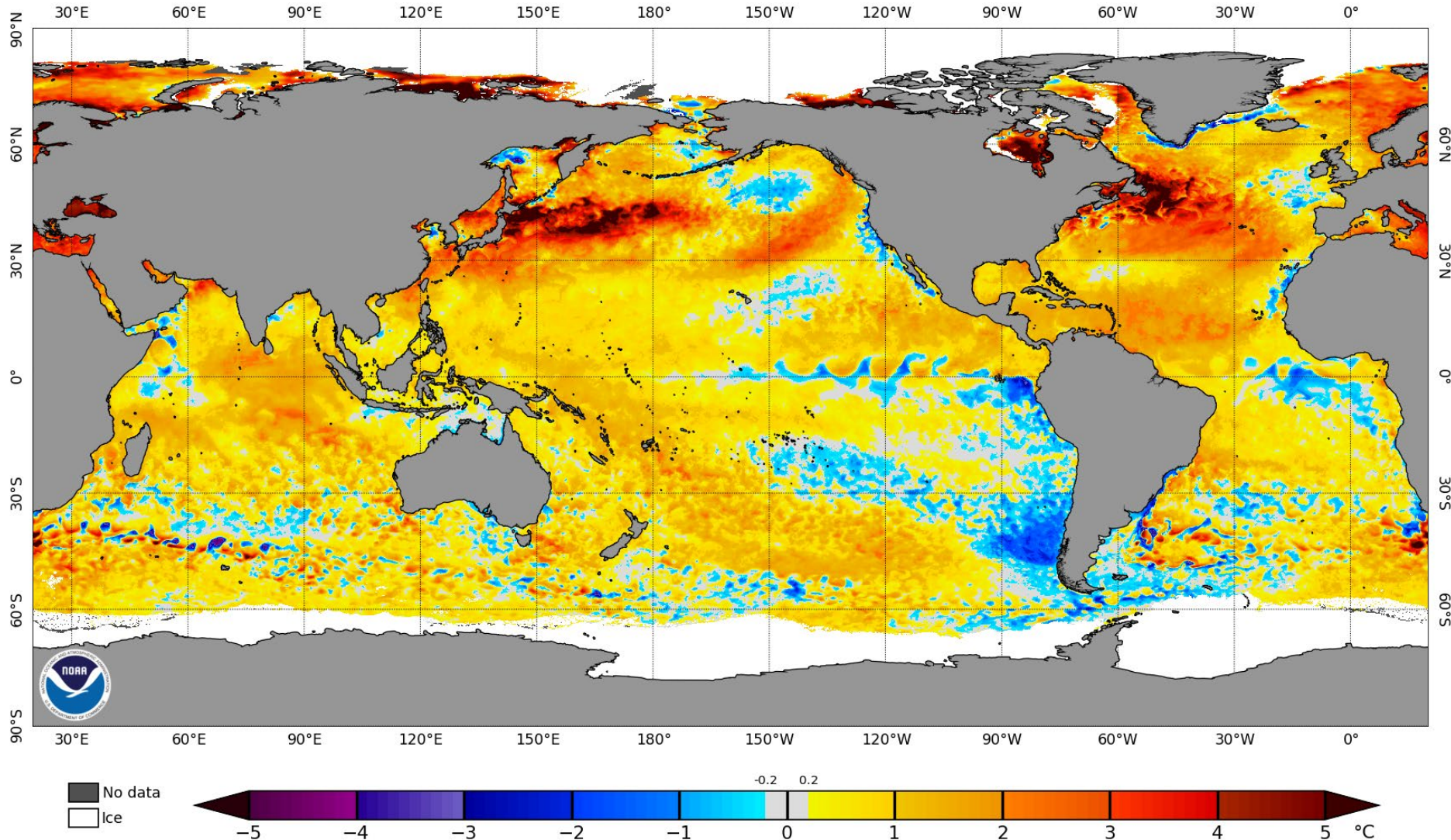
ERIC HUNT  
EHUNT2@UNL.EDU  
402-617-4190



# Sea Surface Temp Anomalies

NEBRASKA STATE  
CLIMATE OFFICE

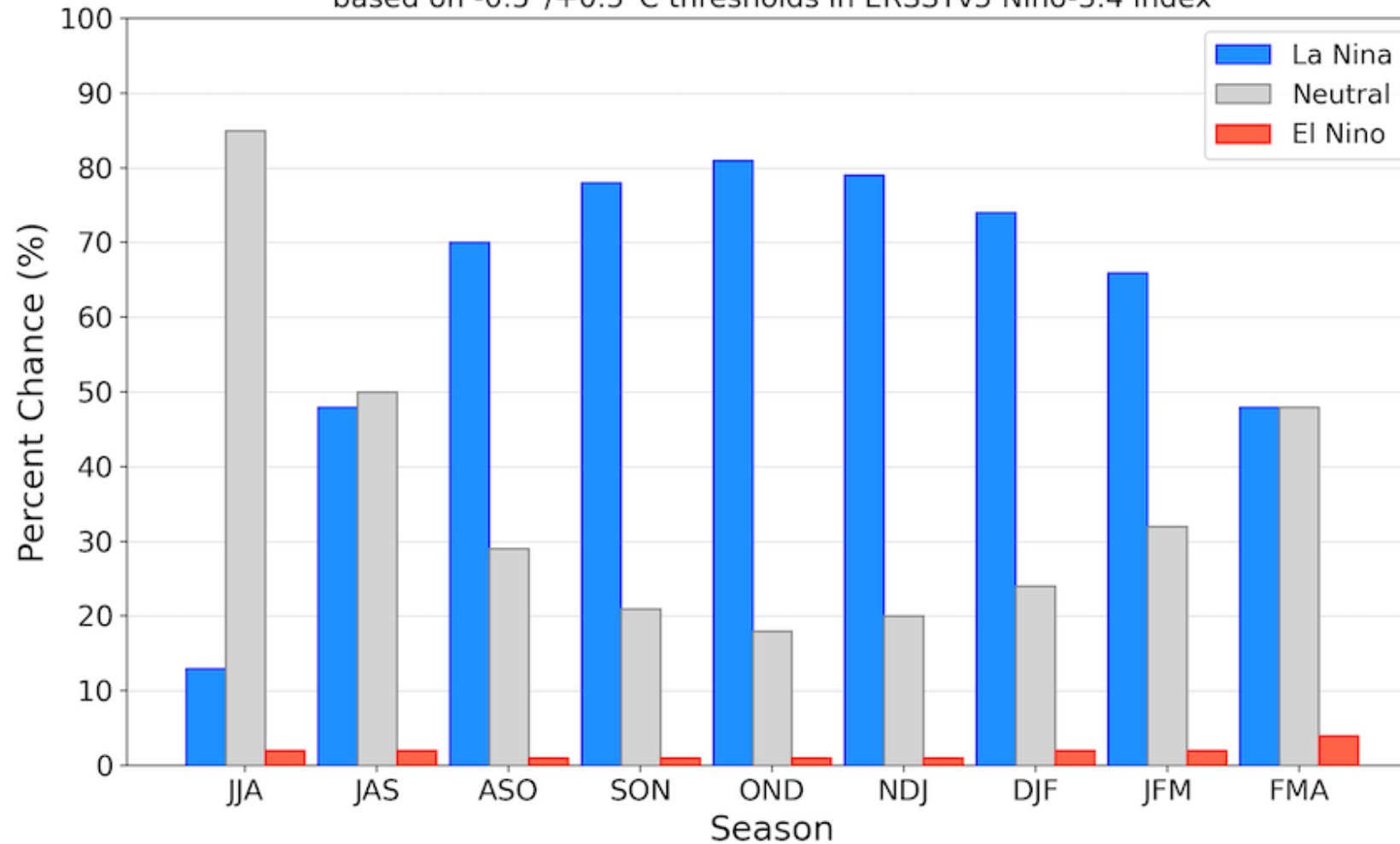
NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 23 Jul 2024



# ENSO update

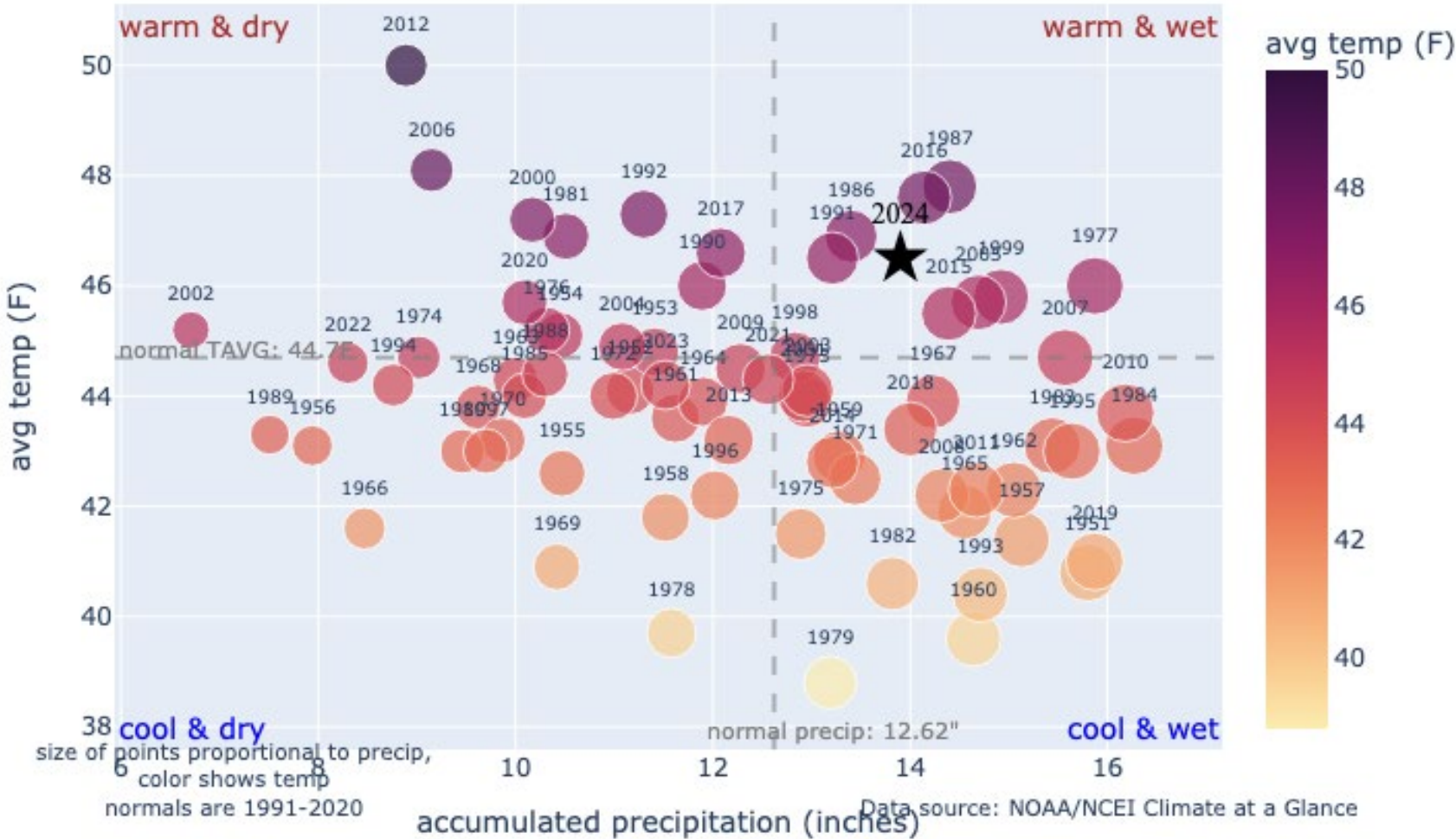
## Official NOAA CPC ENSO Probabilities (issued July 2024)

based on  $-0.5^{\circ}/+0.5^{\circ}\text{C}$  thresholds in ERSSTv5 Niño-3.4 index



# January-June 2024 Quad Chart

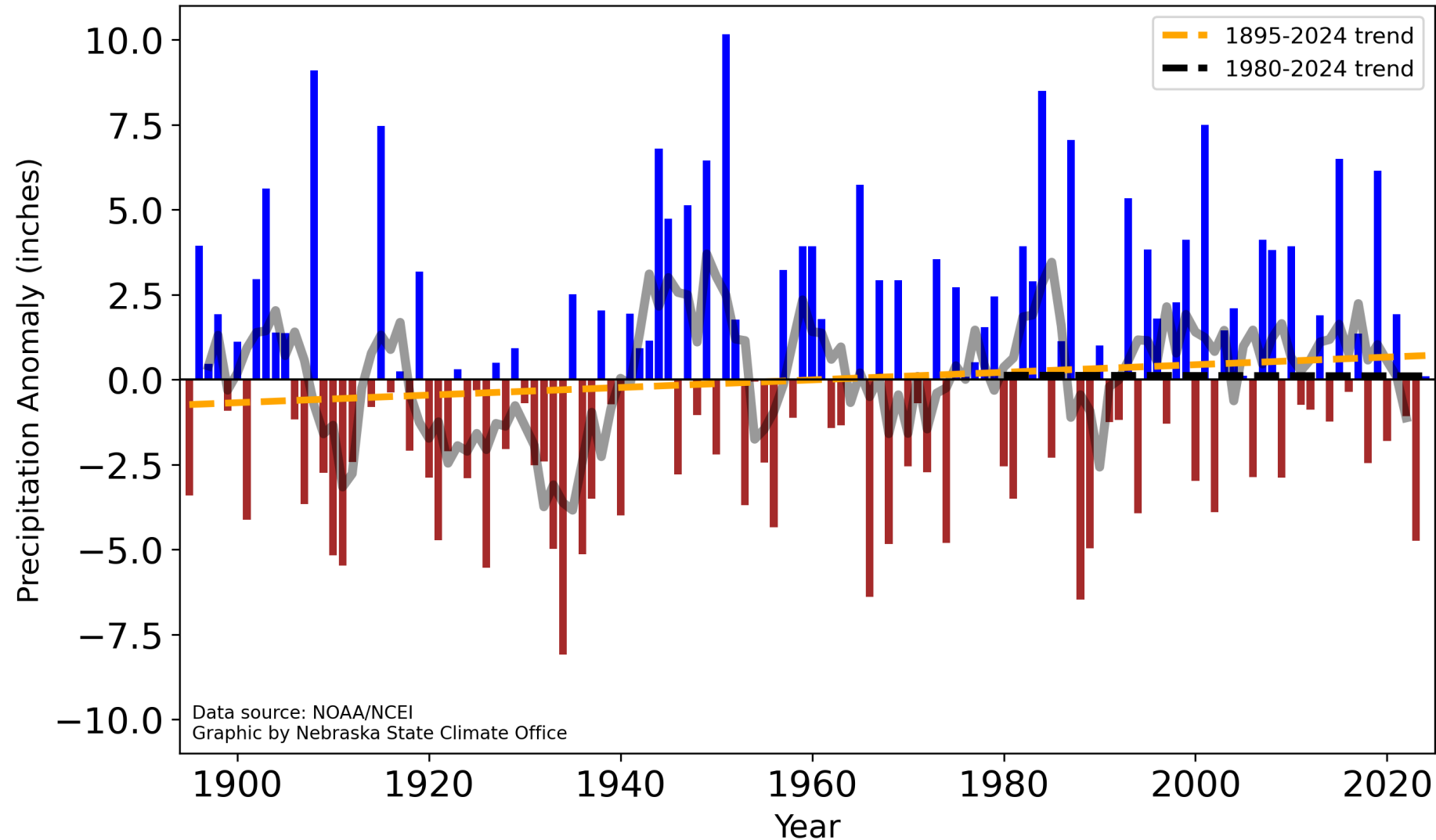
Nebraska statewide average temperature and precipitation, January - June



Data source: NOAA/NCEI Climate at a Glance

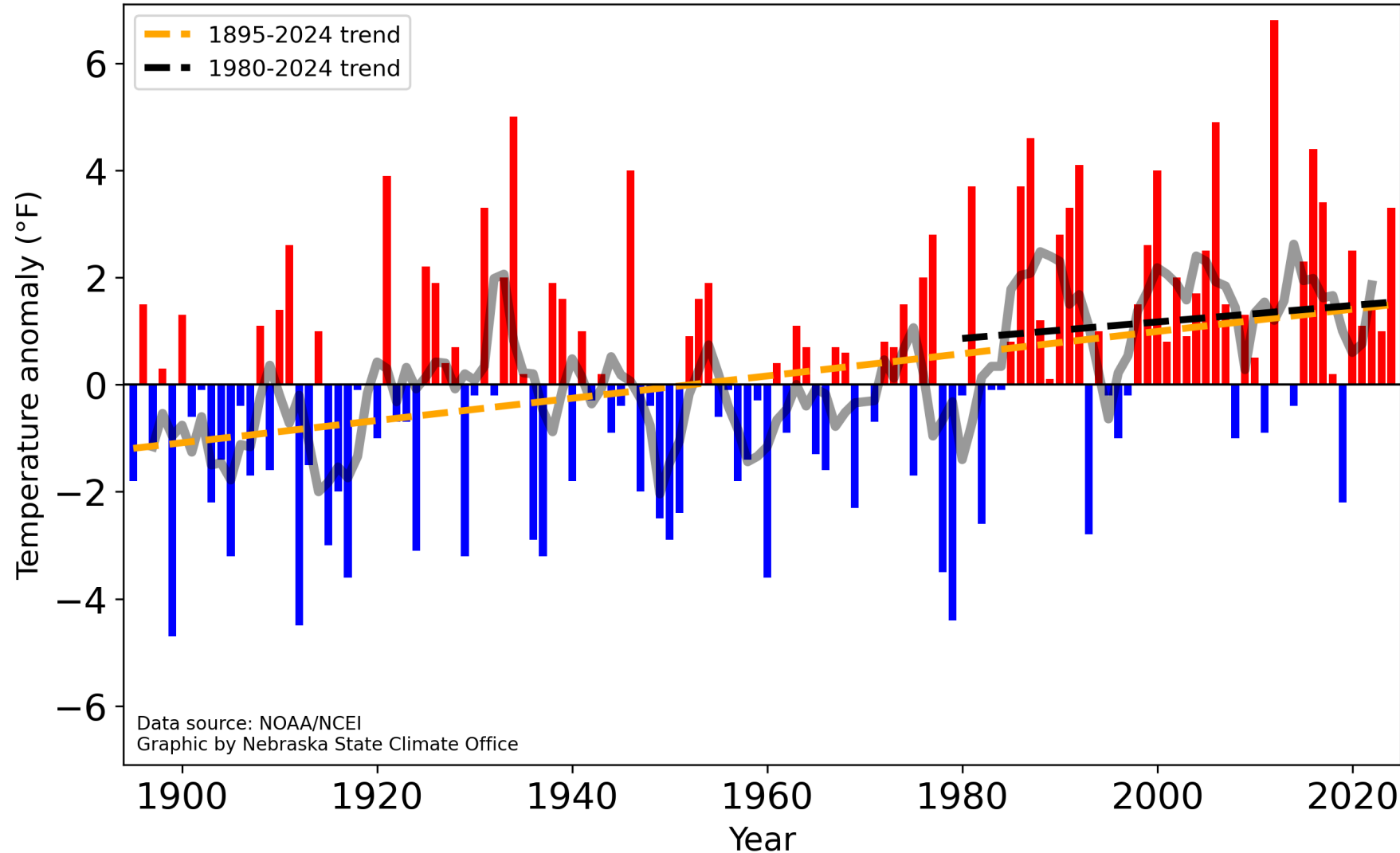
# January-June 2024 in perspective

Nebraska statewide January-June precipitation anomaly (inches), with respect to 20th century average



# January-June 2024 in perspective

Nebraska statewide January-June temperature anomaly, with respect to 20th century average



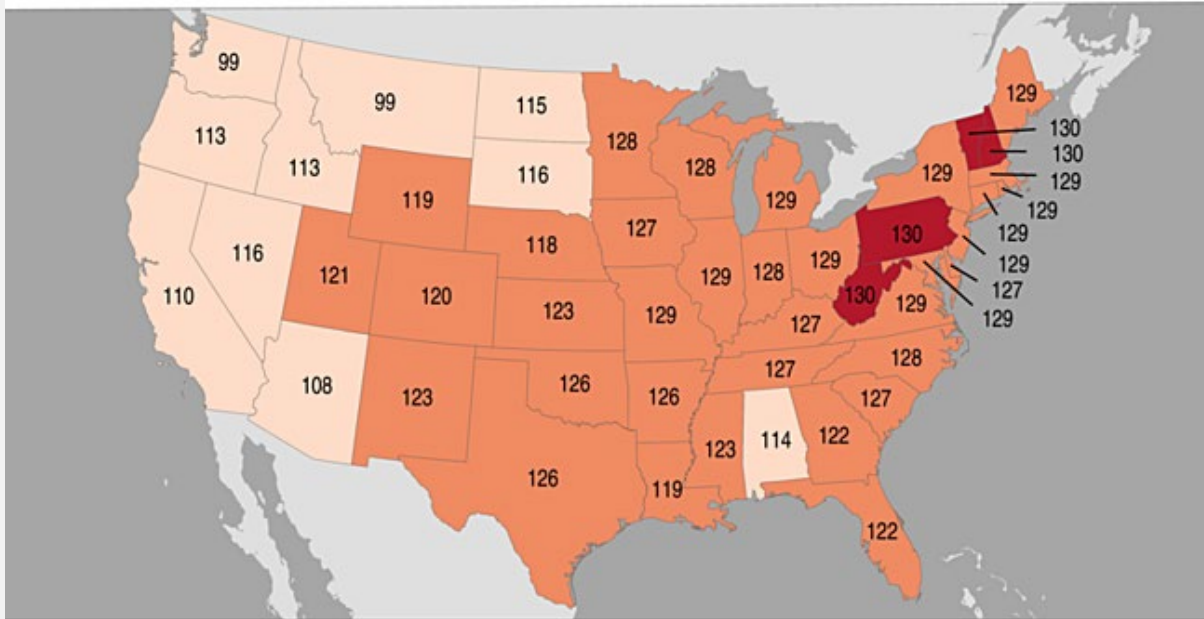
# 2024 (through June)

## Statewide Average Temperature Ranks

January – June 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information



Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly

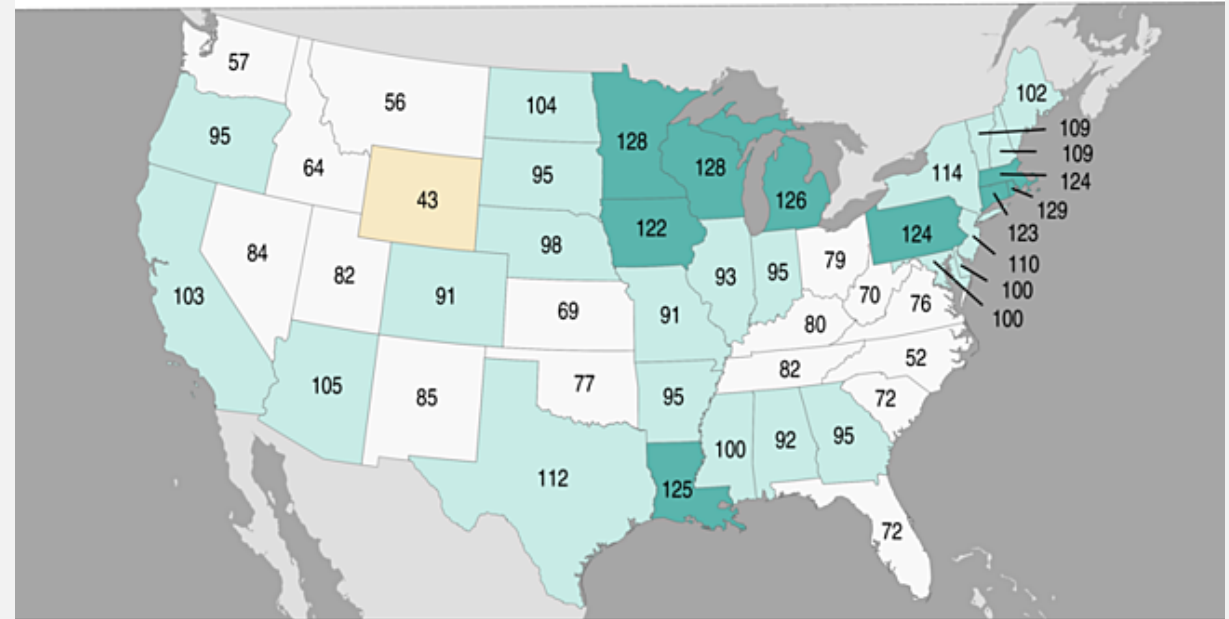


## Statewide Precipitation Ranks

January – June 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information



Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly



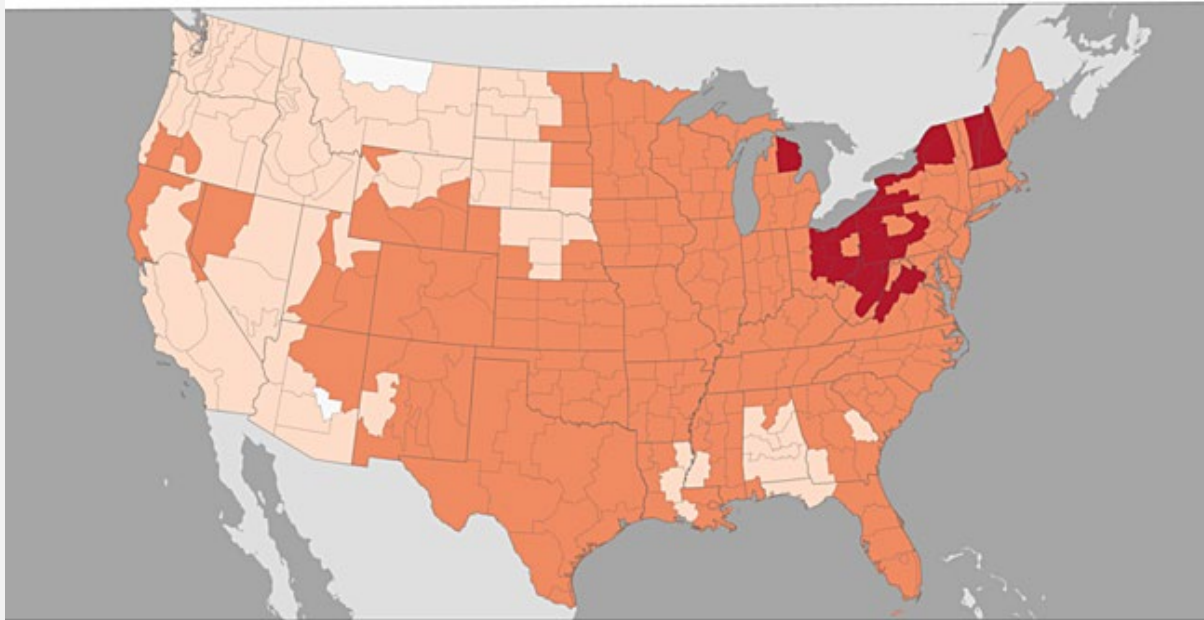
# 2024 (through June)

## Divisional Average Temperature Ranks

January–June 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information



Record Coldest  
Much Below Average  
Below Average  
Near Average  
Above Average  
Much Above Average  
Record Warmest



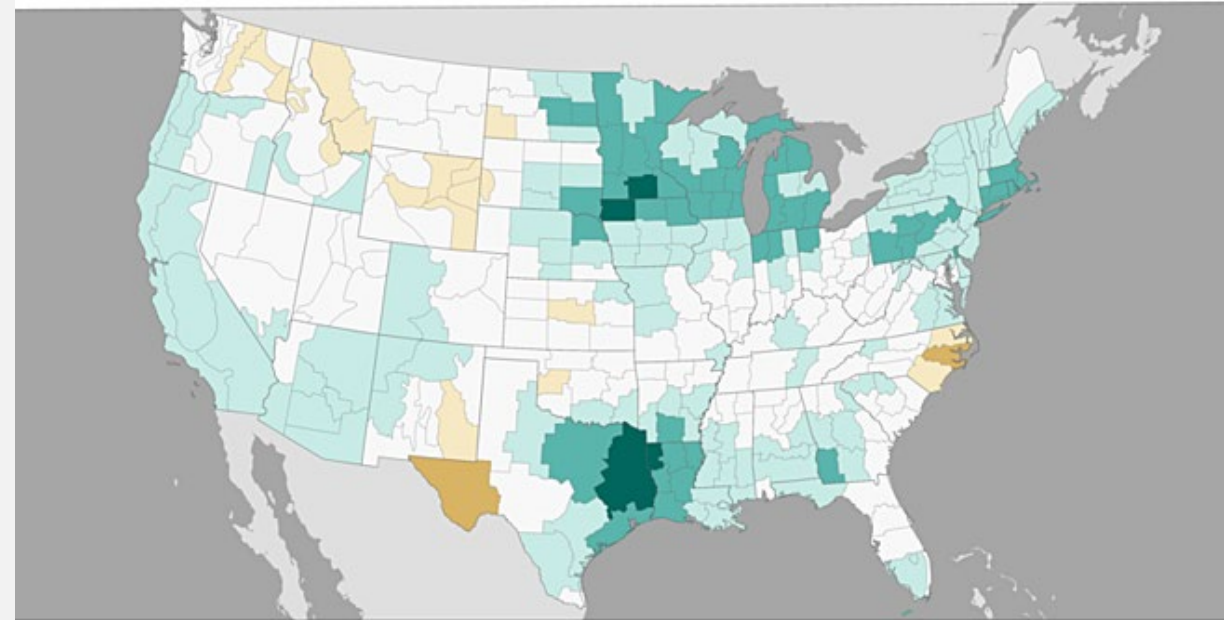
Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly

## Divisional Precipitation Ranks

January–June 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information



Record Driest  
Much Below Average  
Below Average  
Near Average  
Above Average  
Much Above Average  
Record Wettest



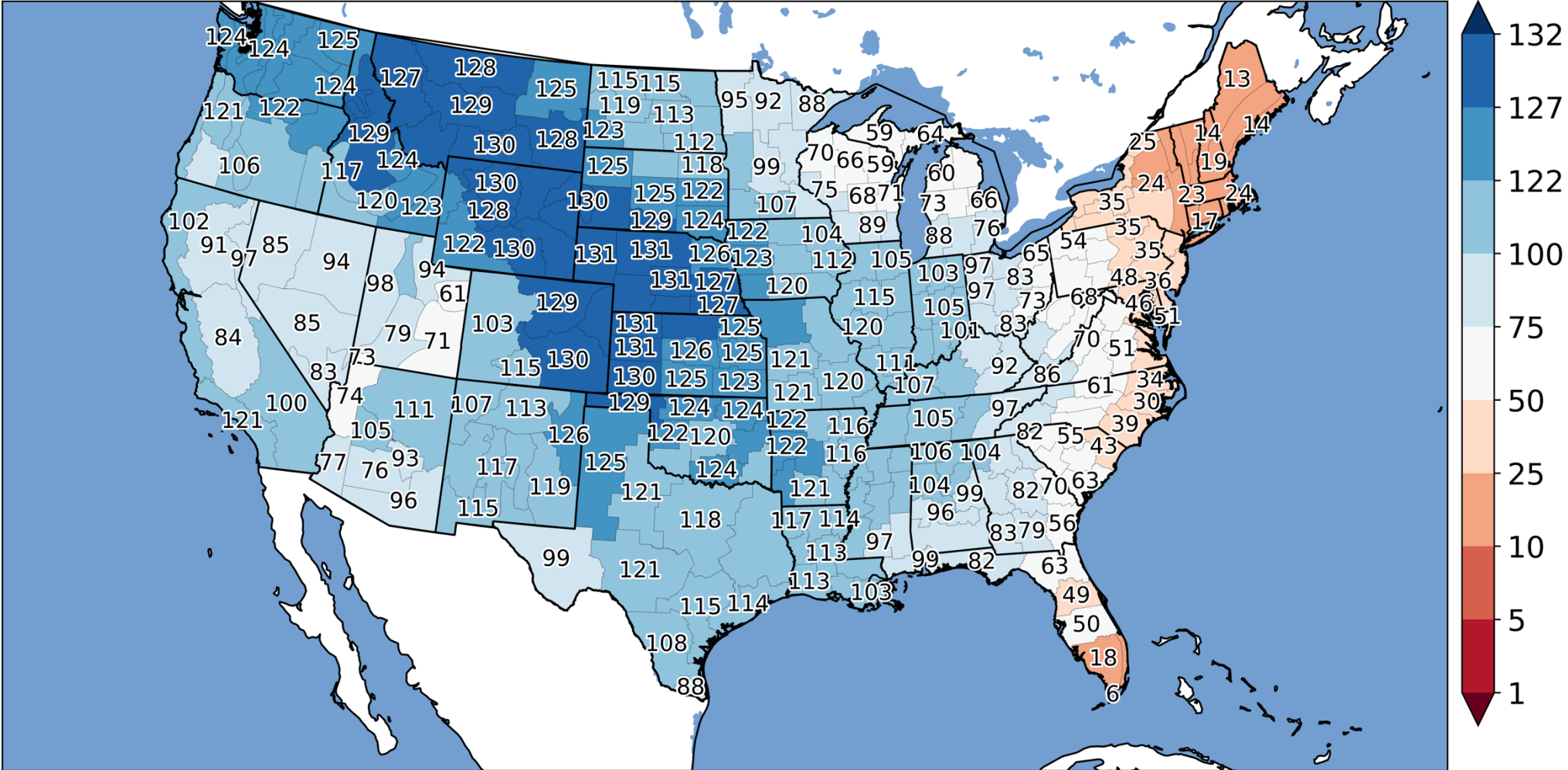
Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly



# January cold snap

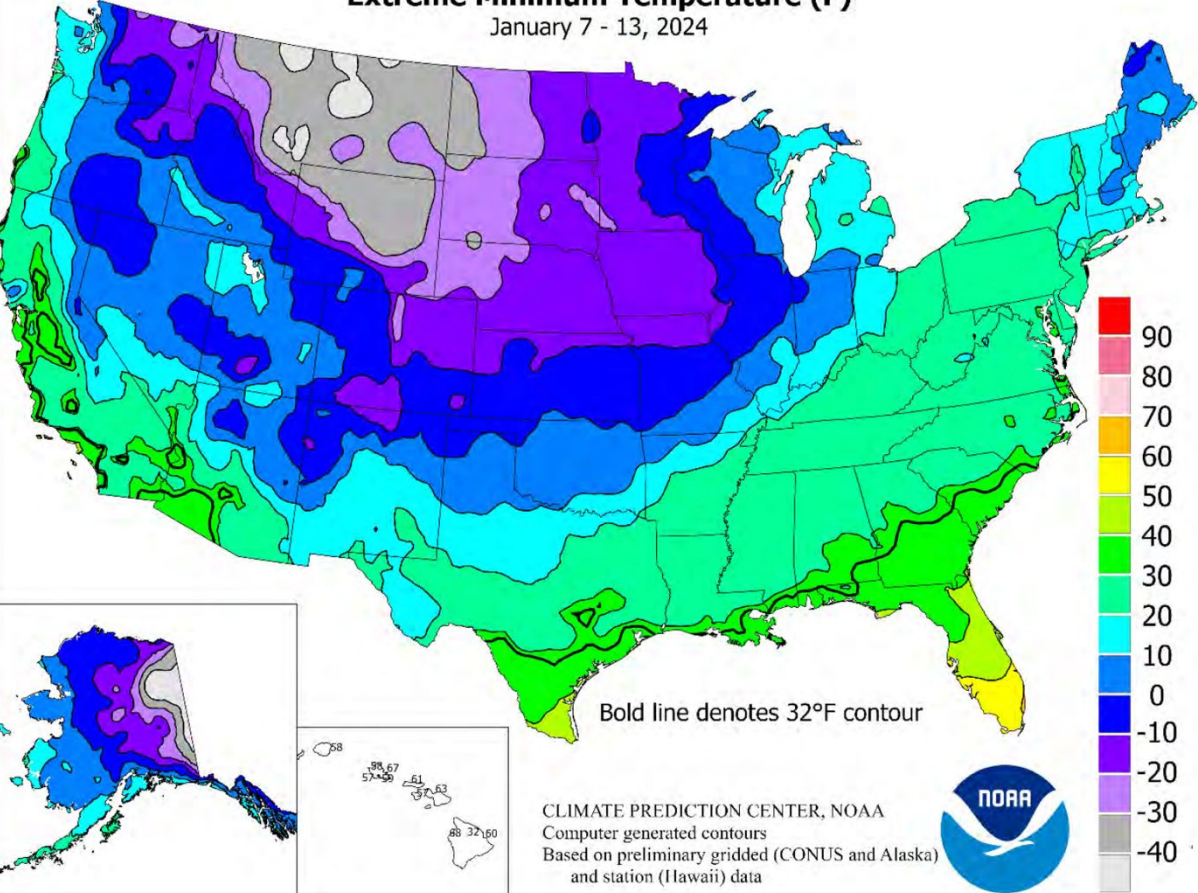


7 Jan 2024 ~7 AM till 17 Jan 2024 ~7 AM Average Temperature Ranks by Climate District  
Based on IEM Estimates, 1 is hottest out of 132 total years (1893-2024)

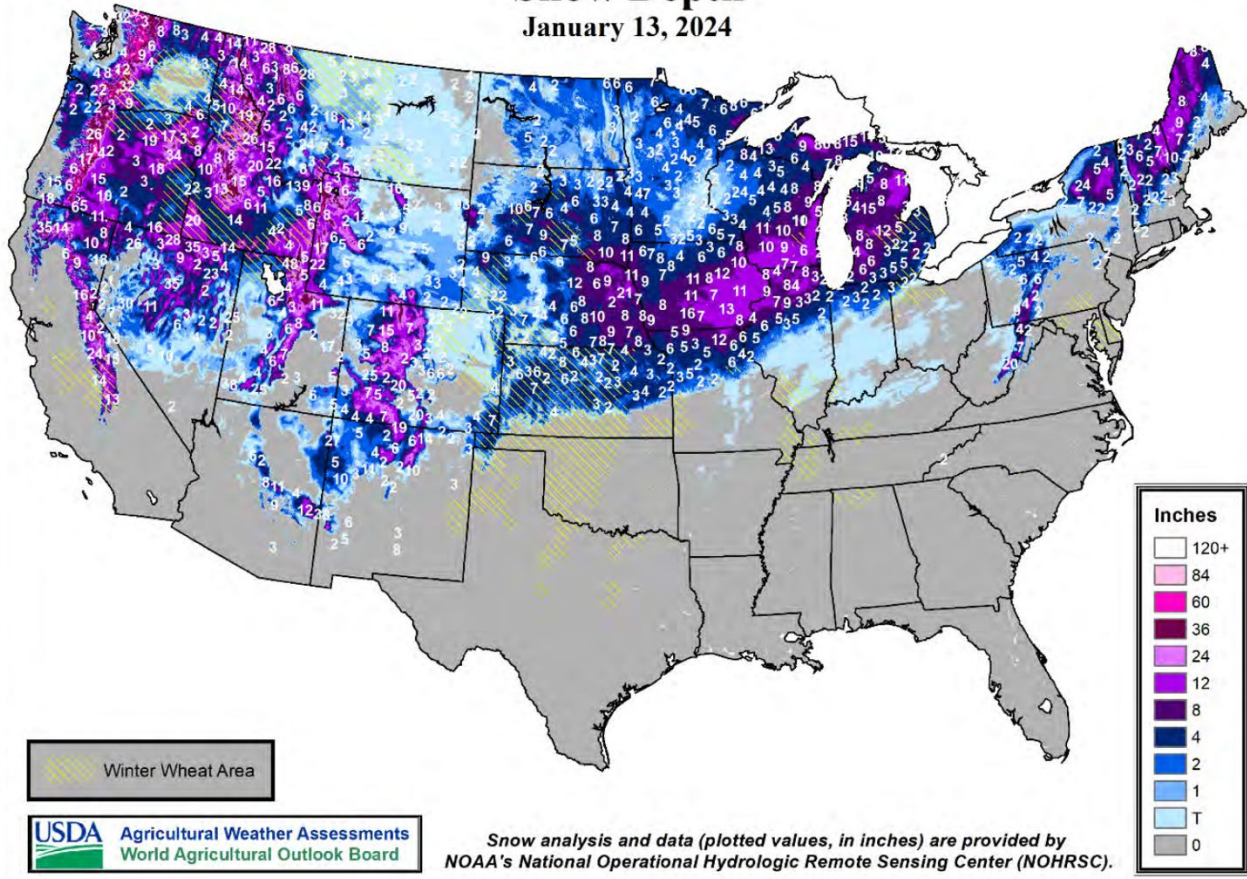


# January cold snap

**Extreme Minimum Temperature (F)**  
January 7 - 13, 2024

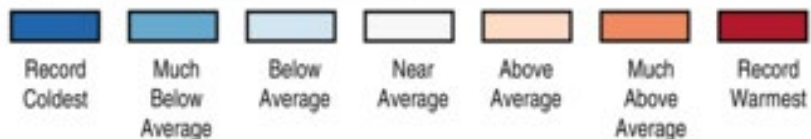
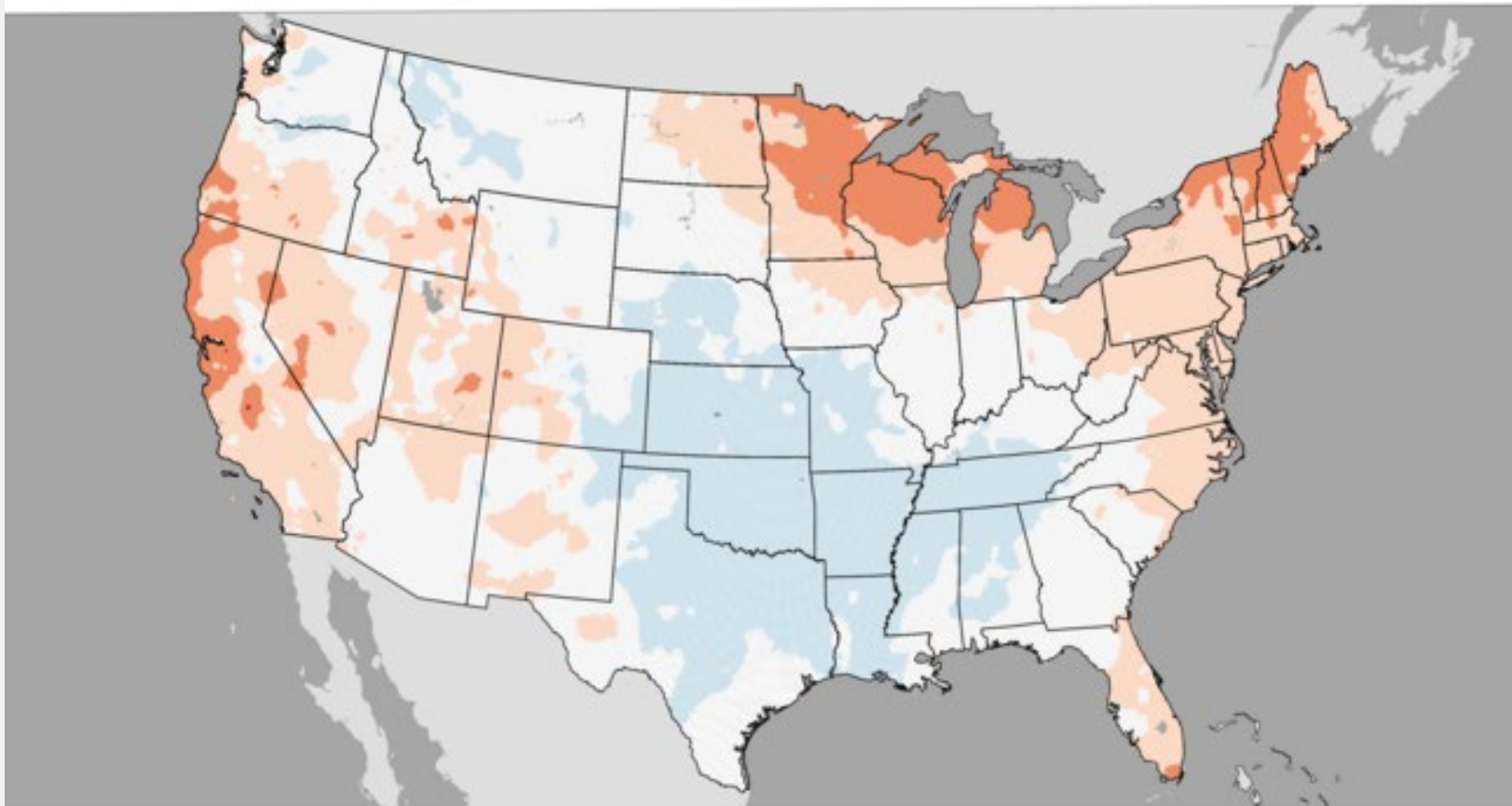


**Snow Depth**  
January 13, 2024



# January cold snap

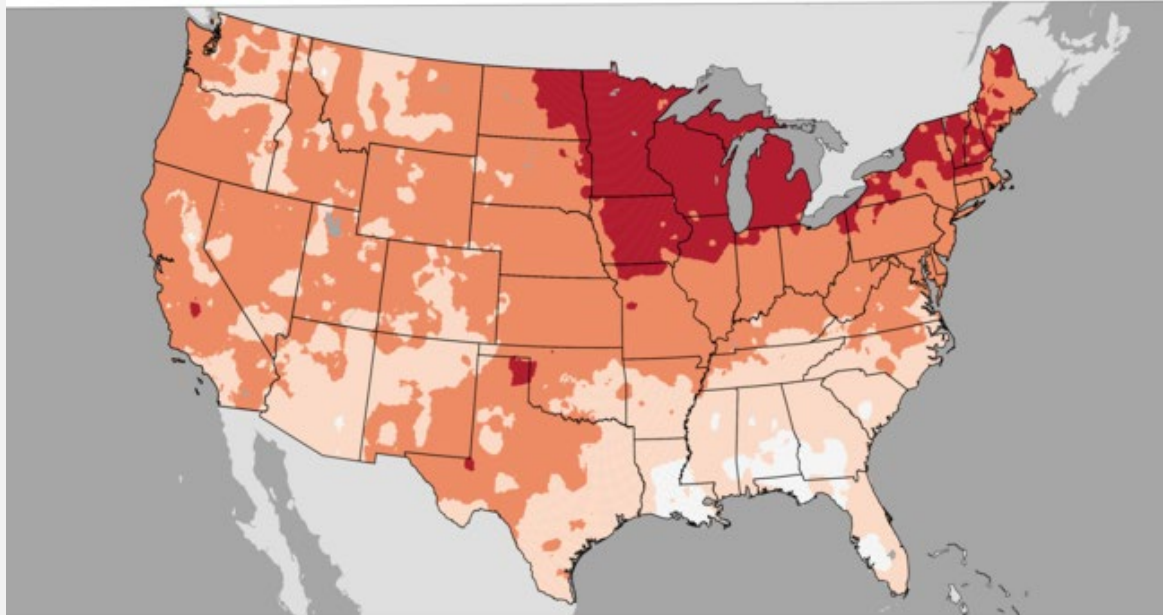
Mean Temperature Percentiles  
January 2024  
Ranking Period: 1895-2024  
NOAA's National Centers for Environmental Information



# Winter 2024

**Very mild overall. Wetter than average almost statewide.**

Mean Temperature Percentiles  
December 2023–February 2024  
Ranking Period: 1895–2024  
NOAA's National Centers for Environmental Information

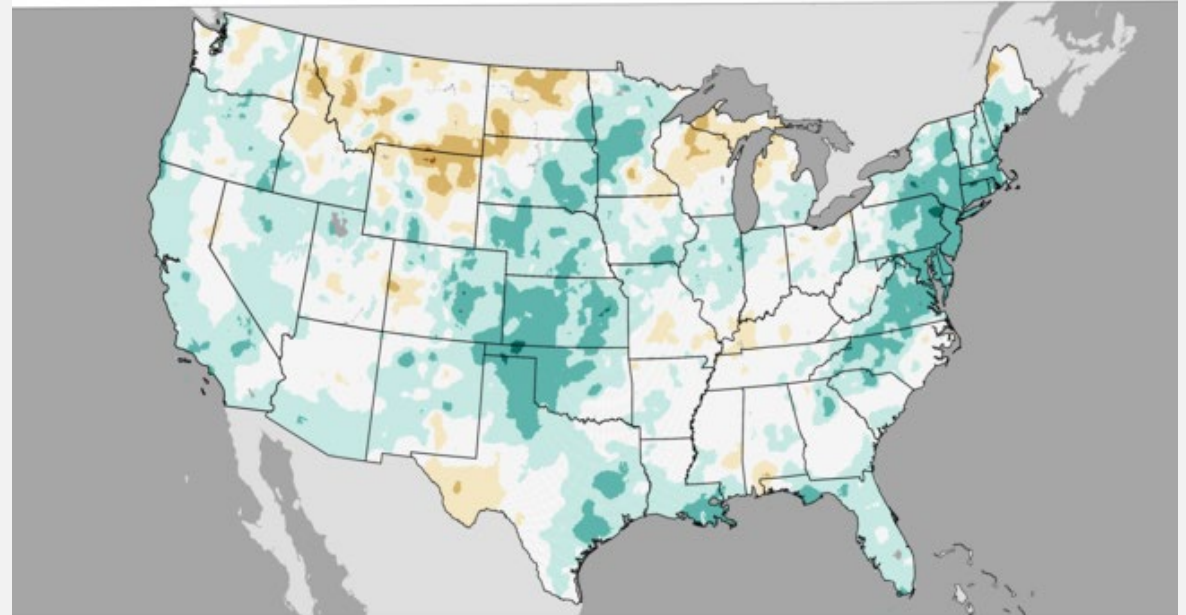


Record Coldest  
Much Below Average  
Below Average  
Near Average  
Above Average  
Much Above Average  
Record Warmest



Created: Wed Mar 06 2024  
Source: nClimGrid-Monthly

Total Precipitation Percentiles  
December 2023–February 2024  
Ranking Period: 1895–2024  
NOAA's National Centers for Environmental Information



Record Driest  
Much Below Average  
Below Average  
Near Average  
Above Average  
Much Above Average  
Record Wettest

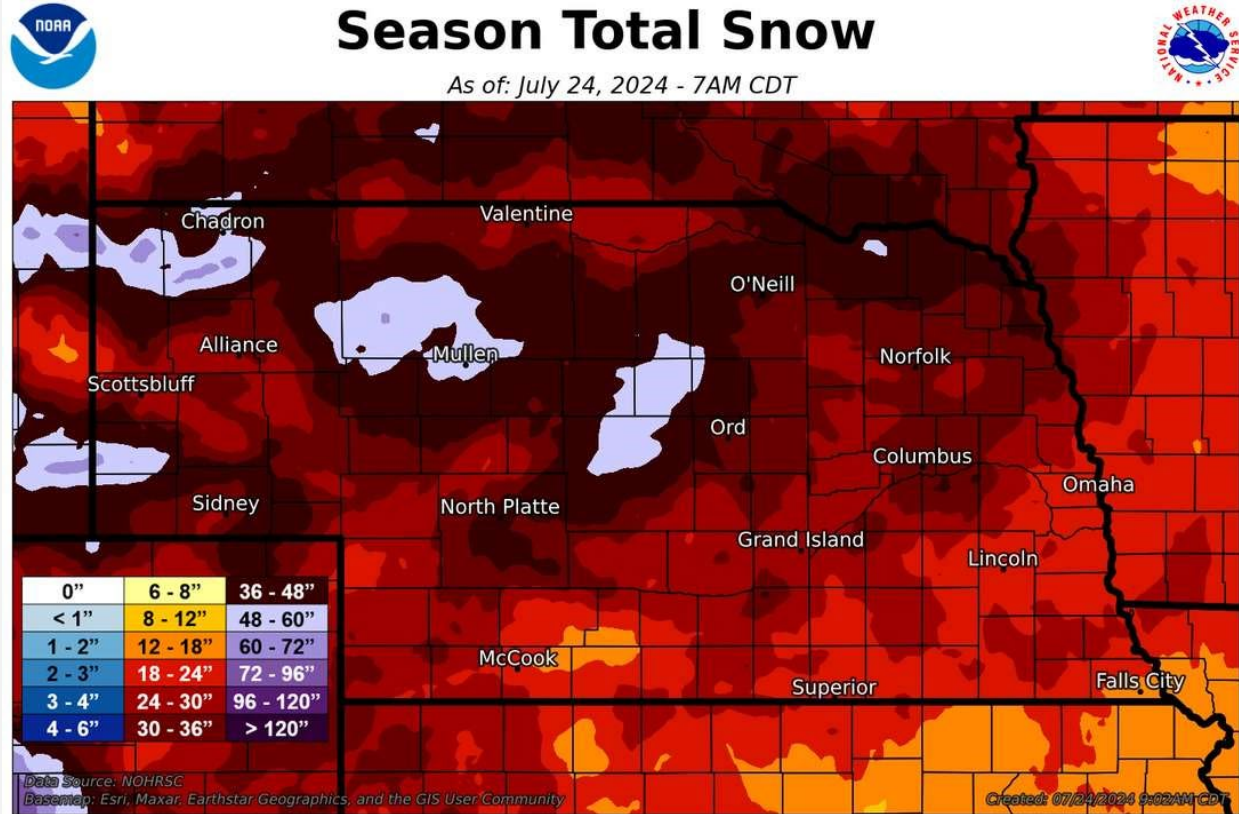


Created: Wed Mar 06 2024  
Source: nClimGrid-Monthly

# 2023-2024 snow

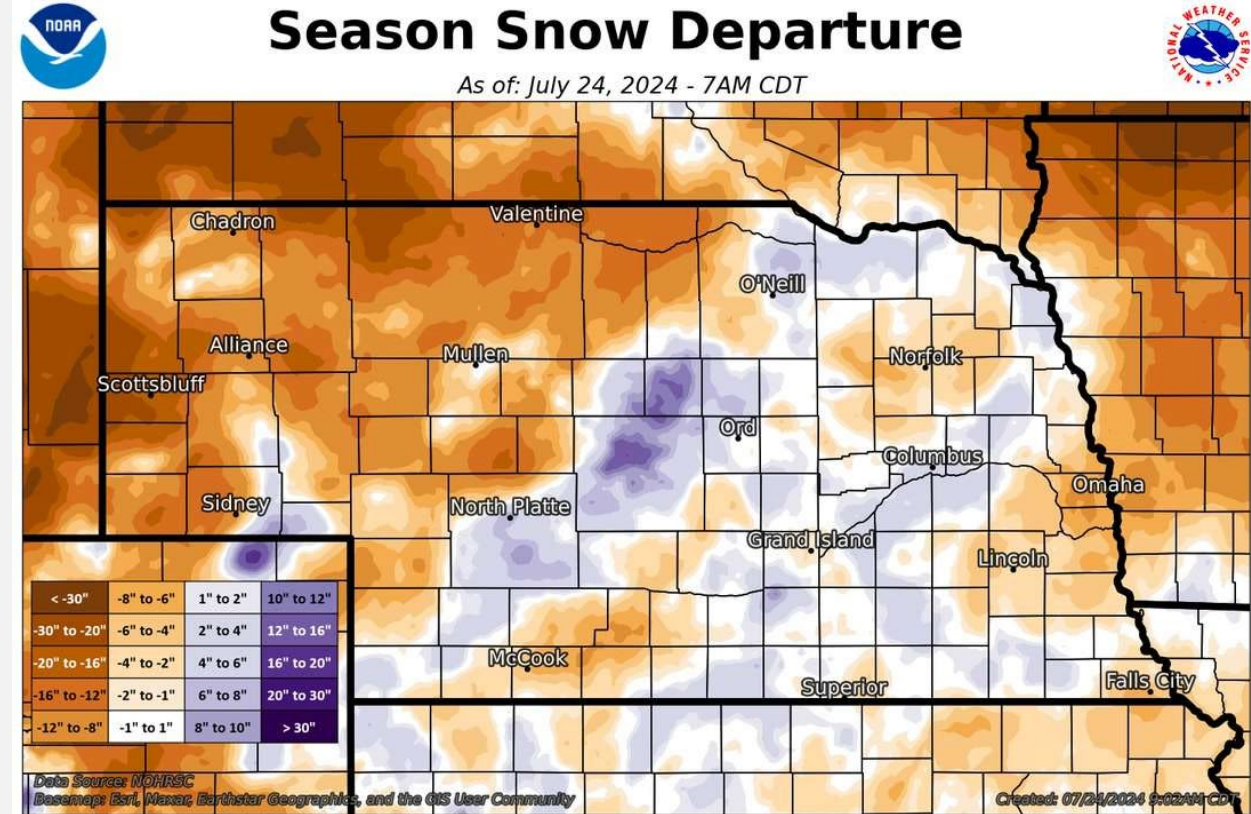
## Season Total Snow

As of: July 24, 2024 - 7AM CDT



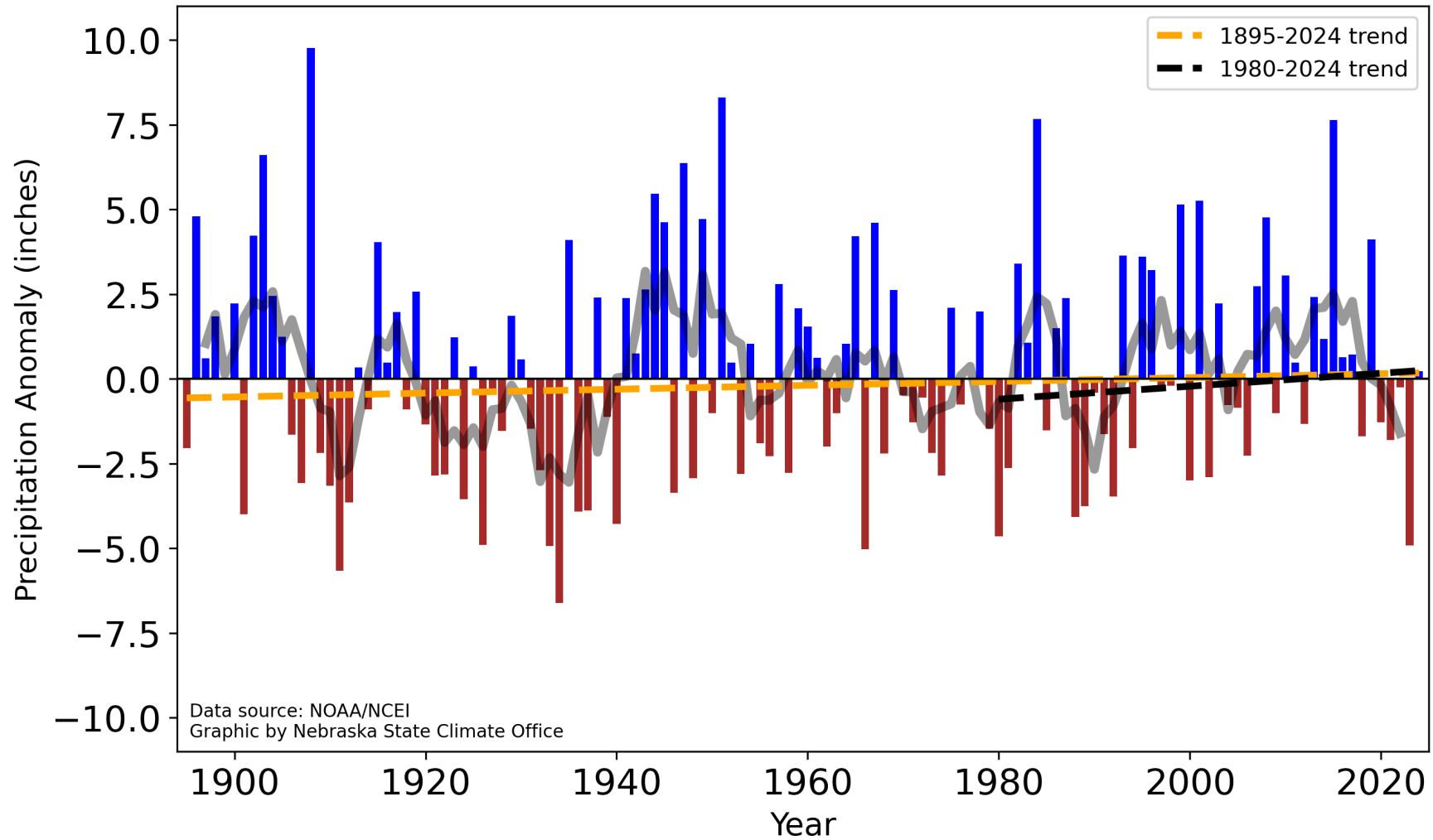
## Season Snow Departure

As of: July 24, 2024 - 7AM CDT



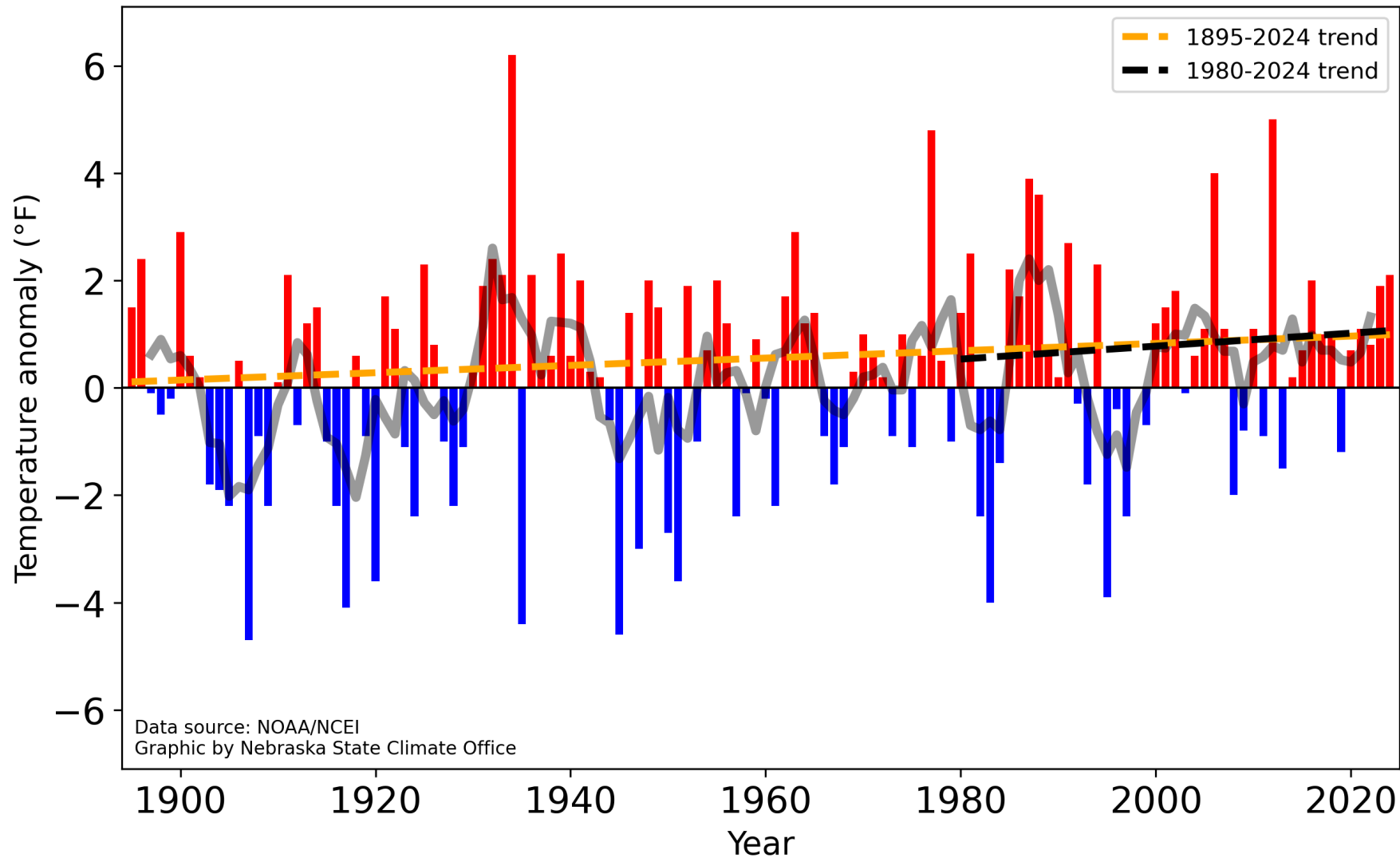
# Apr-Jun 2024 in perspective

Nebraska statewide April-June precipitation anomaly (inches), with respect to 20th century average



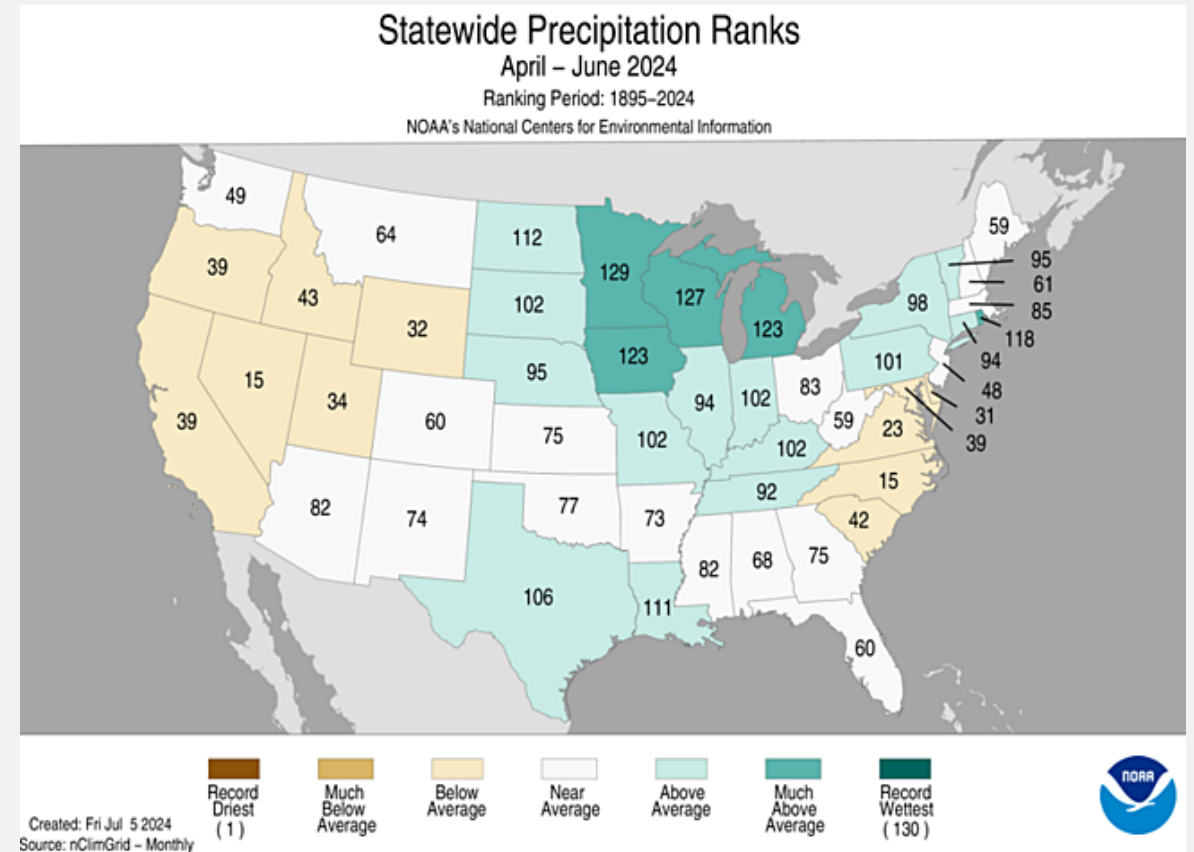
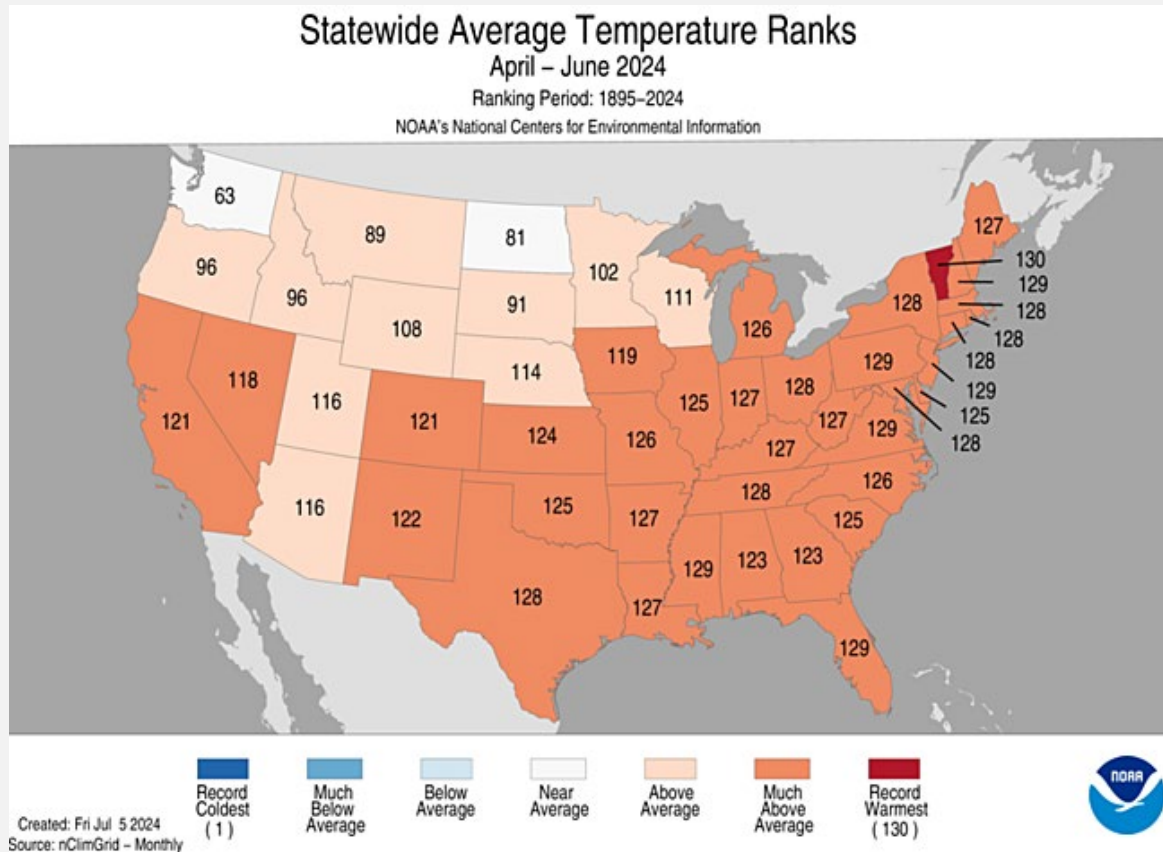
# Apr-Jun 2024 in perspective

Nebraska statewide April-June temperature anomaly, with respect to 20th century average



# April-June 2024

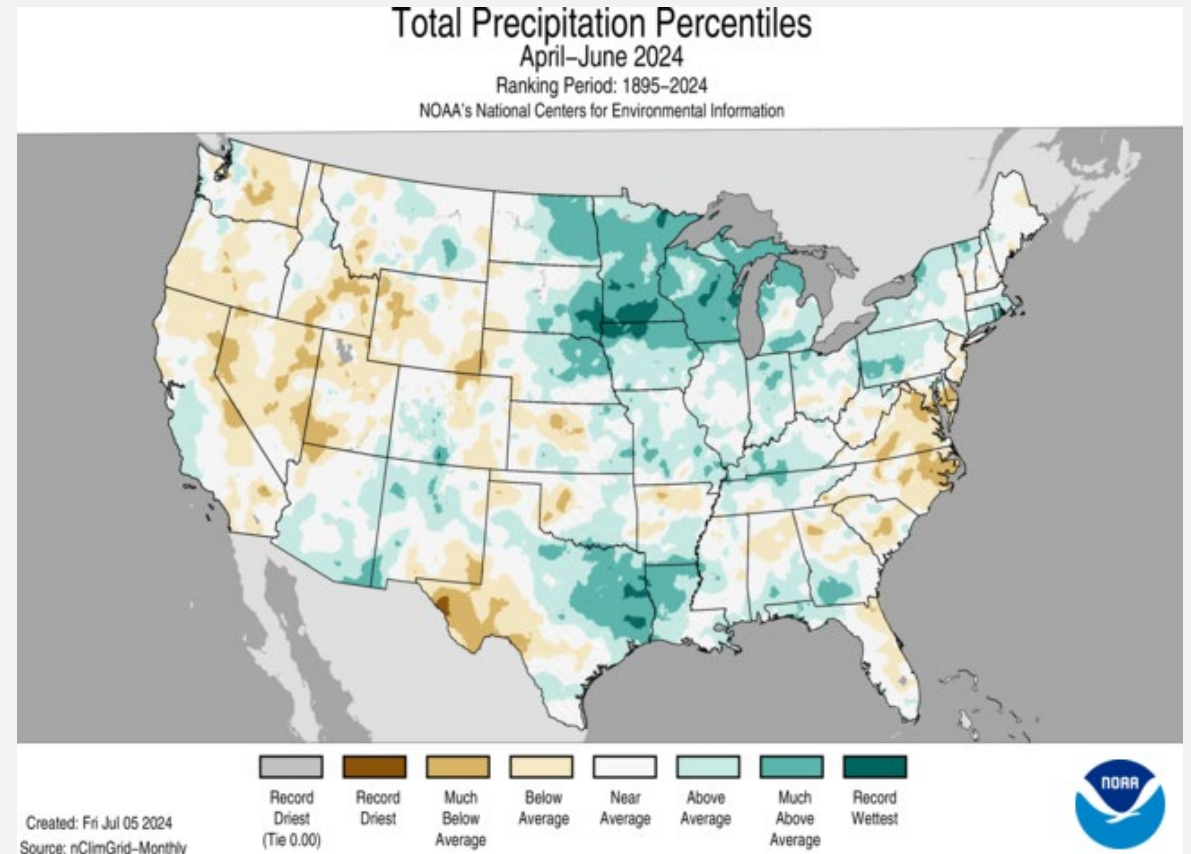
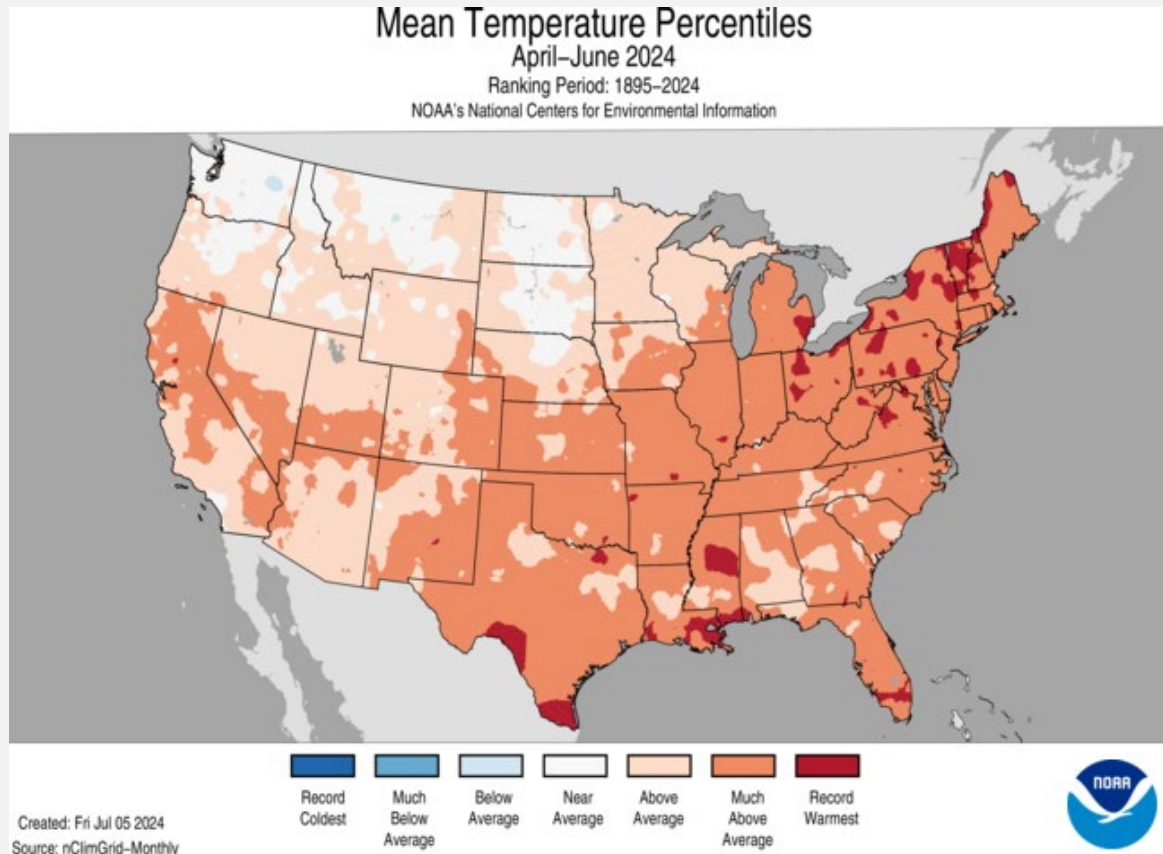
**Warmer than average all but north central. Drier in the Panhandle but wet northeast and north central.**





# April-June 2024

**Warmer than average all but north central. Drier in the Panhandle but wet northeast and north central.**

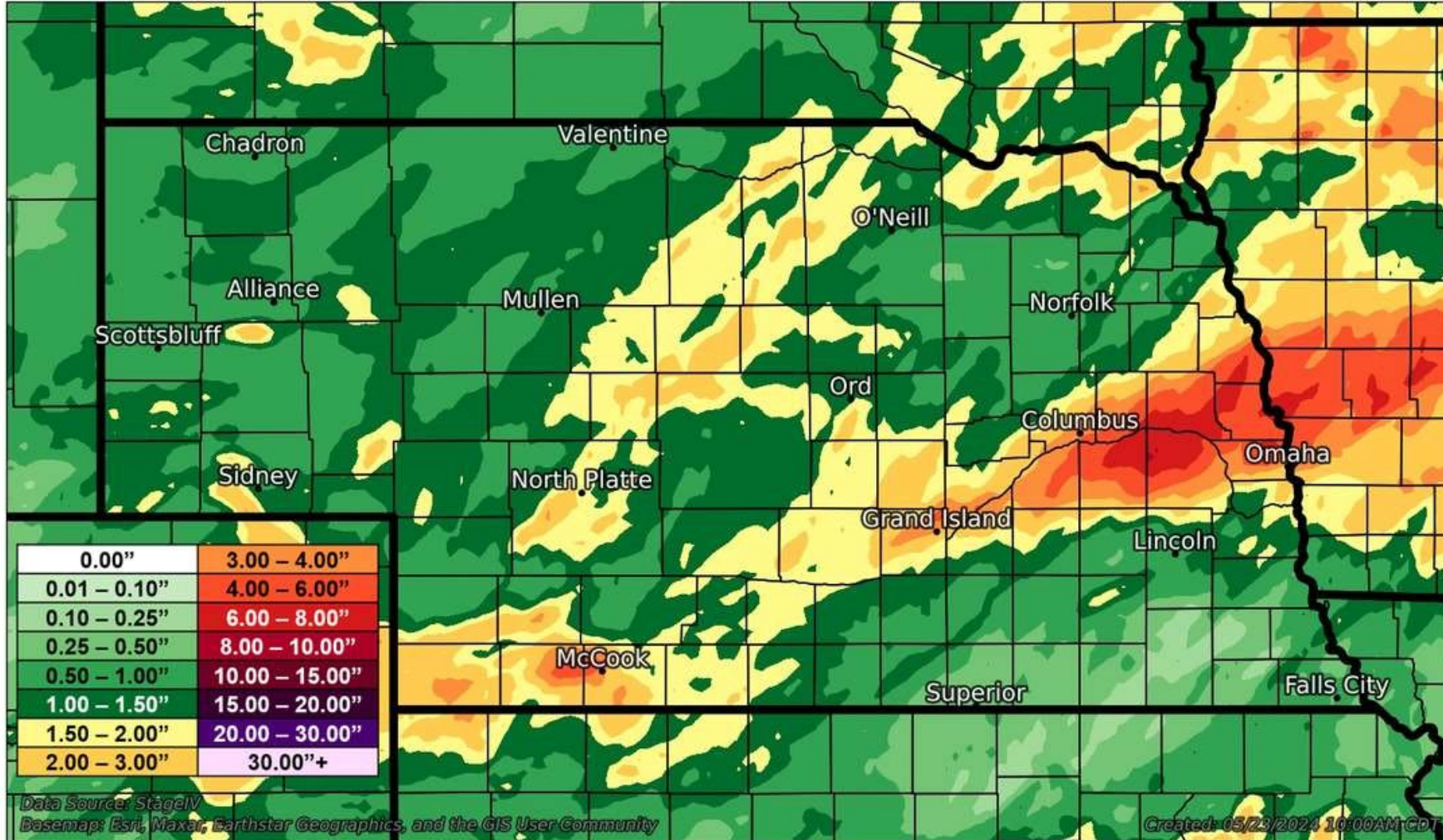


# May 20-21 heavy rainfall



## 7-Day Precipitation

As of: May 23, 2024 - 7AM CDT

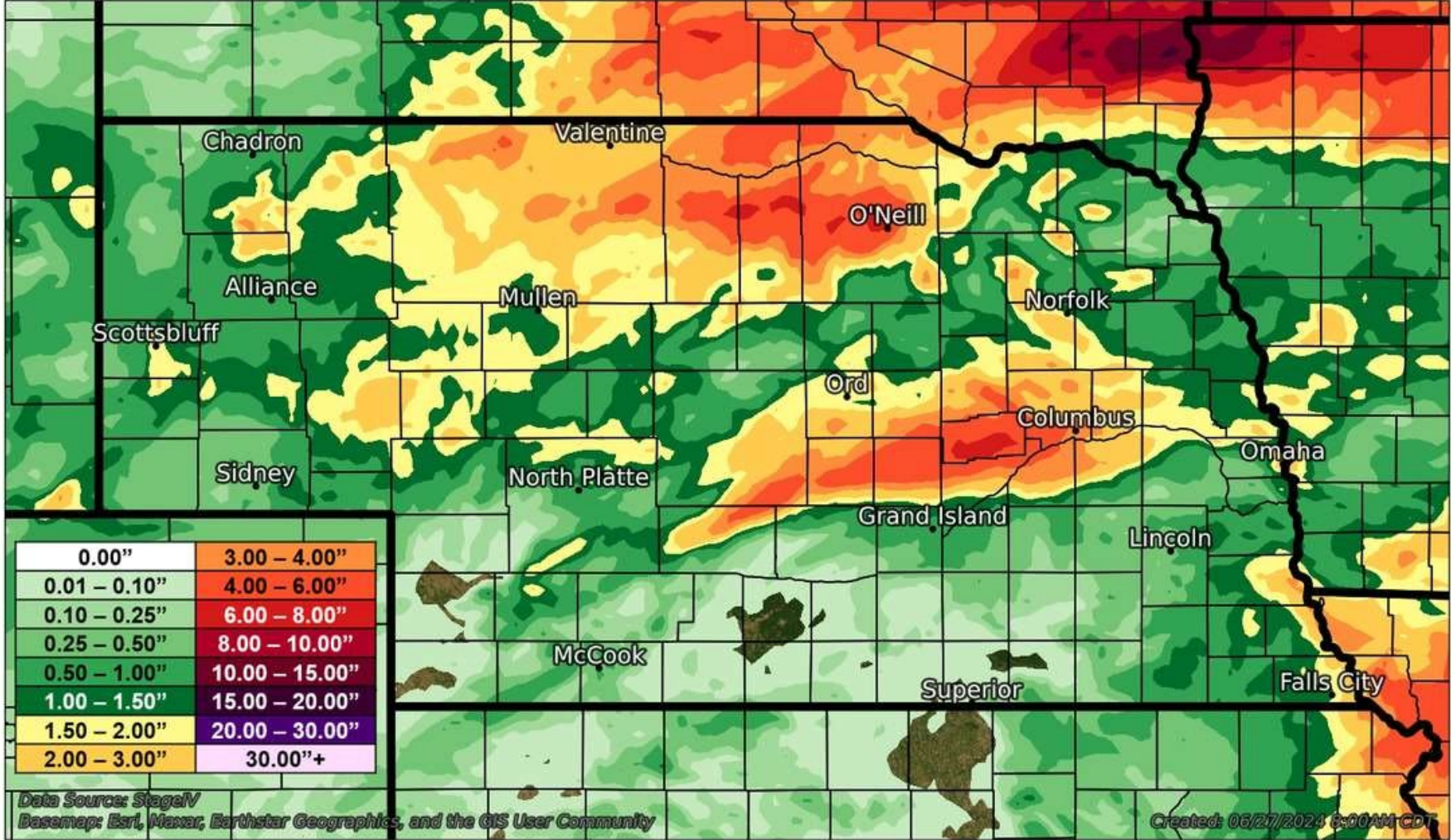


# June 20-21 heavy rainfall



## 7-Day Precipitation

As of: June 26, 2024 - 7AM CDT

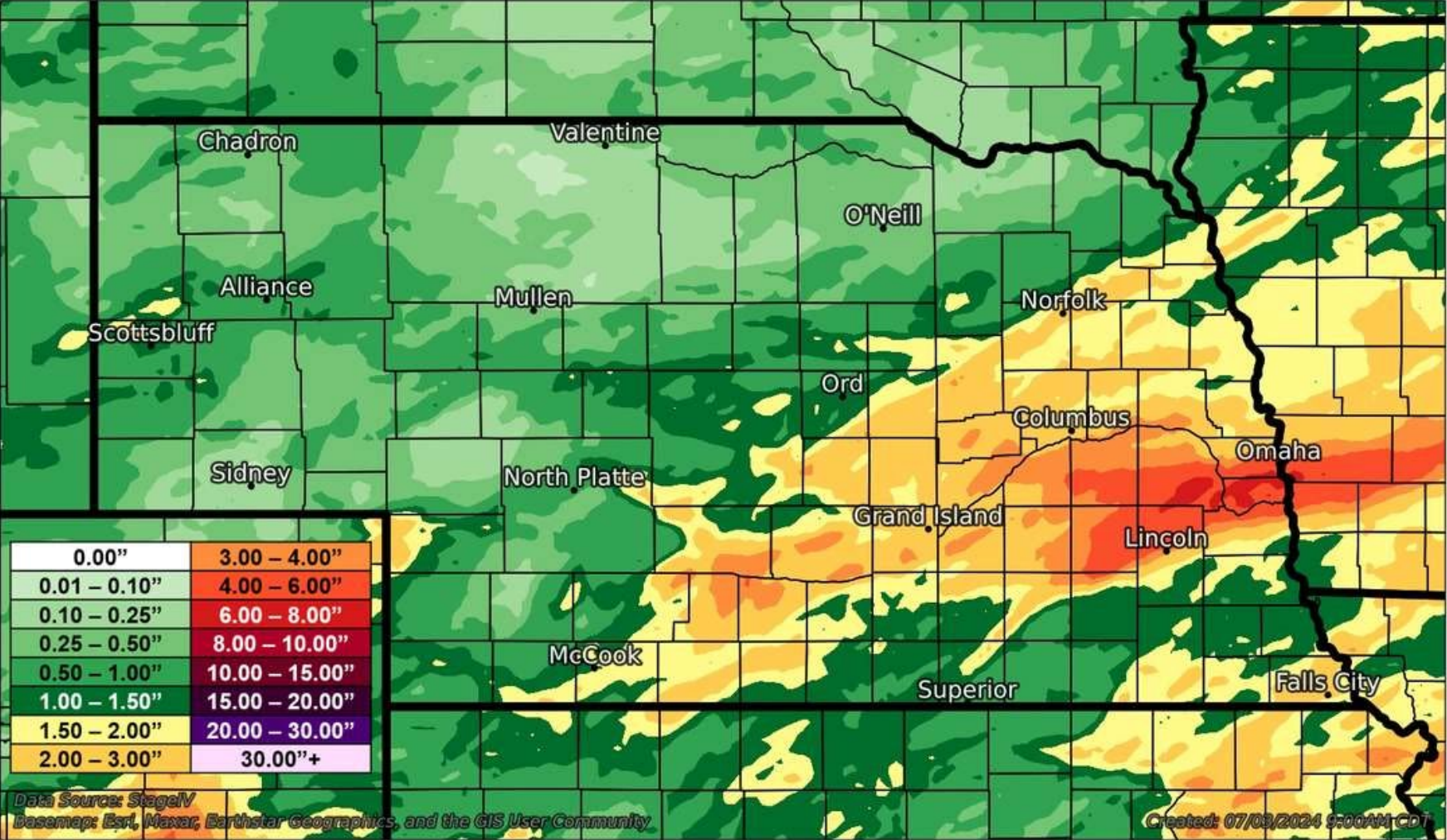


# July 1-2 heavy rainfall



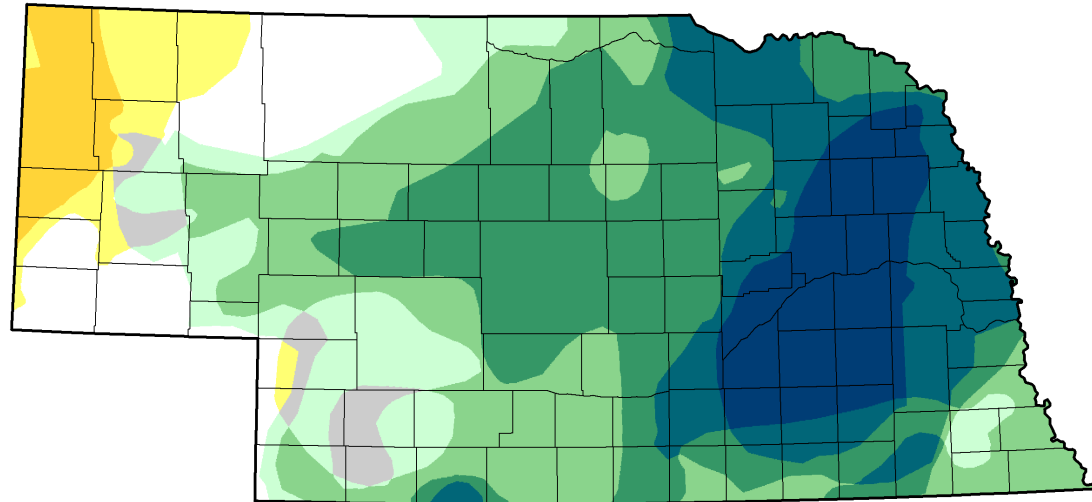
## 7-Day Precipitation

As of: July 03, 2024 - 7AM CDT



# Drought changes

U.S. Drought Monitor Class Change - Nebraska  
52 Week

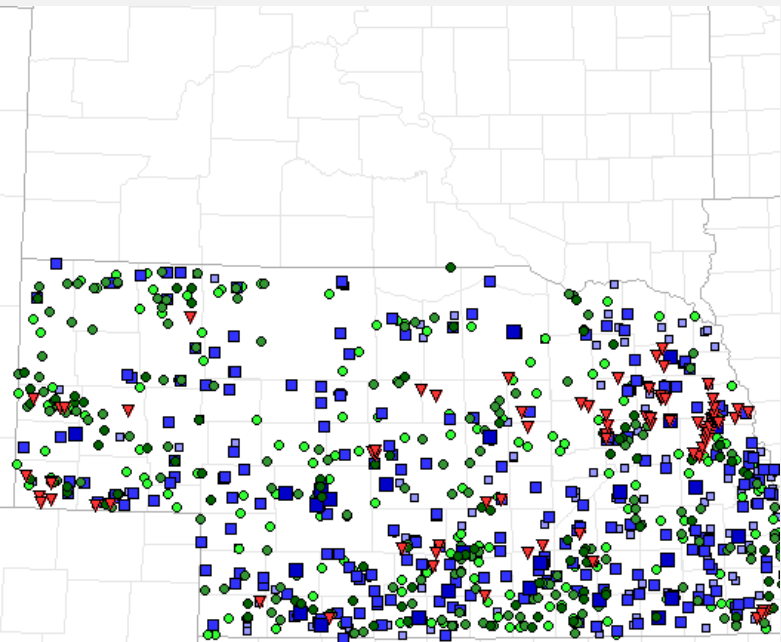
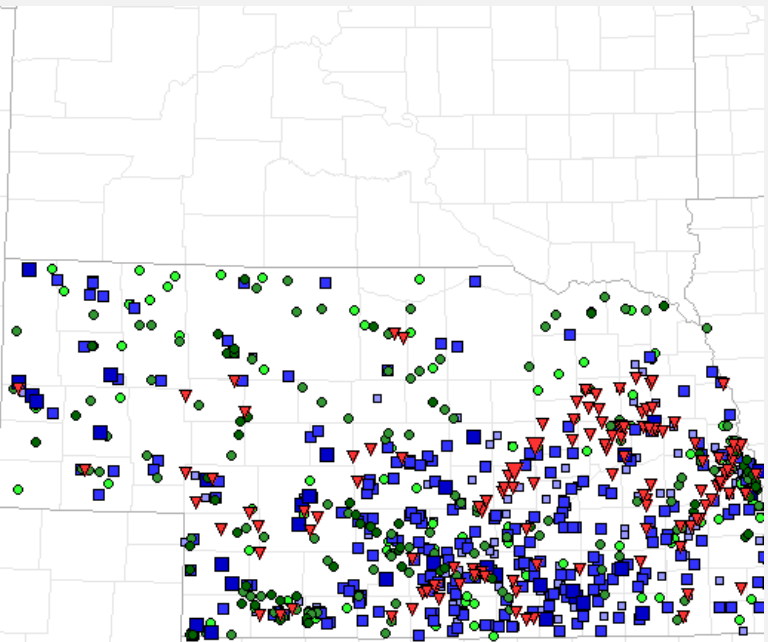


- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

July 2, 2024  
compared to  
July 4, 2023

[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

# Severe storm: 2024 vs. 2023

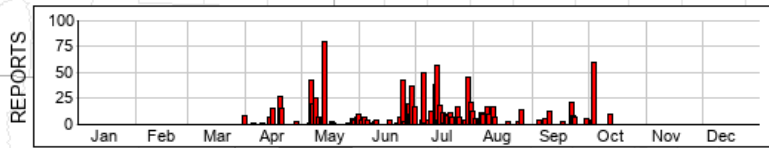
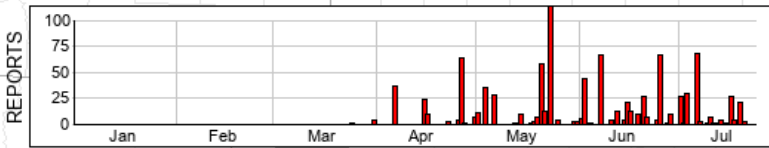


**Storm Reports Legend**

Tornadoes.....	129
▼ All Reports.....	129
▼ Possible EF2+.....	2
<b>Severe Wind.....</b>	<b>468</b>
■ Wind Damage.....	159
■ Meas. Gusts.....	276
■ Meas. Gusts > 75 MPH.....	33
<b>Severe Hail.....</b>	<b>317</b>
● Hail 1.00-1.24 in.....	112
● Hail 1.25-1.99 in.....	134
● Hail 2.00+ in.....	71

**Storm Reports Legend**

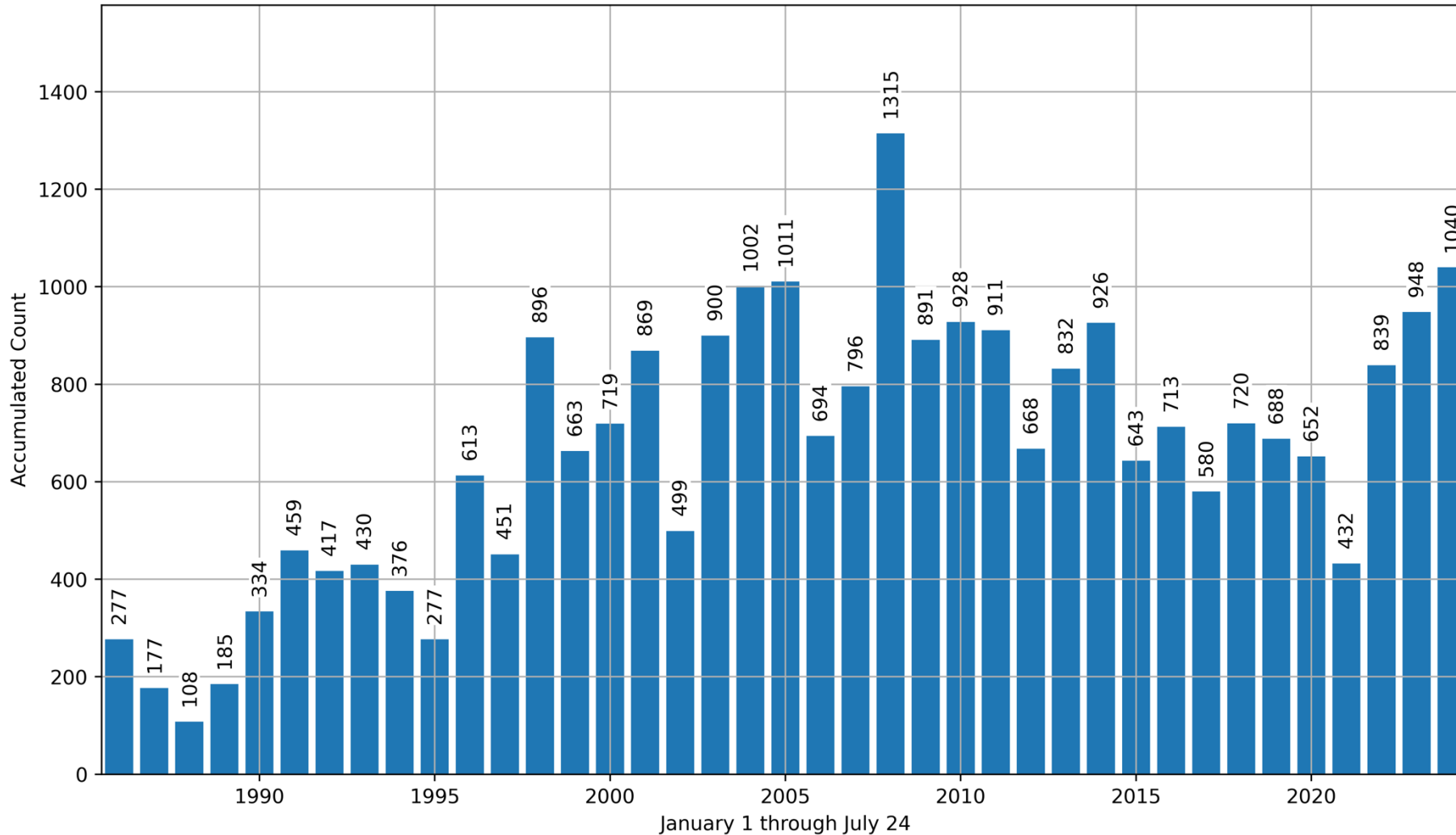
Tornadoes.....	81
▼ All Reports.....	81
▼ Possible EF2+.....	1
<b>Severe Wind.....</b>	<b>453</b>
■ Wind Damage.....	162
■ Meas. Gusts.....	264
■ Meas. Gusts > 75 MPH.....	27
<b>Severe Hail.....</b>	<b>486</b>
● Hail 1.00-1.24 in.....	206
● Hail 1.25-1.99 in.....	177
● Hail 2.00+ in.....	103

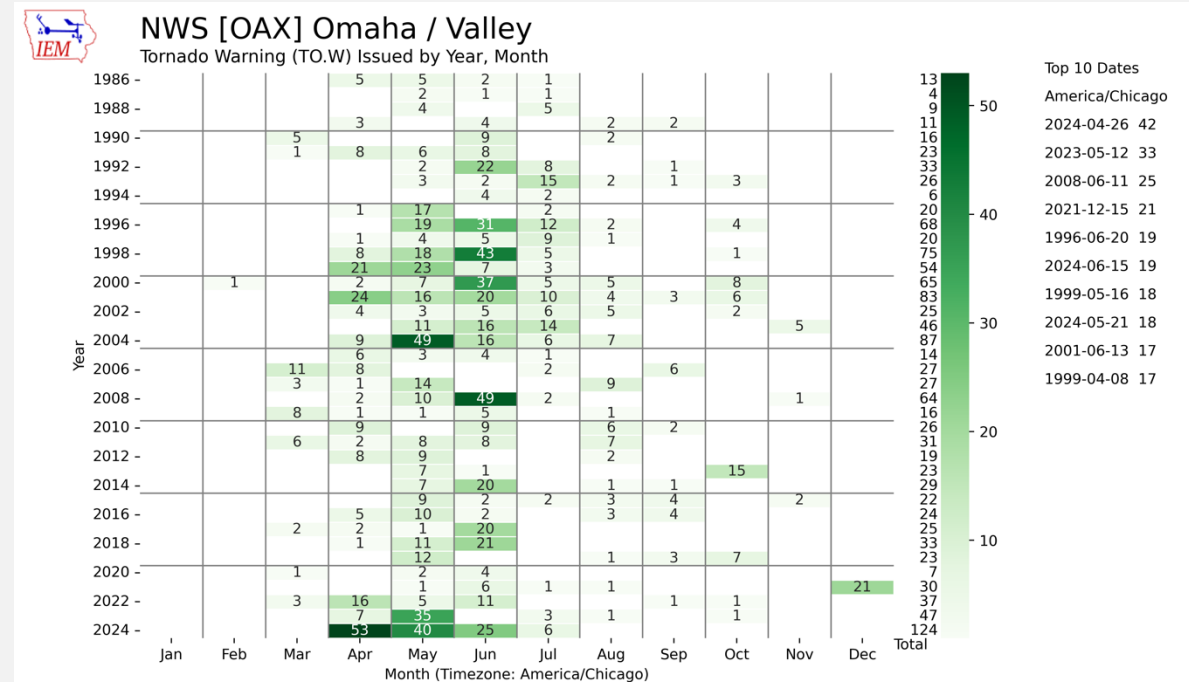
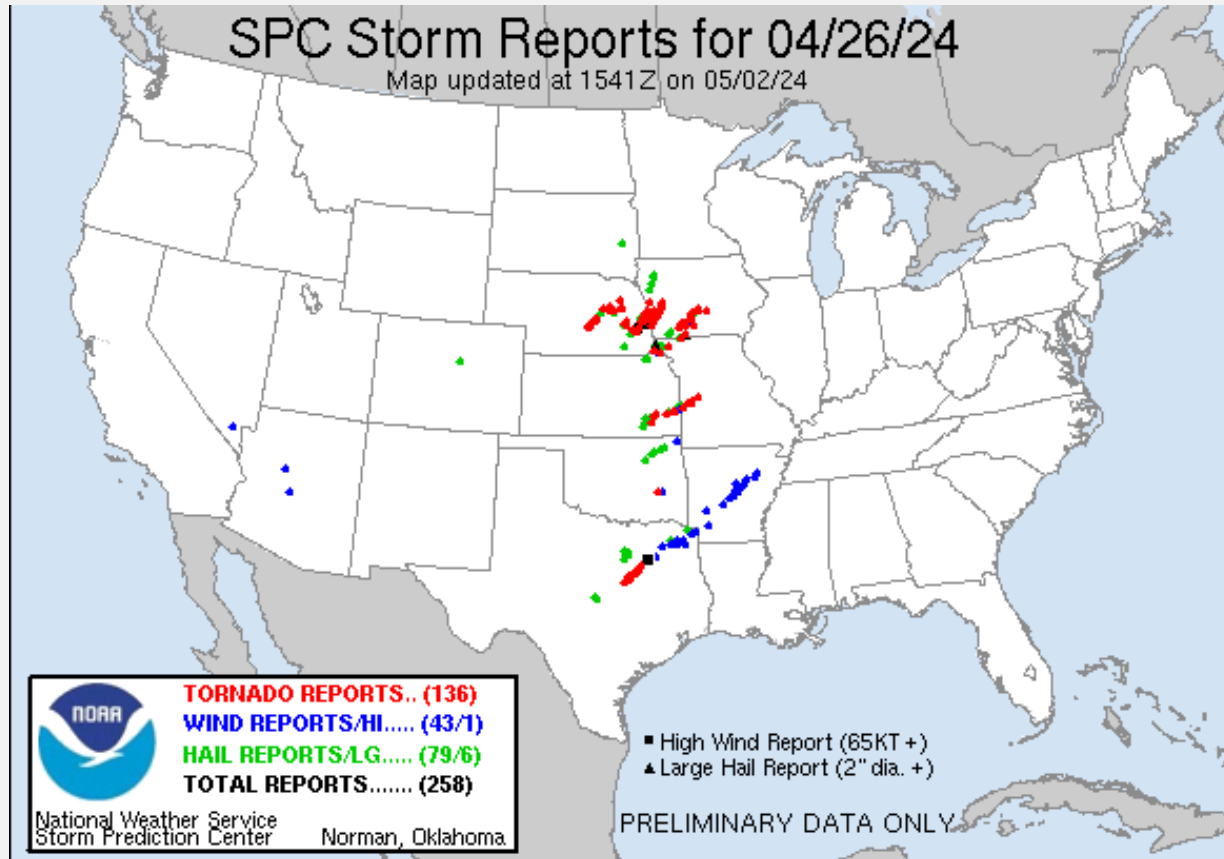


# Severe storms report



NWS Issued for Counties in Nebraska [January 1 through July 24]  
Severe Thunderstorm + Tornado Warning Count



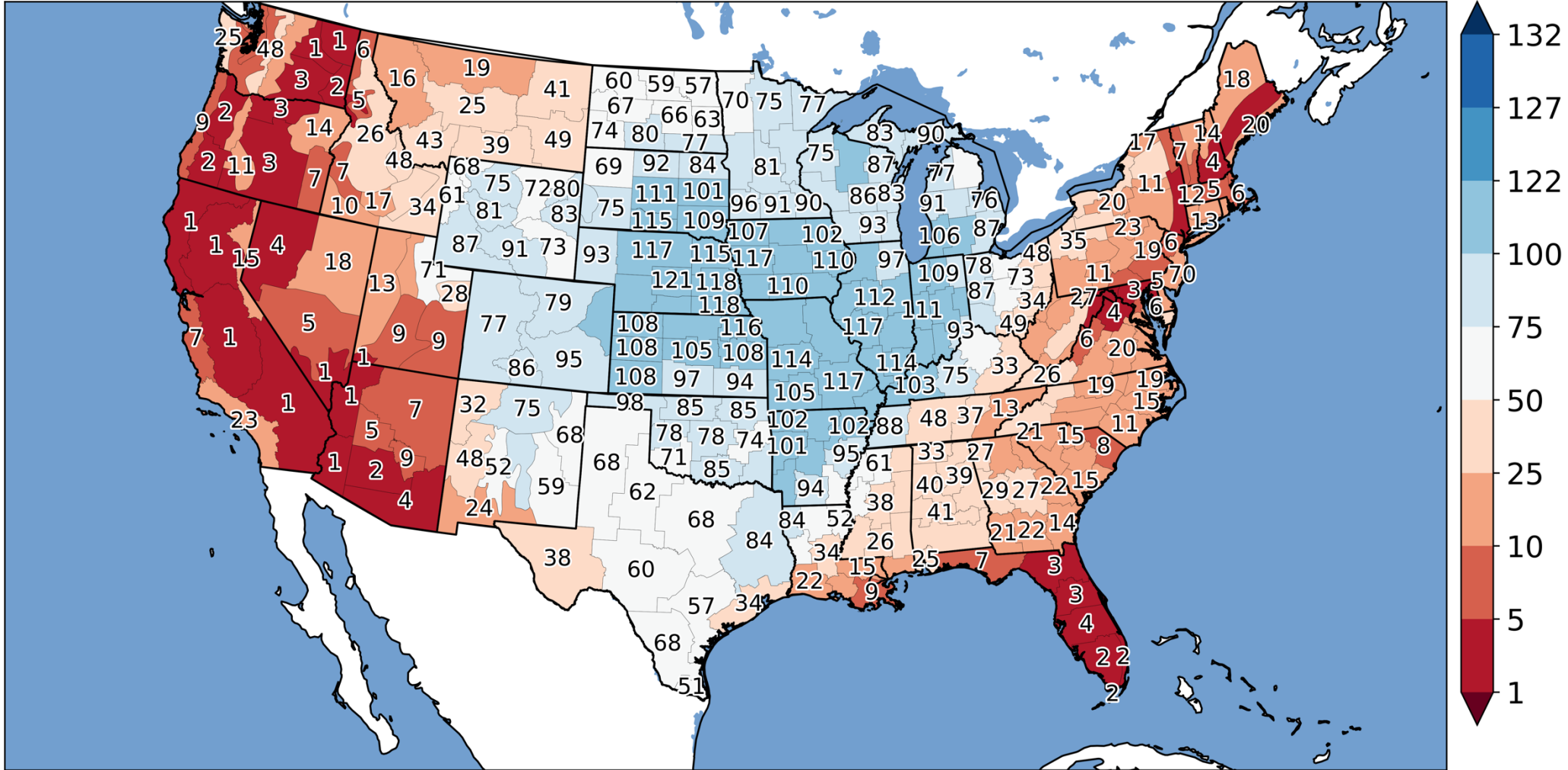




# July 2024 (preliminary)



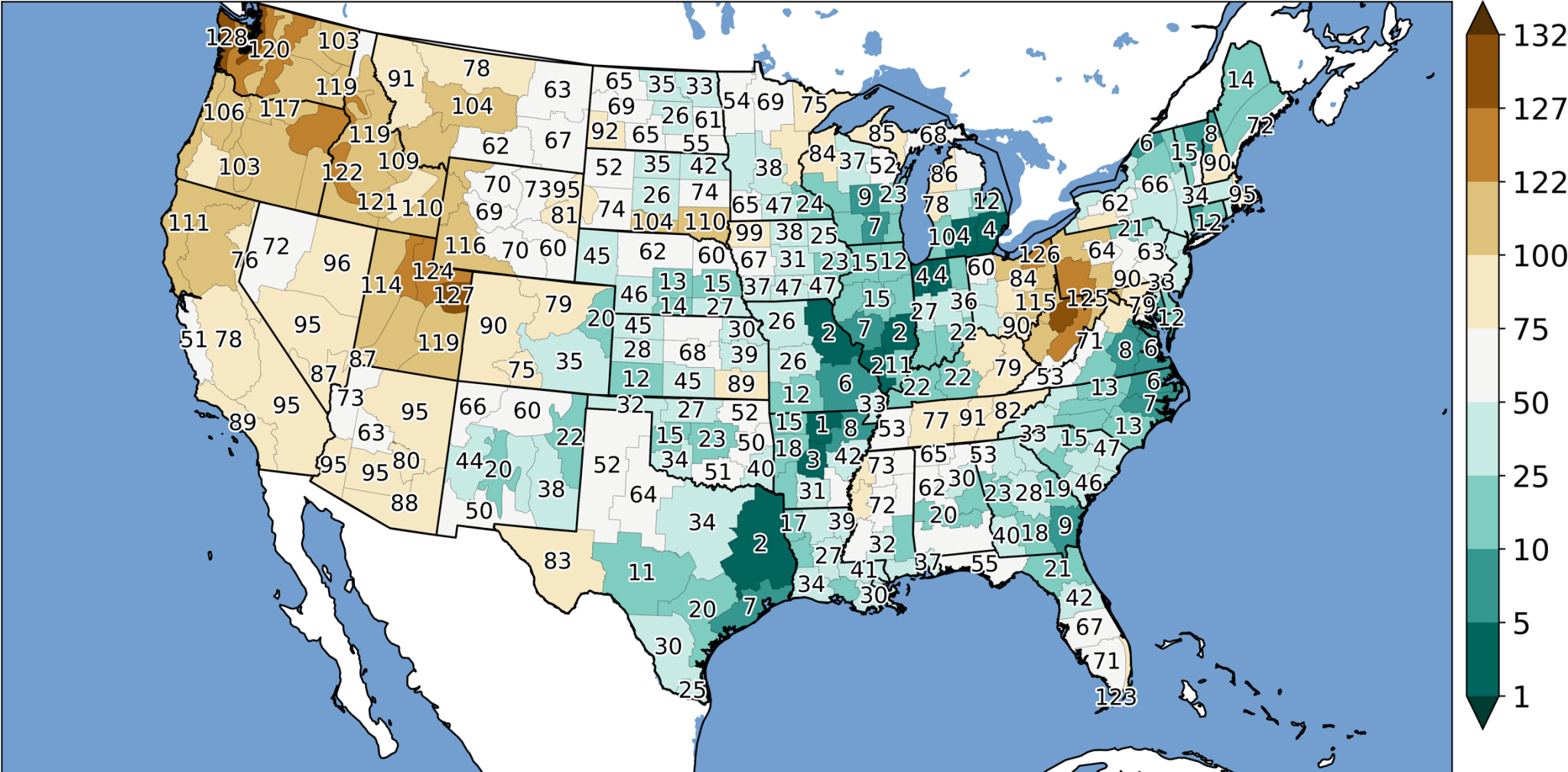
30 Jun 2024 ~7 AM till 23 Jul 2024 ~7 AM Average Temperature Ranks by Climate District  
Based on IEM Estimates, 1 is hottest out of 132 total years (1893-2024)



# July 2024 (preliminary)

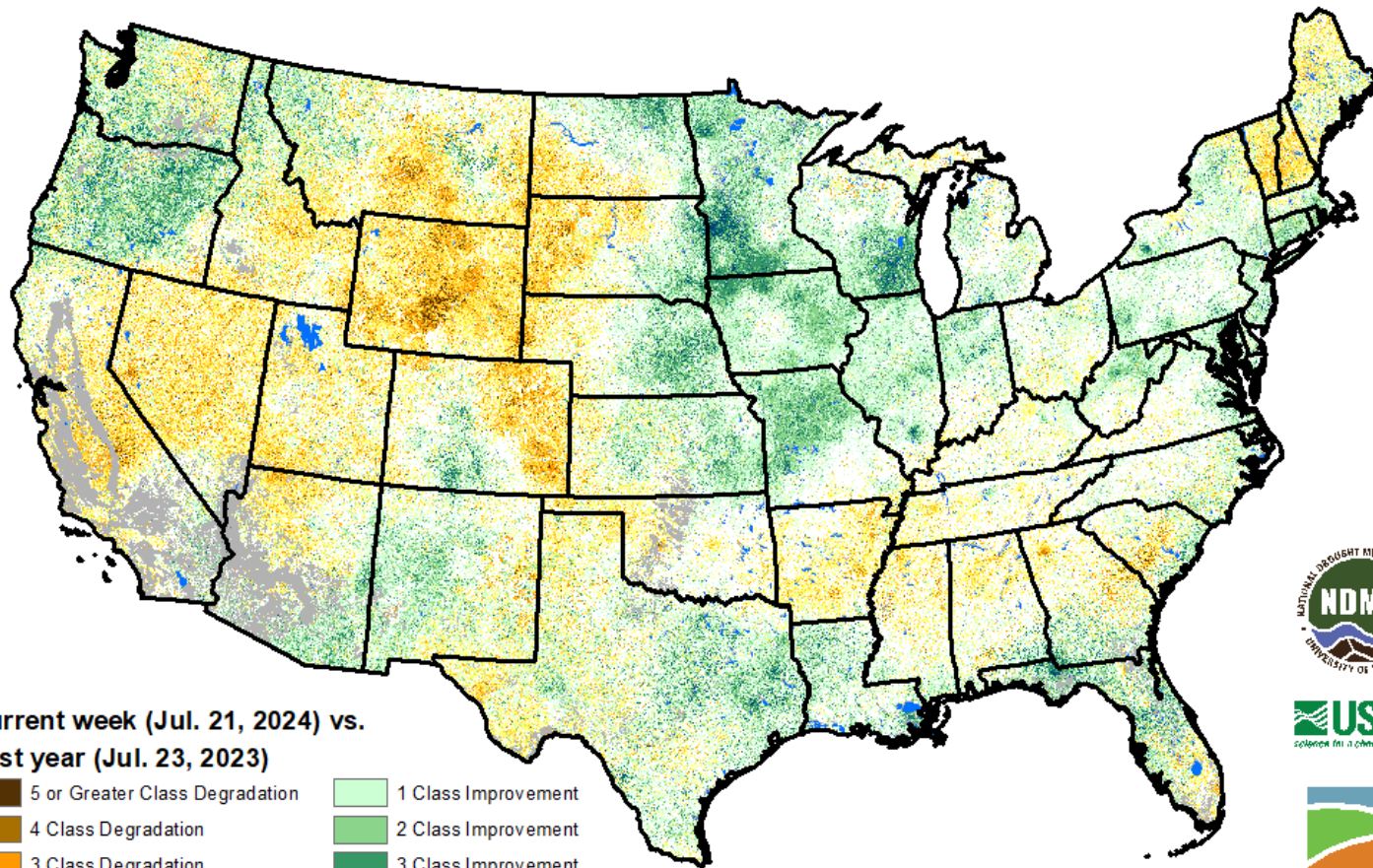


30 Jun 2024 ~7 AM till 23 Jul 2024 ~7 AM Total Precipitation Ranks by Climate District  
Based on IEM Estimates, 1 is wettest out of 132 total years (1893-2024)

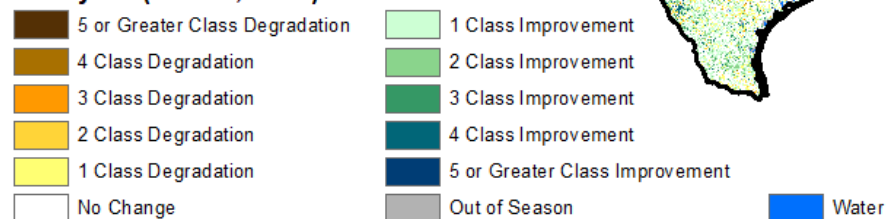


# Vegetation health changes

## Vegetation Drought Response Index (VegDRI) Change



Current week (Jul. 21, 2024) vs.  
Last year (Jul. 23, 2023)



# Temp and Precip Extremes 2024

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**Maximum Daily High Temperature: 106, Superior and Red Cloud**

**Minimum Daily High Temperature: -18, Harrison**

**Minimum Daily Low Temperature: -34, Harrison**

**Maximum Daily Low Temperature: 79, Auburn**

**Maximum Total Precipitation: 28.68", Salem**

**Minimum Total Precipitation: 7.43", Chadron**



NSCO.UNL.EDU



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ehunt2@unl.edu 402-617-4190

