

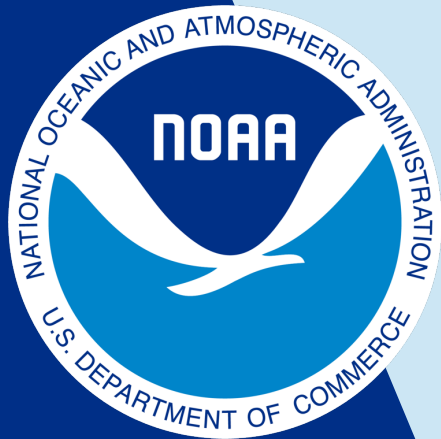
# NOAA Climate Science and Services Monthly Climate Update

## **Russ Vose**

Ph.D., Chief of Climate Monitoring and Assessment, NOAA National Centers for Environmental Information

## **Cory Baggett**

Meteorologist, NOAA Climate Prediction Center (CPC)



National Oceanic and  
Atmospheric Administration

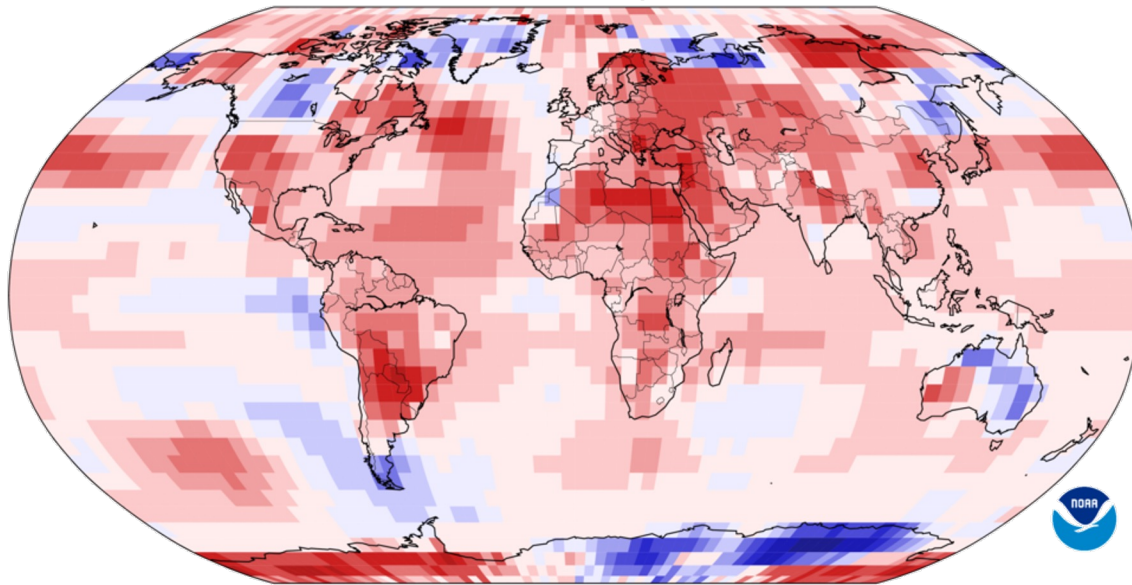
June 2024

# June 2024 Global Temperature

The global temperature record dates back to 1850 (175 years)

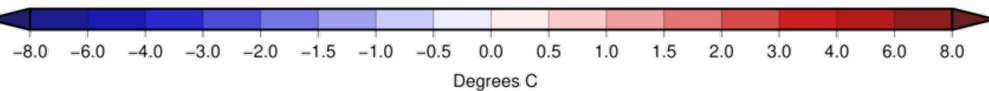
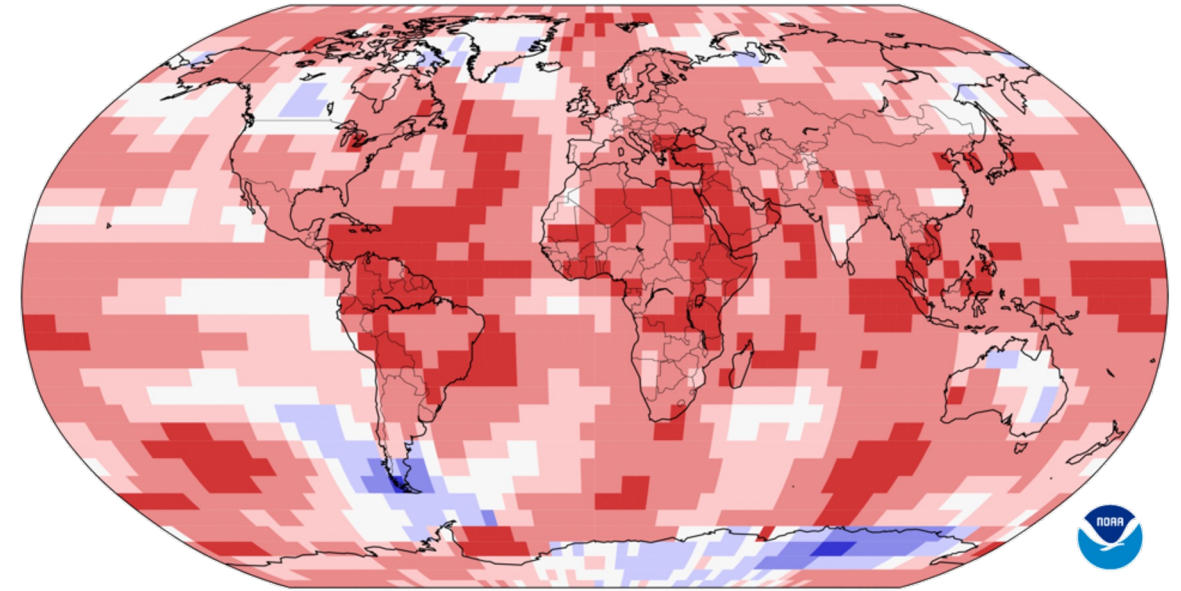
Land & Ocean Temperature Departure from Average Jun 2024  
(with respect to a 1991-2020 base period)

Data Source: NOAAGlobalTemp v6.0.0-20240708



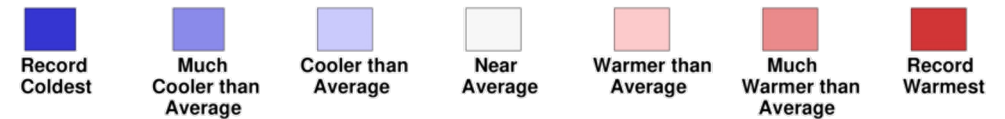
Land & Ocean Temperature Percentiles Jun 2024  
NOAA's National Centers for Environmental Information

Data Source: NOAAGlobalTemp v6.0.0-20240708



National Centers for Environmental Information

Map Projection: Robinson



- **Global Land & Ocean: +1.22°C/+2.20°F; warmest for June on record**
- **Global Land-only: +1.75°C/+3.15°F; warmest for June on record**
- **Global Ocean-only: +0.98°C/+1.76°F; warmest for June on record**

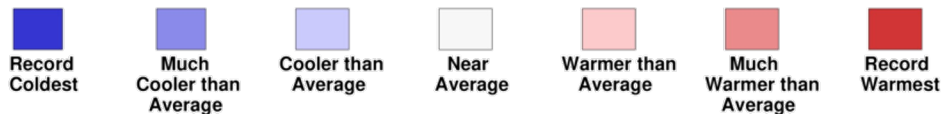
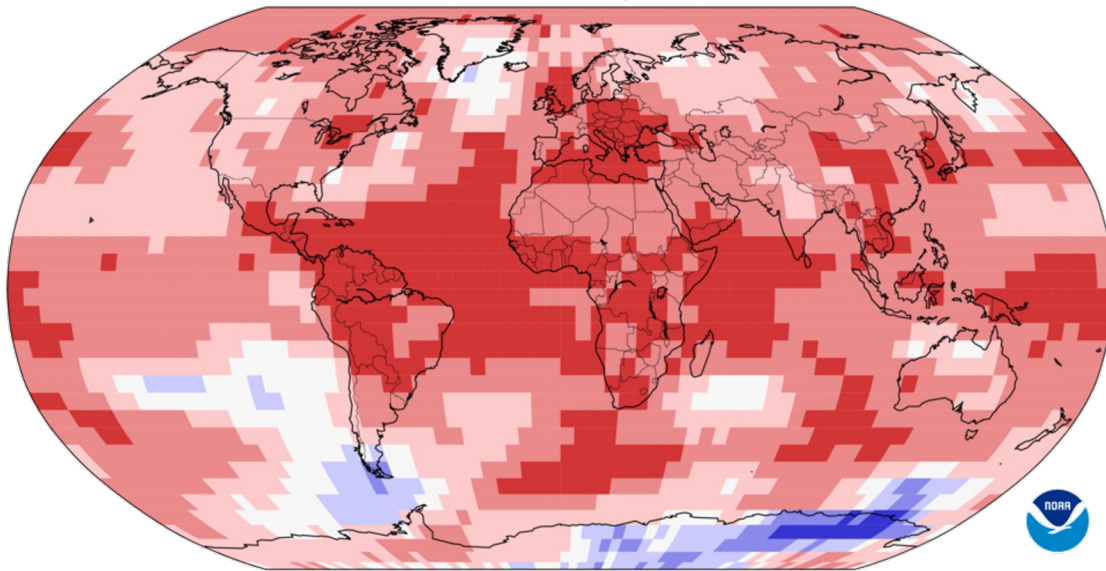


# January-June 2024 Global Temperature

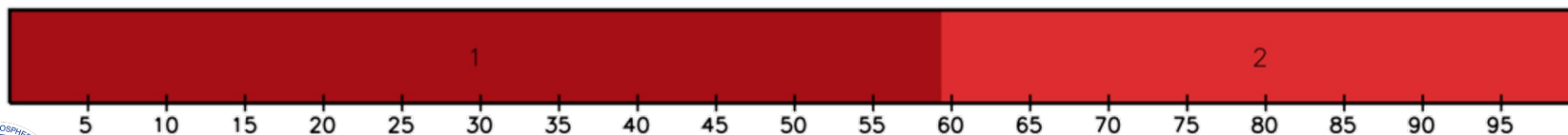
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Land & Ocean Temperature Percentiles Jan-Jun 2024  
NOAA's National Centers for Environmental Information

Data Source: NOAA GlobalTemp v6.0.0-20240708

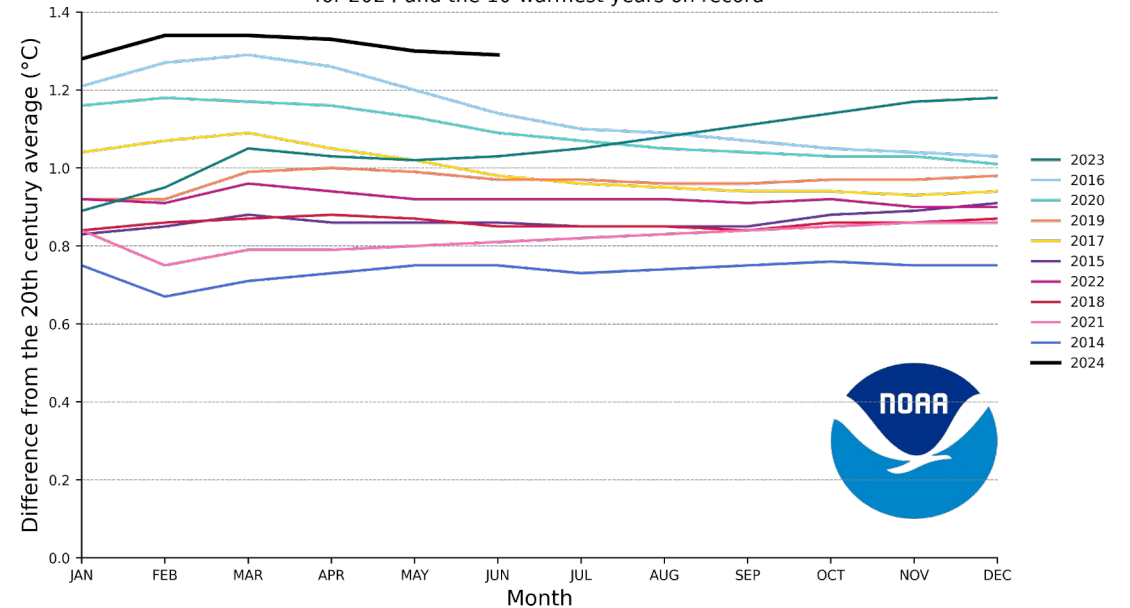


**Global Land & Ocean: +1.29°C/+2.32°F; warmest for Jan-Jun on record**



Global Year-to-Date Temperature Anomalies

for 2024 and the 10-warmest years on record



**59% chance 2024 will be warmest year on record**

**100% chance 2024 will be a top 5 year**



# Contiguous U.S. June 2024

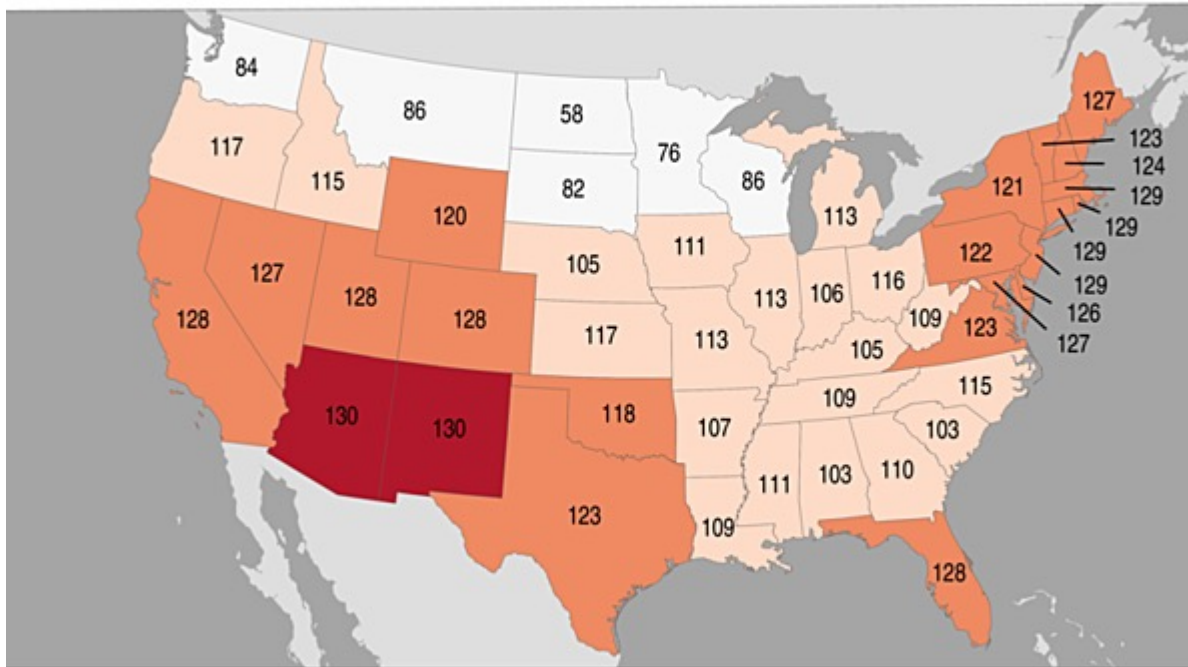
## The U.S. record dates back to 1895 (130 years)

### Statewide Average Temperature Ranks

June 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information

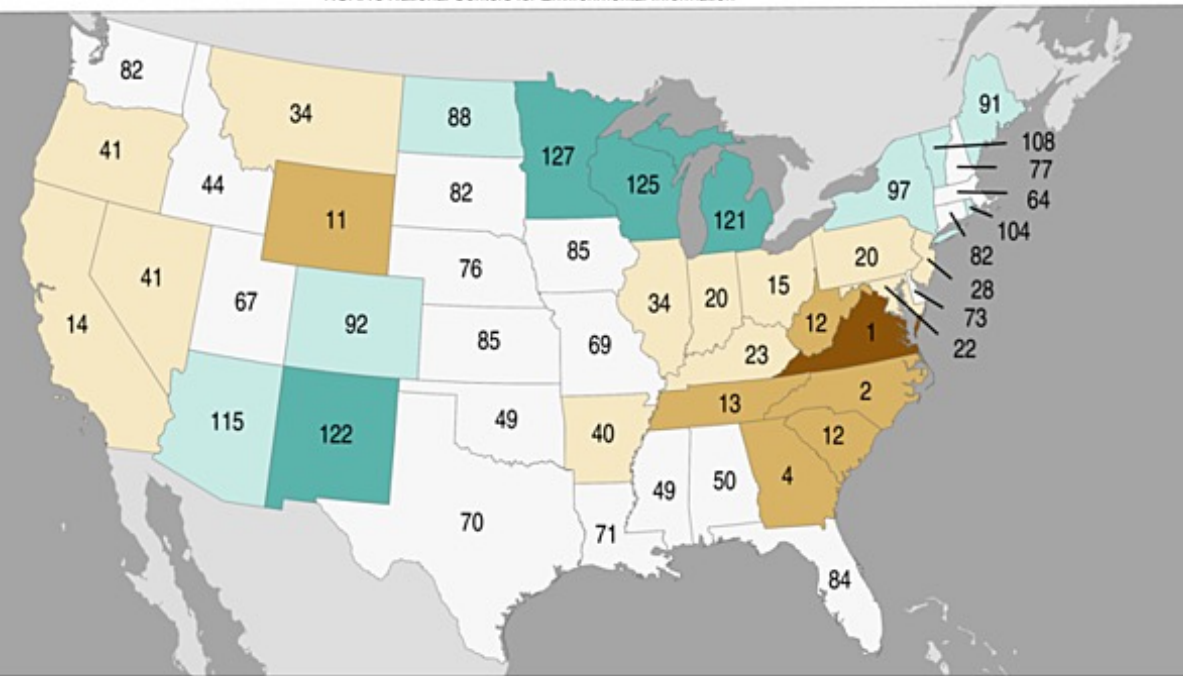


### Statewide Precipitation Ranks

June 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information



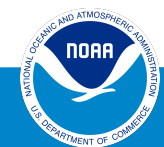
Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly



Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly



- **Temperature: 71.8°F/+3.4°F; 2<sup>nd</sup> warmest**
- **Precipitation: 2.74 inches/-0.18 inch; bit below average**

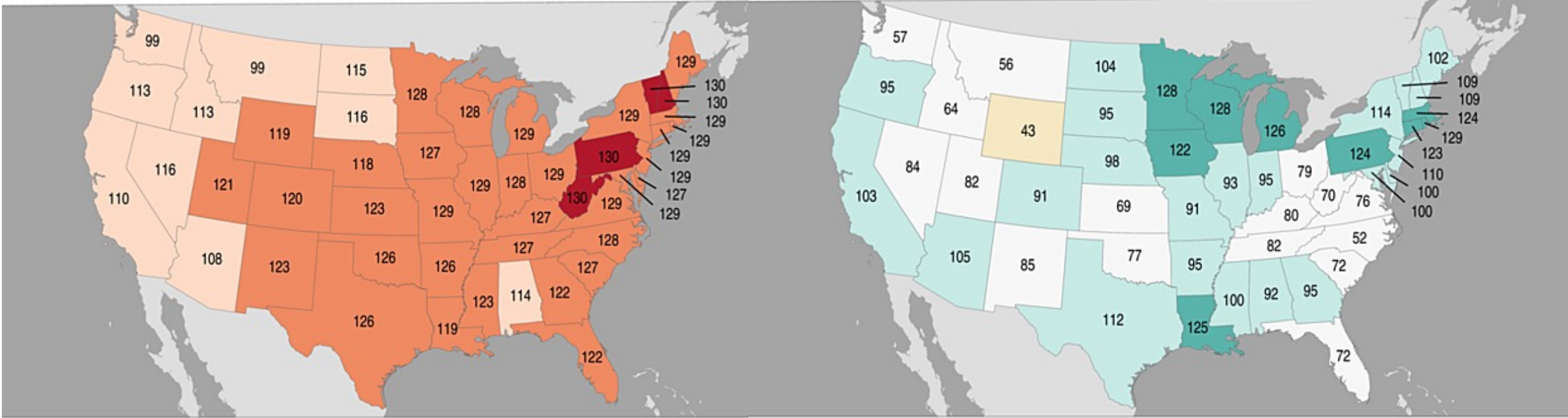


# Contiguous U.S. January-June 2024

## The U.S. record dates back to 1895 (130 years)

Statewide Average Temperature Ranks  
January – June 2024  
Ranking Period: 1895–2024  
NOAA's National Centers for Environmental Information

Statewide Precipitation Ranks  
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Ranking Period: 1895–2024  
NOAA's National Centers for Environmental Information



Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly

Created: Fri Jul 5 2024  
Source: nClimGrid - Monthly











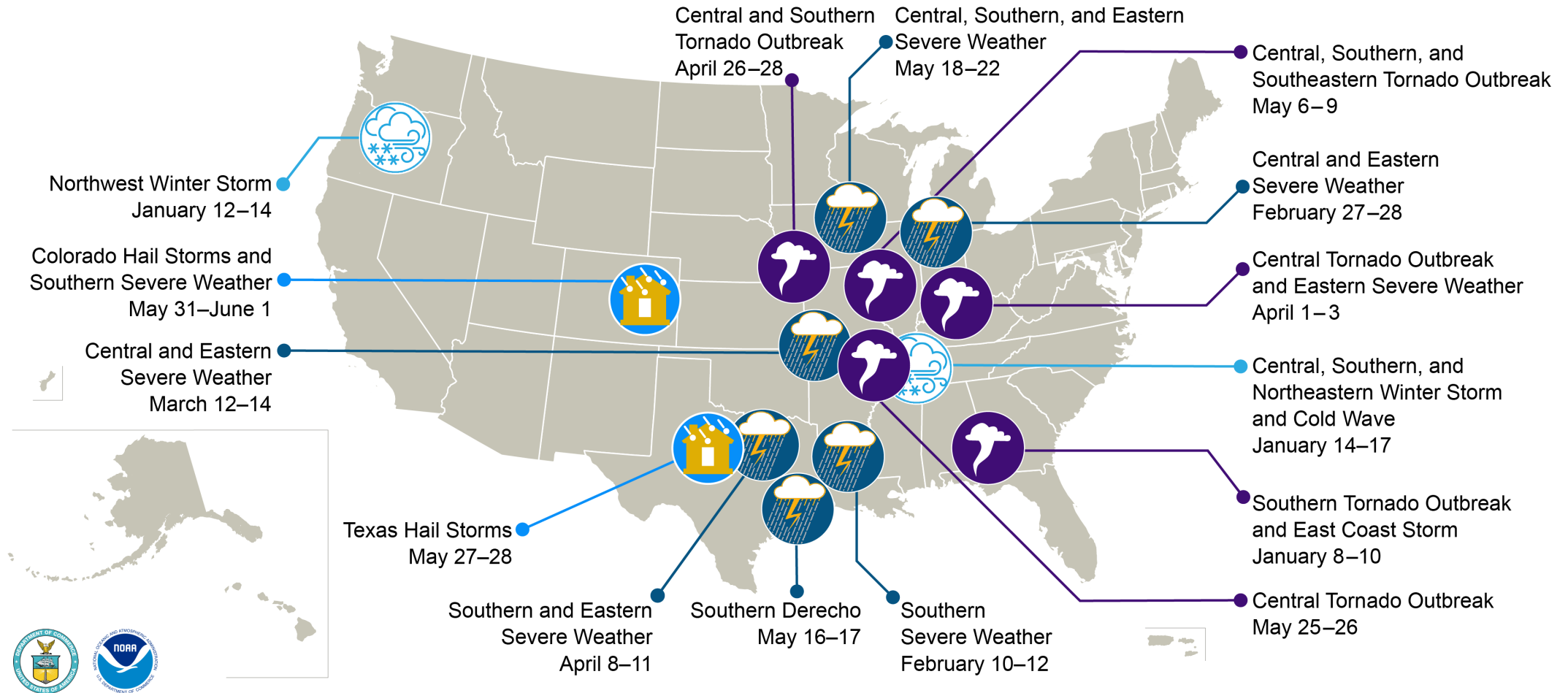
- **Temperature: 50.9°F/+3.4°F; 2<sup>nd</sup> warmest**
- **Precipitation: 17.36 inches/+2.06 inches; 11<sup>th</sup> wettest**



# Billion \$ Disasters: 15 So Far This Year

## U.S. 2024 Billion-Dollar Weather and Climate Disasters

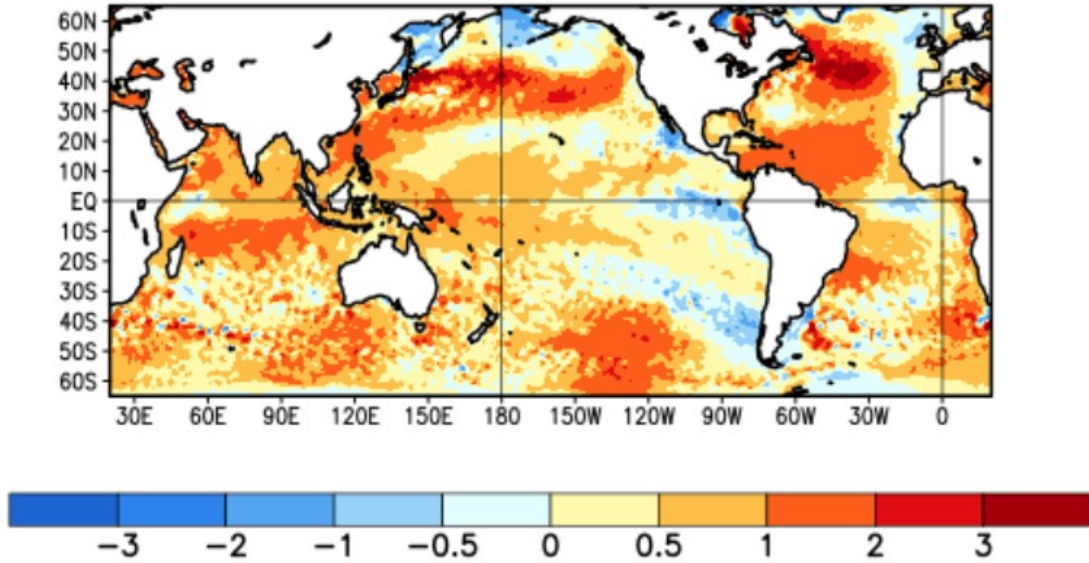
-  Drought/Heat Wave
-  Flooding
-  Hail
-  Hurricane
-  Severe Weather
-  Tornado Outbreak
-  Wildfire
-  Winter Storm/Cold Wave



*This map denotes the approximate location for each of the 15 separate billion-dollar weather and climate disasters that impacted the United States through June 2024.*

# Sea Surface Temperatures and ENSO

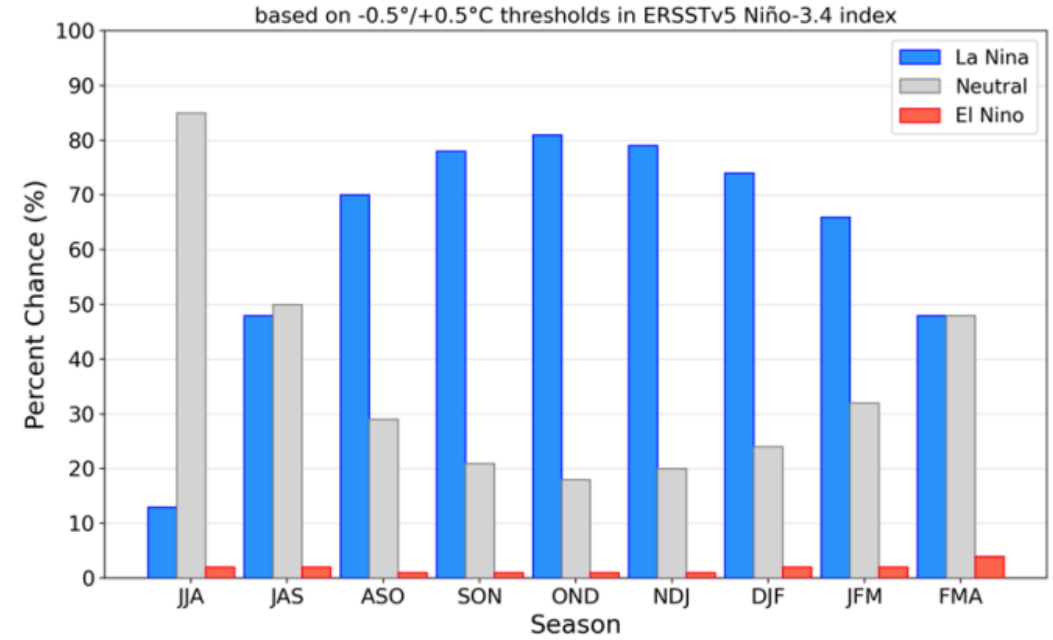
Average SST Anomalies  
16 JUN 2024 – 13 JUL 2024



## Sea surface temperatures

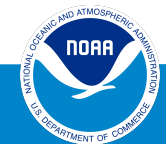
- During the last four weeks, equatorial SSTs were above average across the west-central Pacific Ocean, around the Maritime Continent, and the Atlantic Ocean. Near-to-below-average SSTs were evident in the east-central and eastern Pacific Ocean.
- The oceanic and atmospheric observations currently reflect ENSO-neutral conditions.

Official NOAA CPC ENSO Probabilities (issued July 2024)



## ENSO forecast

- We are currently under a La Niña Watch.
- La Niña is favored to develop during August-October (70% chance) and persist into the Northern Hemisphere winter 2024-25 (79% chance during November-January).



# Monthly Forecast (August)

## August Average Temperature Probability

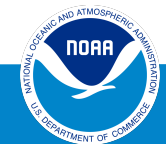
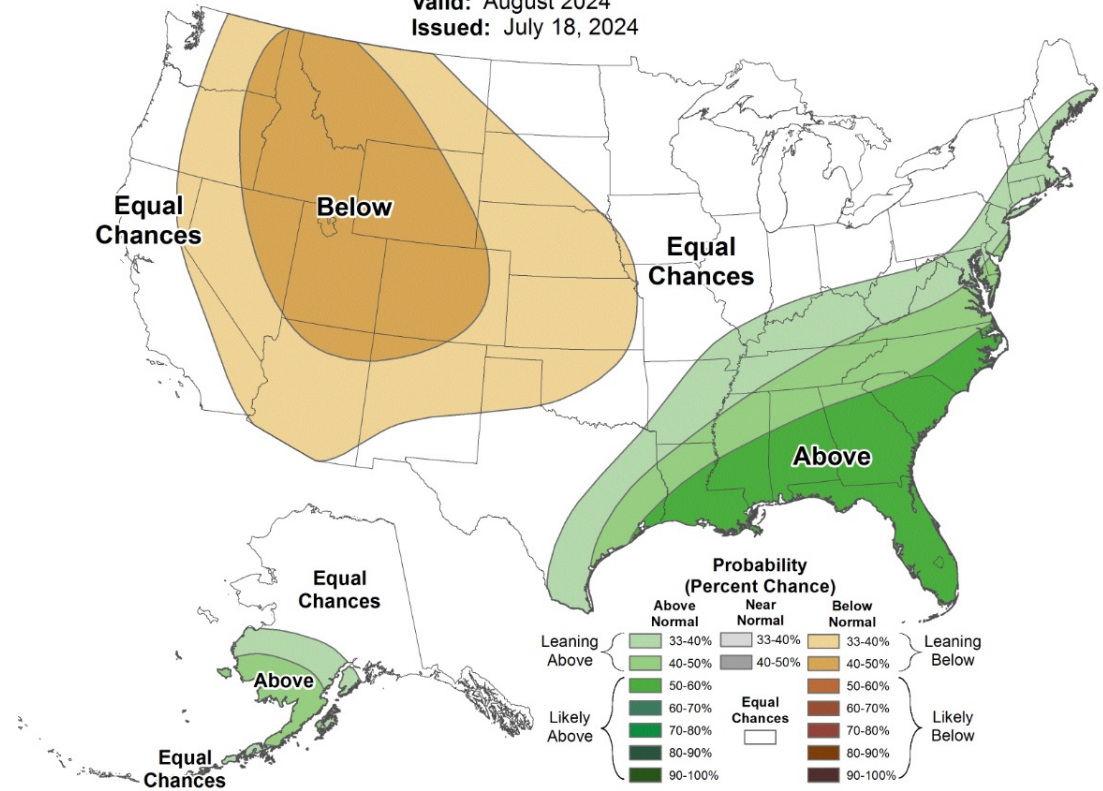
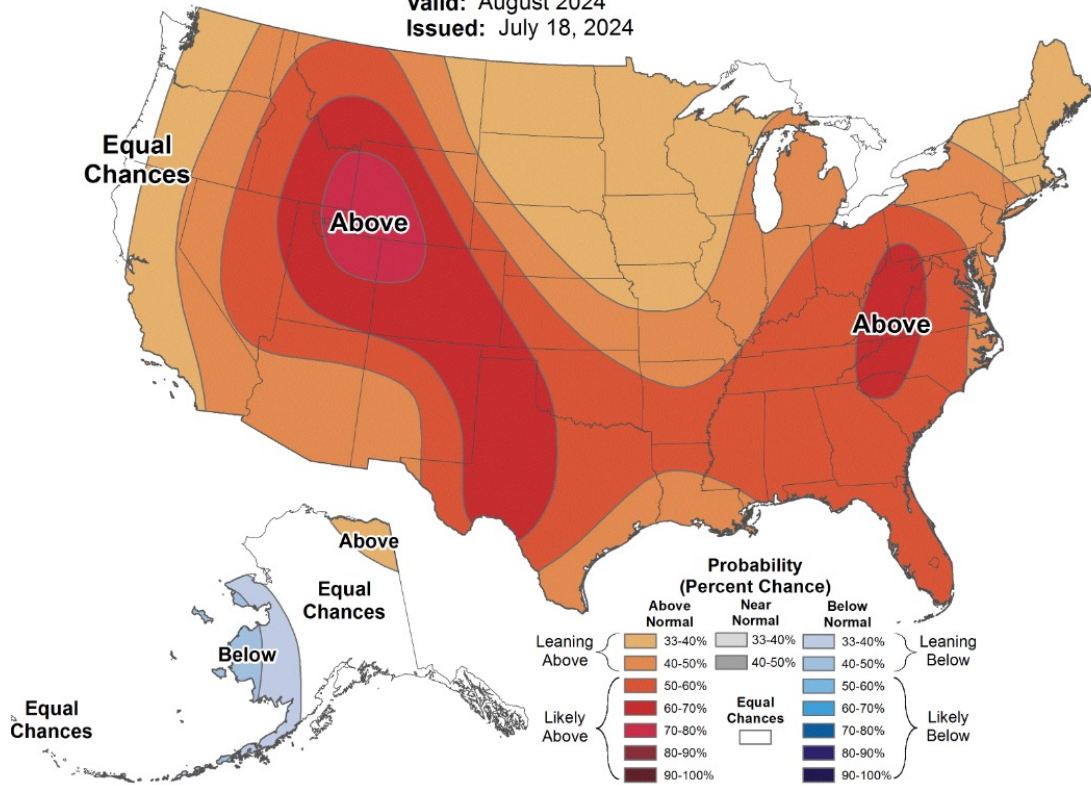
## August Total Precipitation Probability

### Monthly Temperature Outlook

### Monthly Precipitation Outlook

Valid: August 2024  
Issued: July 18, 2024

Valid: August 2024  
Issued: July 18, 2024





# Three-Month Forecast (Aug, Sep, Oct)

## Aug-Sept-Oct Average Temperature Probability

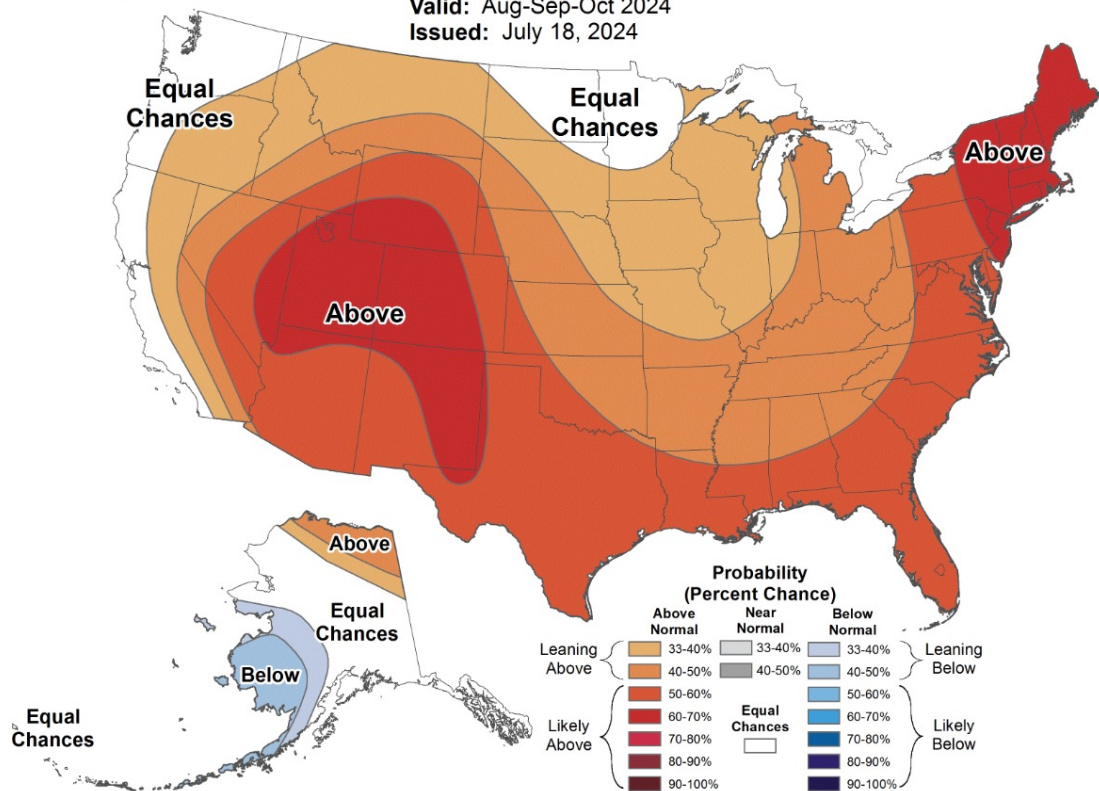
## Aug-Sept-Oct Total Precipitation Probability



### Seasonal Temperature Outlook



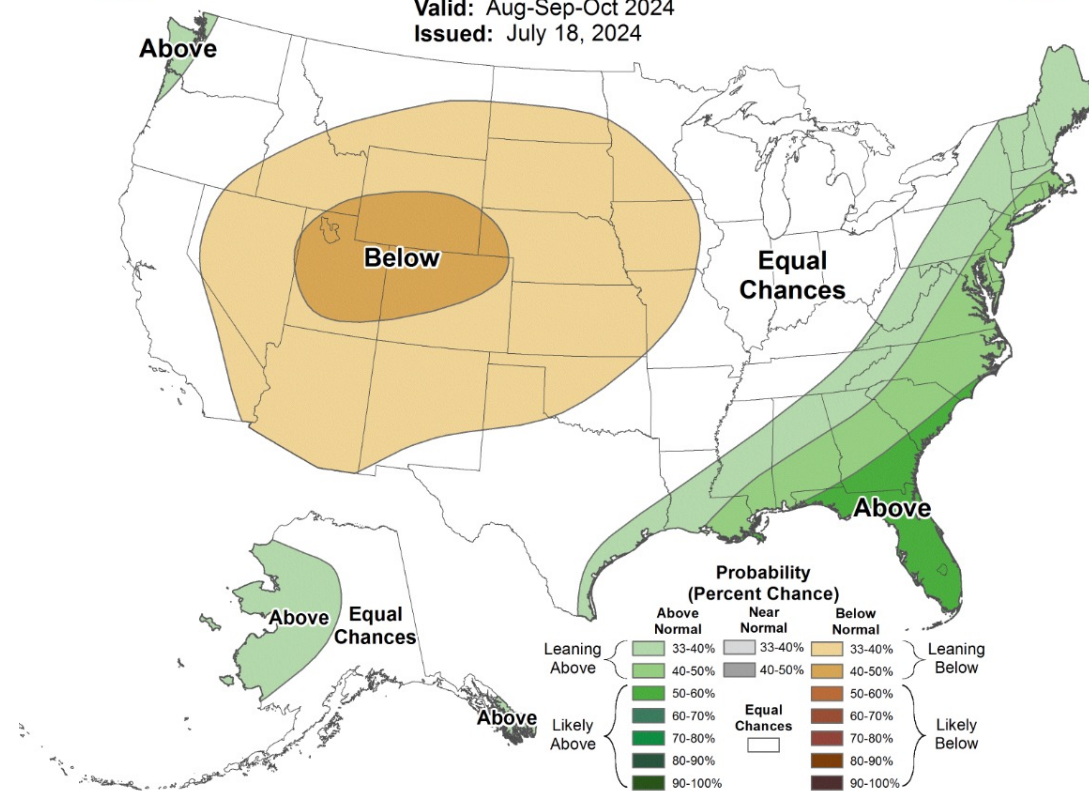
Valid: Aug-Sep-Oct 2024  
Issued: July 18, 2024



### Seasonal Precipitation Outlook



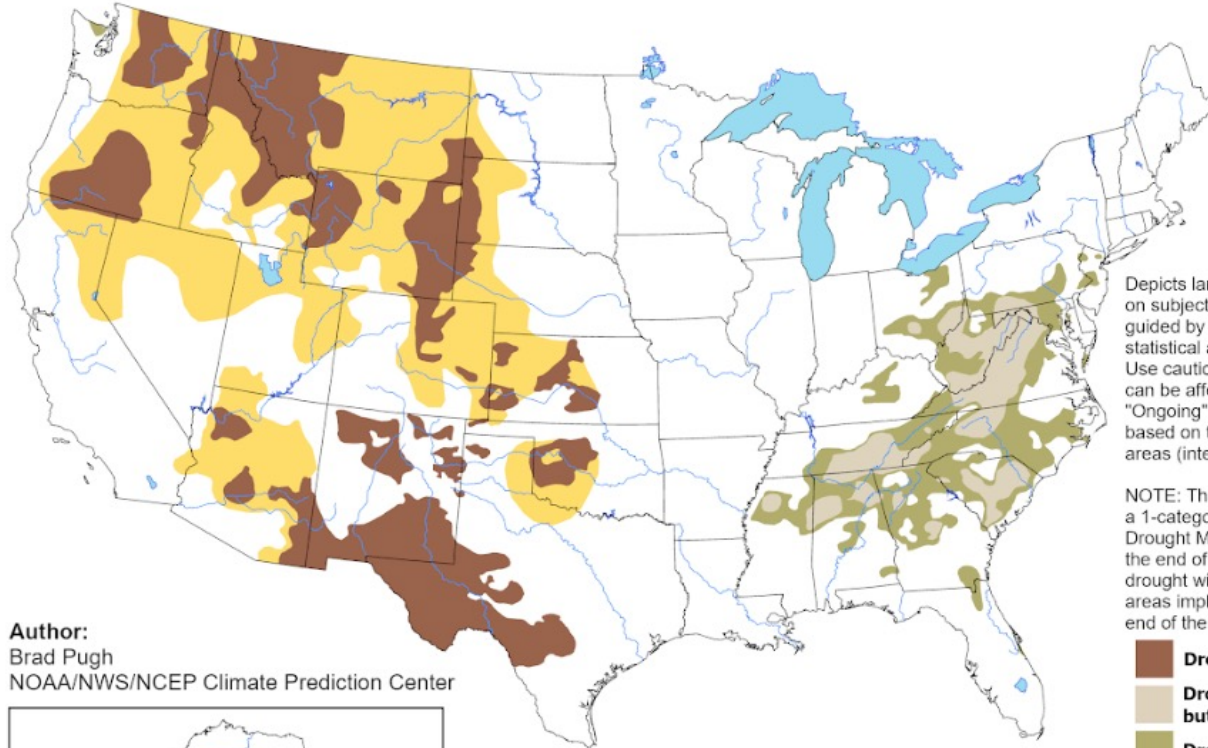
Valid: Aug-Sep-Oct 2024  
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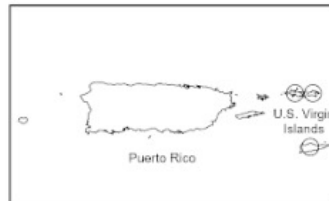
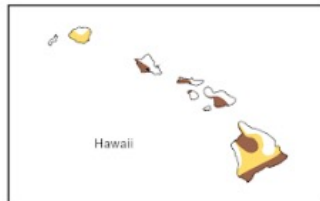
# Drought Outlook

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for July 18 - October 31, 2024  
Released July 18, 2024



Author:  
Brad Pugh  
NOAA/NWS/NCEP Climate Prediction Center



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought

- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought



<https://go.usa.gov/3eZ73>



# For More Information



## Today's presentation:

- <https://www.ncei.noaa.gov/access/monitoring/monthly-report/briefings>

## NOAA's National Centers for Environmental Information: [www.ncei.noaa.gov/](http://www.ncei.noaa.gov/)

- Monthly climate reports (U.S. & Global): <https://www.ncei.noaa.gov/access/monitoring/monthly-report/>
- Dates for upcoming reports: <https://www.ncei.noaa.gov/access/monitoring/dyk/monthly-releases>

## NOAA's Climate Prediction Center: [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

## U.S. Drought Monitor: [www.drought.gov](http://www.drought.gov)

## Climate portal: [www.climate.gov](http://www.climate.gov)

## NOAA media contacts: [john.jones-bateman@noaa.gov](mailto:john.jones-bateman@noaa.gov), 202-424-0929 (NOAA/NESDIS PAO)

