NOAA Climate Science and Services Monthly Climate Update

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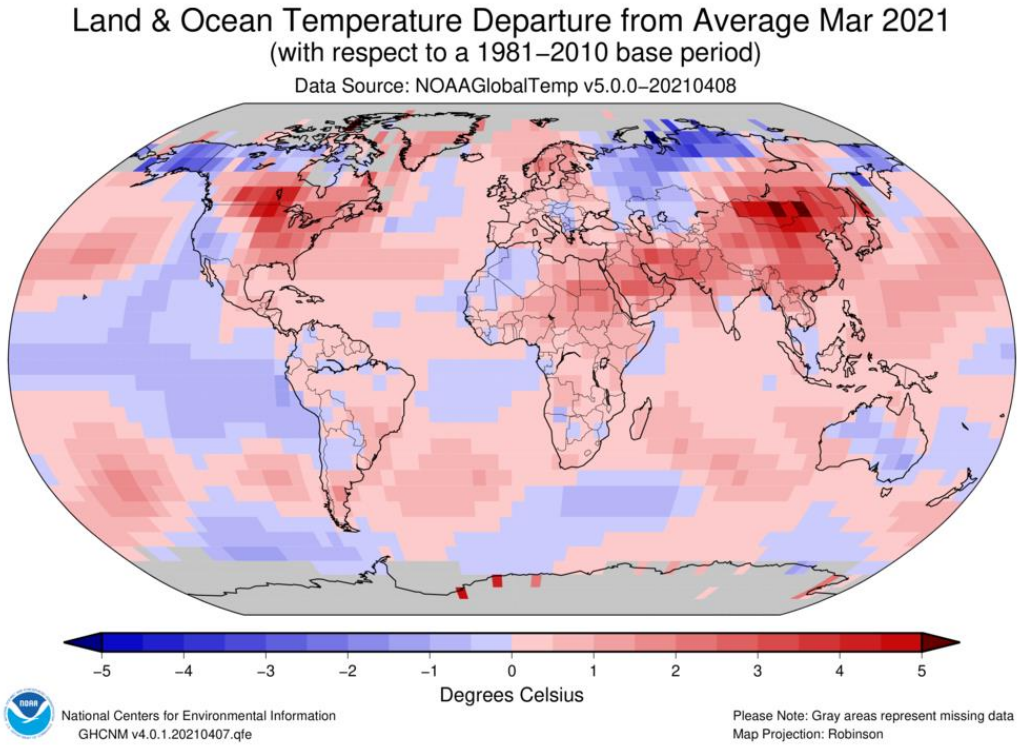
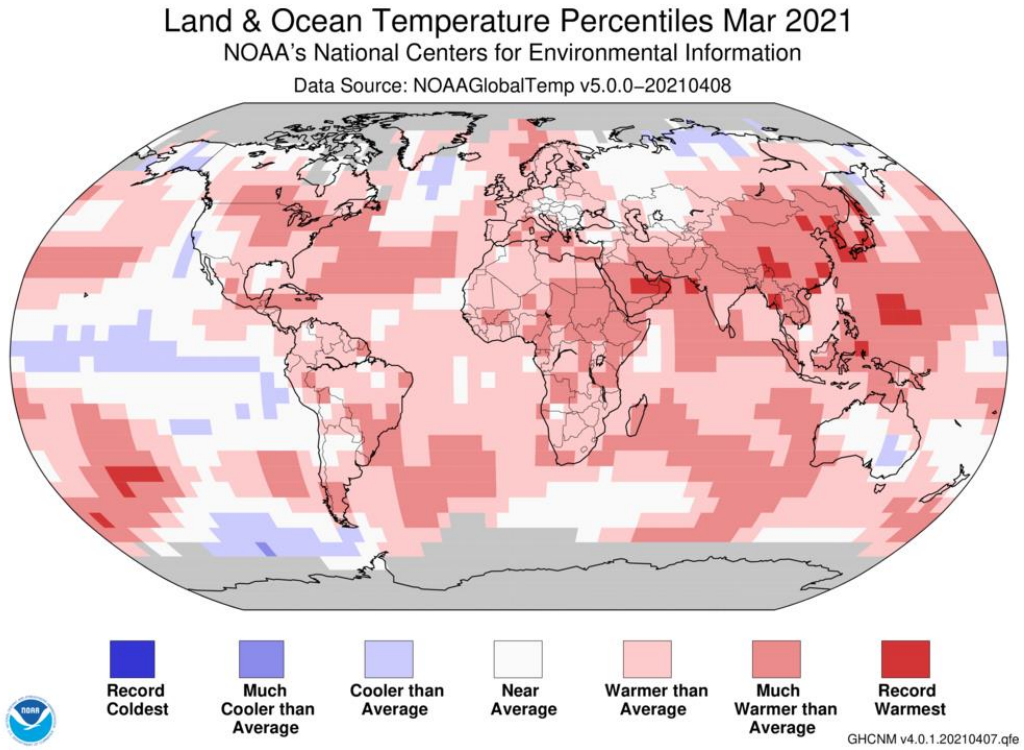
April 2021

March 2021 Global Temperature

The global temperature record dates back to 1880 (142 years)

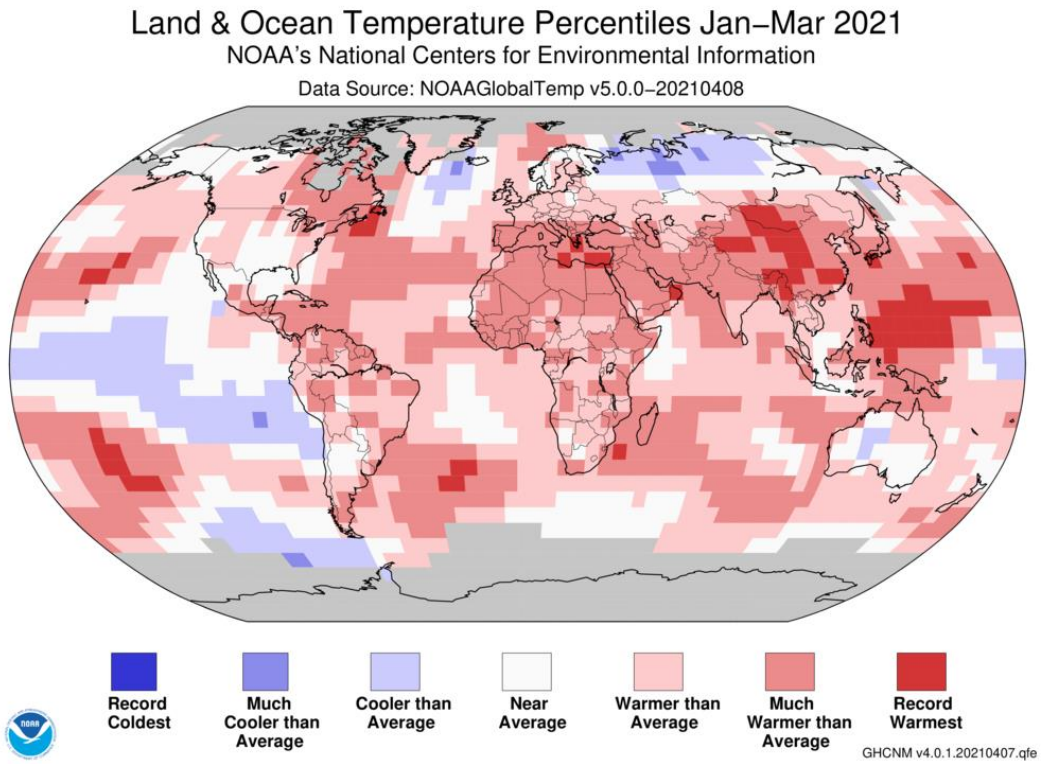


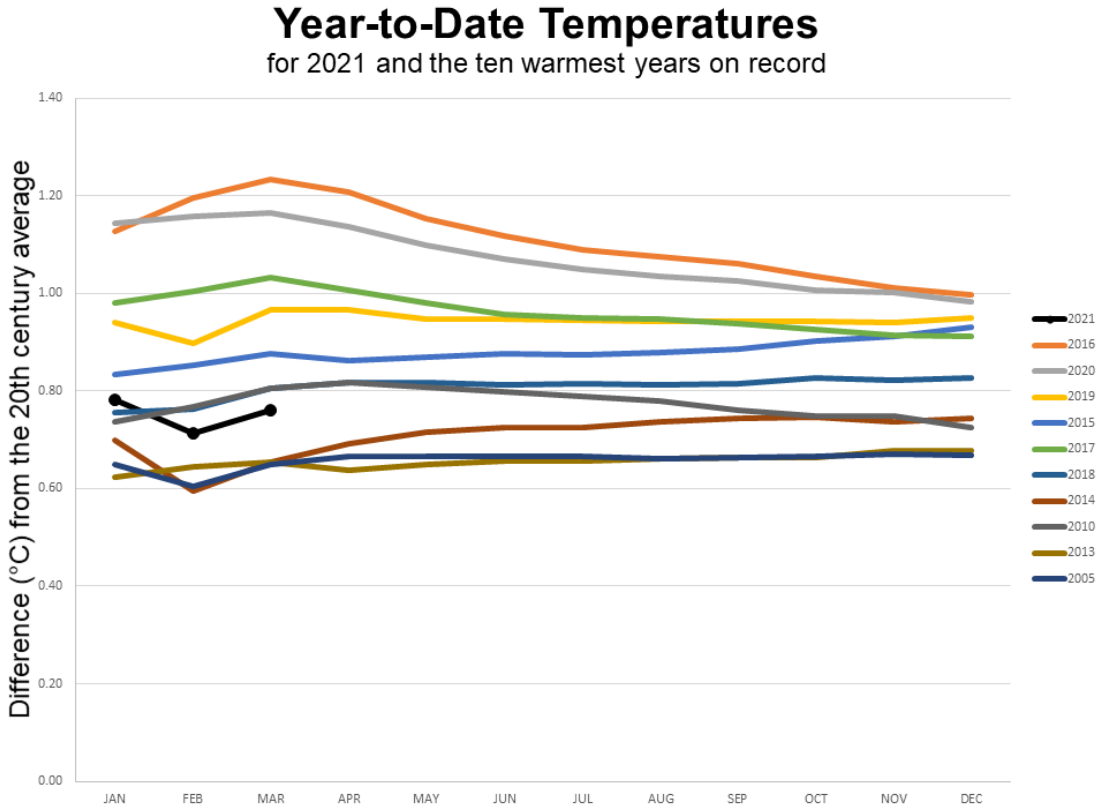


- **Global Land & Ocean:** +0.85°C / +1.53°F; the 8th warmest Mar on record.
- **Global Land:** +1.60°C / +2.88°F; 9th warmest Mar on record.
- **Global Ocean:** +0.57°C / +1.03°F; 9th warmest Mar on record.

January-March Global Temperature

The global temperature record dates back to 1880 (142 years)





- **Global Land & Ocean:** +0.76°C / +1.37°F; tied with 2007 as the 9th warmest Jan-Mar on record.

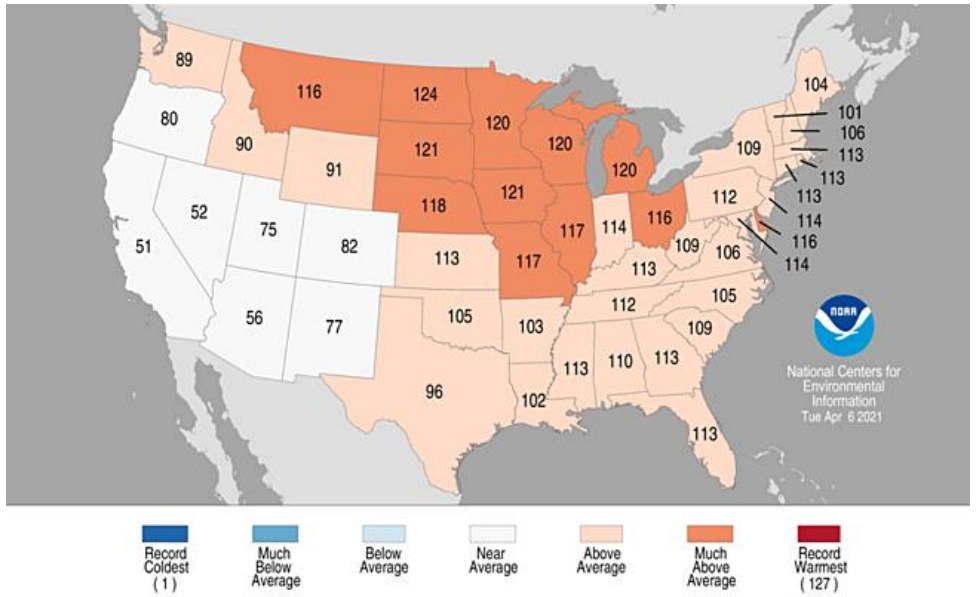
Very likely that 2021 will be a top 10 year

Contiguous U.S. March 2021

Temperature: 45.5°F, +4.0°F, tied with 1945 as the 14th warmest March

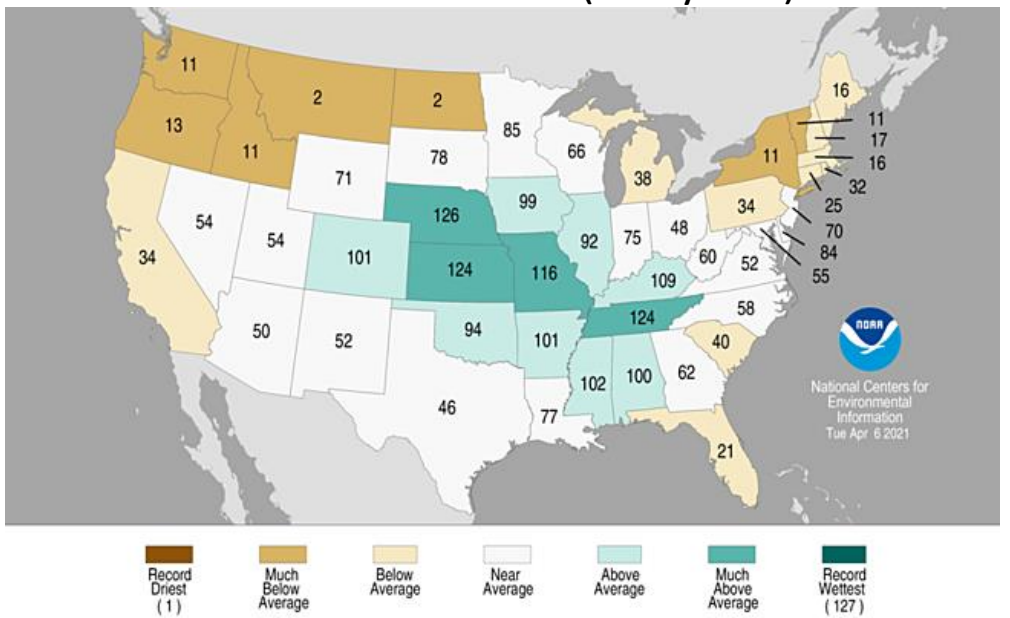
Precipitation: 2.45”, 0.06” below average, “near average”

Temperature Percentiles March 2021
Period: 1895-2021 (127 years)



- Above-average temperatures were observed from the Northwest to the Great Lakes to the Gulf of Mexico and into the Northeast.
- 7 states had a top 10 warm March.
- No state had a statewide March temperature that was below average.

Precipitation Percentiles March 2021
Period: 1895-2021 (127 years)



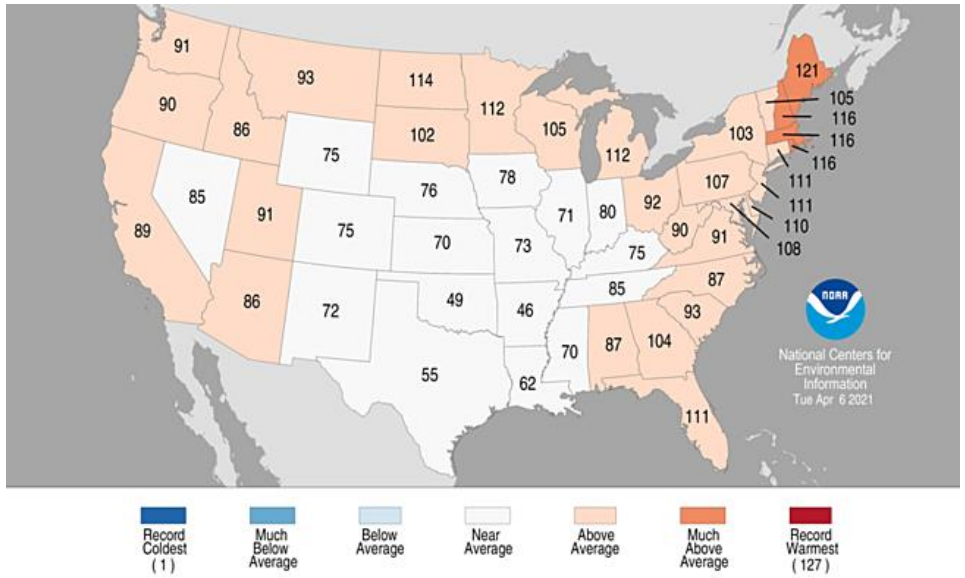
- Above-average precipitation was observed from the central U.S. to the Tennessee Valley and Gulf Coast in March. Below-average precipitation occurred across the Northwest, northern Plains, Northeast, as well as portions of the Southeast, Deep South and West.

Contiguous U.S. January-March 2021

Temperature: 36.9°F, +1.8°F, 33rd warmest

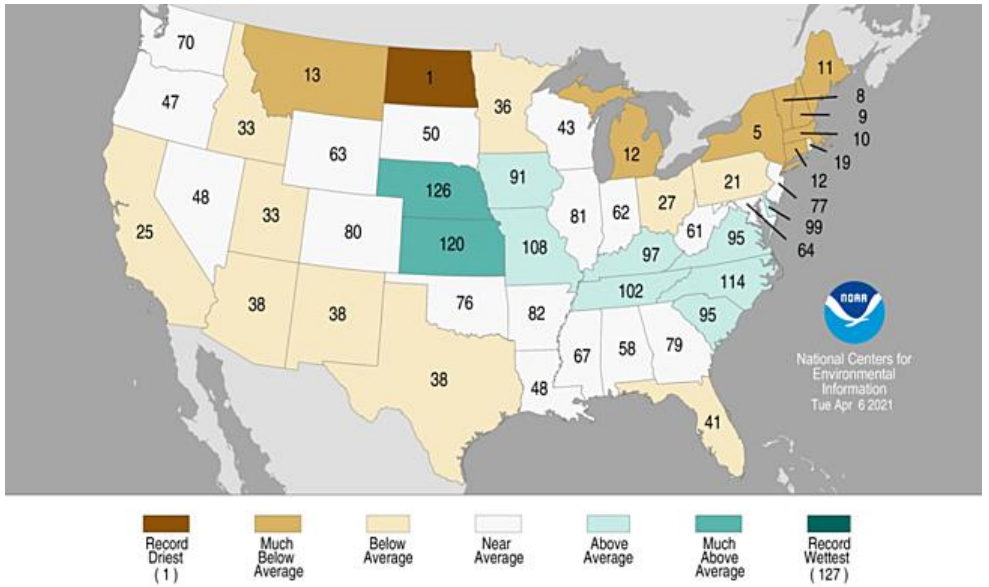
Precipitation: 6.55”, -0.41”, driest since 2015

Temperature Percentiles Jan-Mar 2021
Period: 1895–2021 (127 years)



- Above-average temperatures were present across the Northern Tier and Northeast as well as portions of the West and Southeast.
- No state had a statewide Jan-March temperature that was below average.

Precipitation Percentiles Jan-Mar 2021
Period: 1895–2021(127 years)

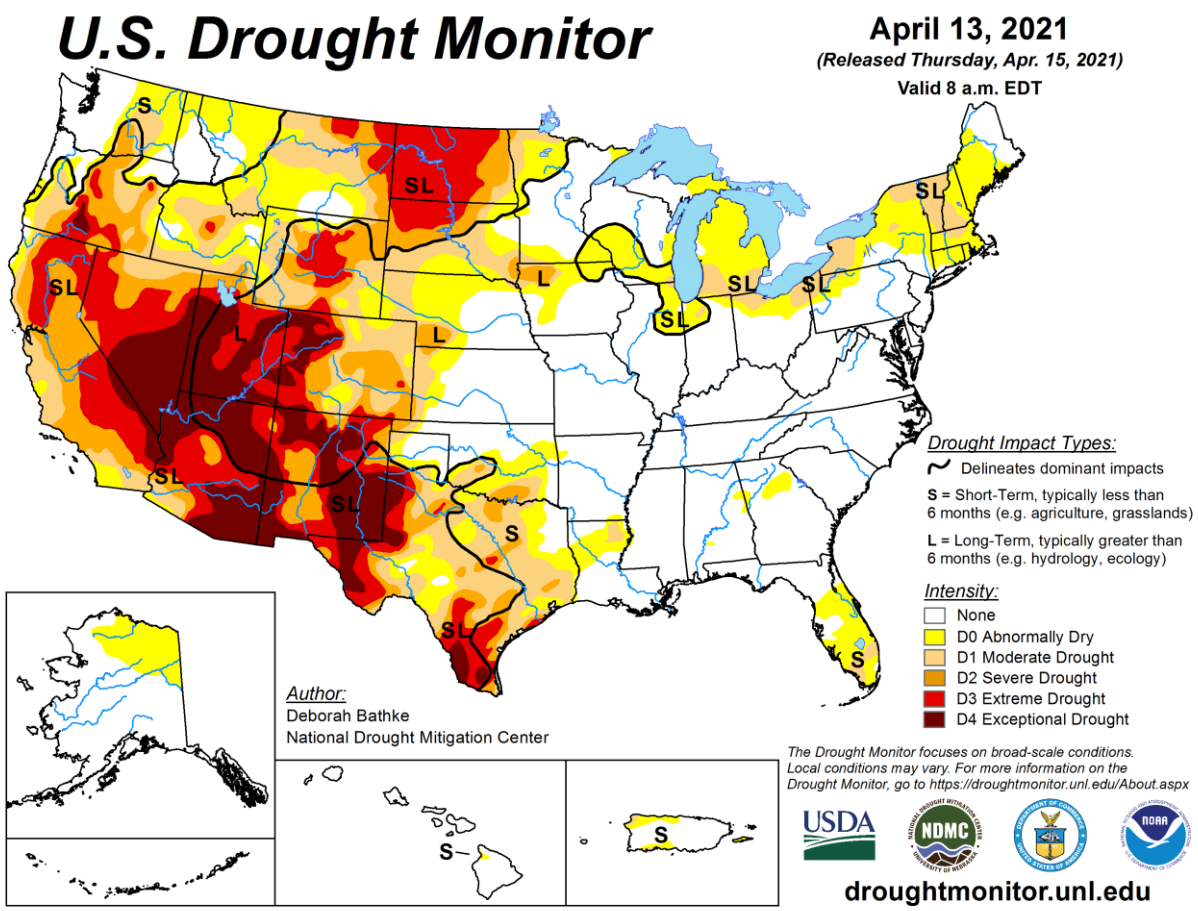


- Above-average precipitation stretched from the central Plains to the East Coast during January-March.
- Below-average precipitation were present across parts of the Northern Tier, the Northeast, the West, South and Southeast.

Current U.S. Drought

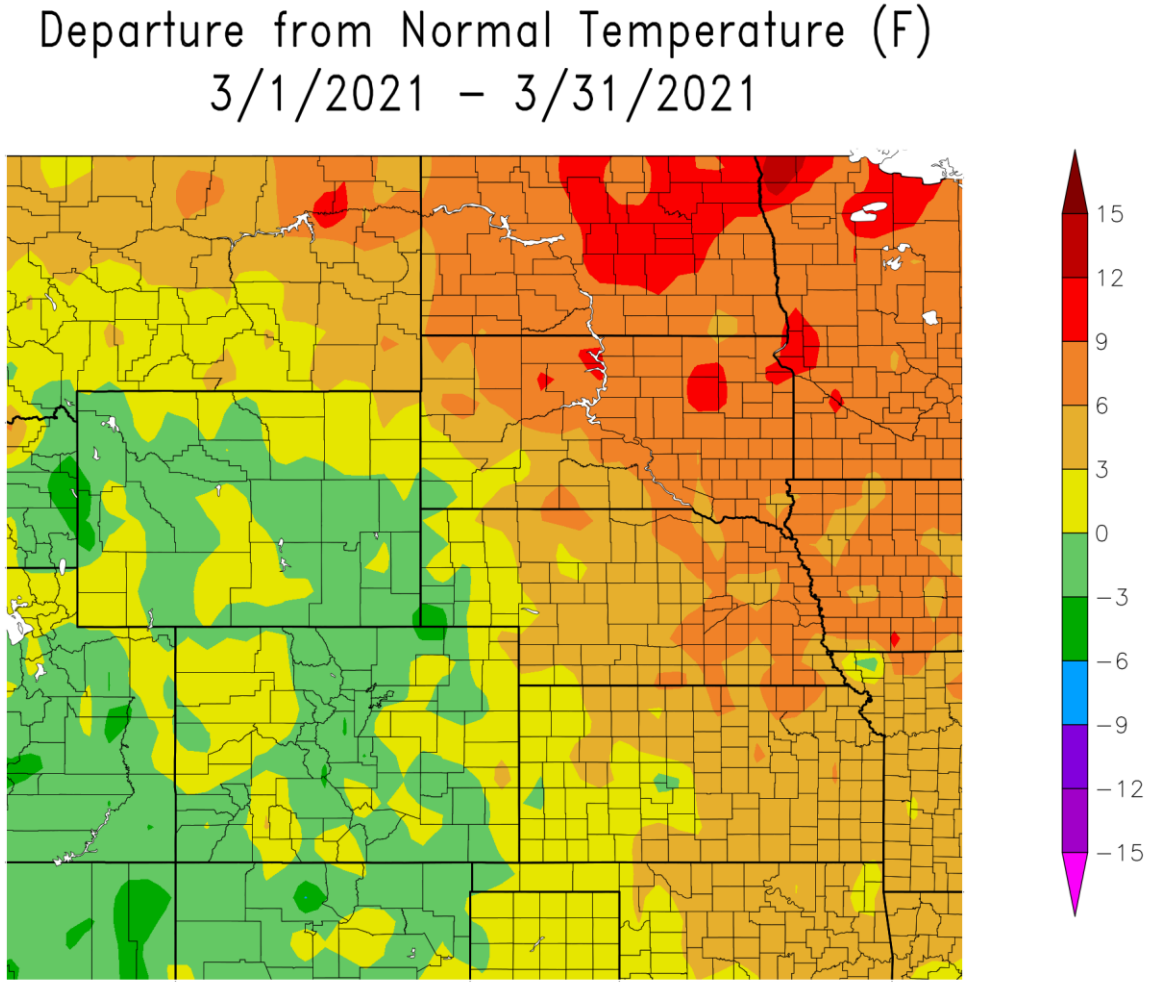
38% of Contiguous U.S. in Drought

(↑ 1 percentage points since mid-March)



- **Improvement**
  Parts of the Midwest and central Plains
- **Degradation**
  Parts of the West, Upper Midwest, Texas, Oklahoma, and the Northeast
- **Outside CONUS**
  No significant changes across PR and HI. Some improvements across northwestern Alaska.

Overview of Conditions in the High Plains



Generated 4/4/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Warmth across Northern and Central Plains

- 2012 remains warmest March for many states in the region (and the country)

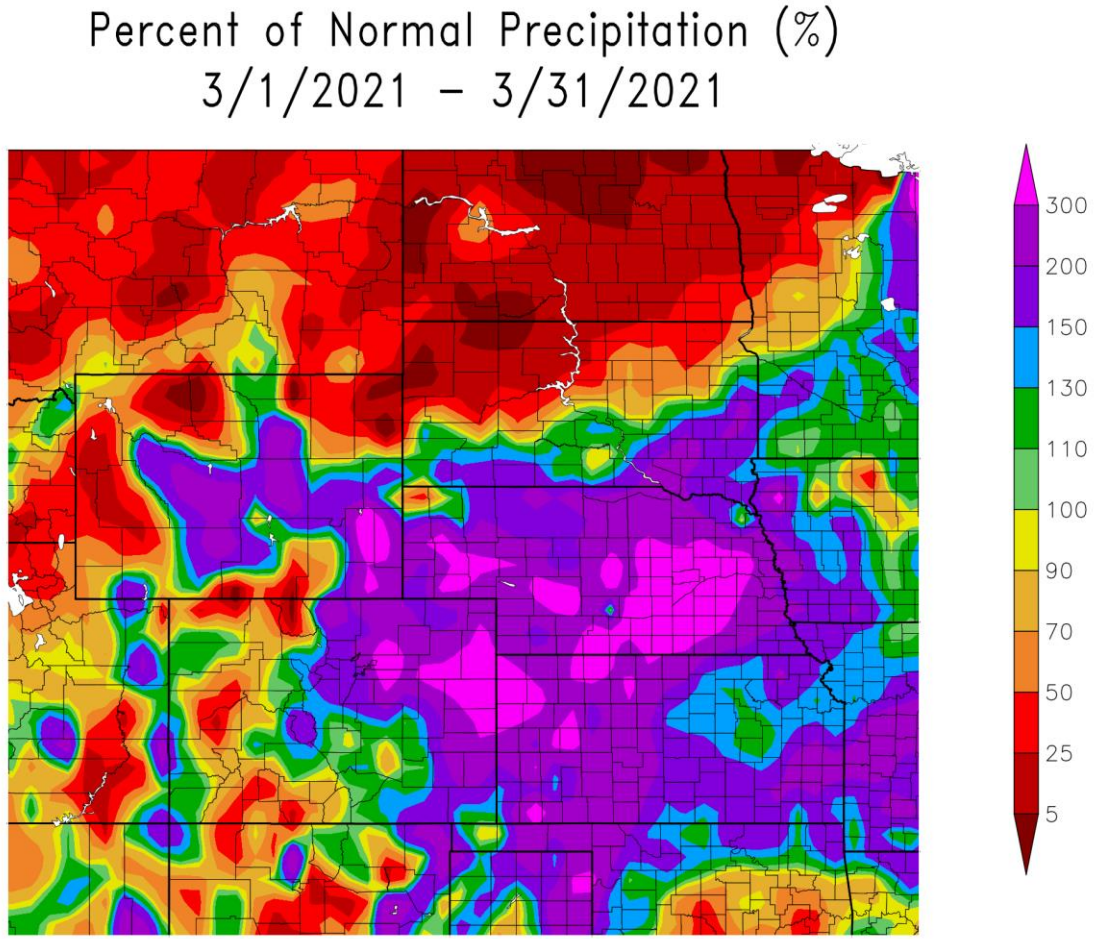
Spring leaf out mixed

Local Example

Aberdeen, SD

- 5th warmest March on record
- 40.0 degrees F

Overview of Conditions in the High Plains



Dichotomy between the Northern and Central Plains

Local Examples

Goodland, KS

- Wettest March on record
- 4.03 inches

Denver, CO

- Snowiest March on record
- 34.0 inches

Dickinson, ND

- Driest March on record
- 0.03 inches

Mid-Month Storm

Heavy Precipitation Event

2.0-4.0 feet of snow

- Parts of Colorado and Wyoming

2.00-6.00 inches of rain

- Parts of Kansas and Nebraska

Cheyenne, WY

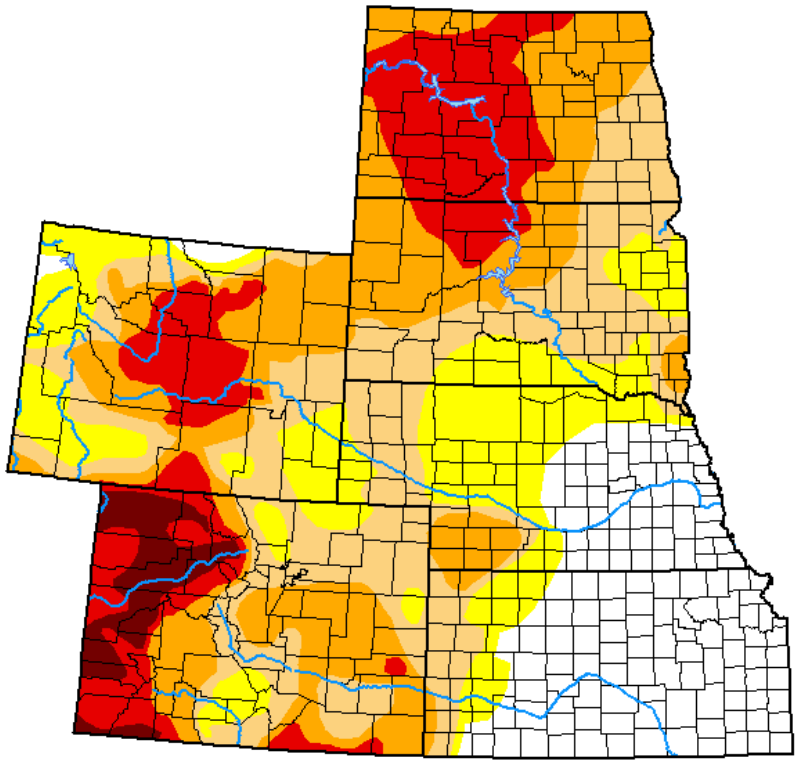
- Snowiest day on record
- 22.7 inches (March 14)

Grand Island, NE

- Wettest/second wettest March days
- 2.75 inches (March 14) / 2.56 inches (March 13)

Holmes Lake, Lincoln, NE; March 31, 2021
Credit: Natalie Umphlett

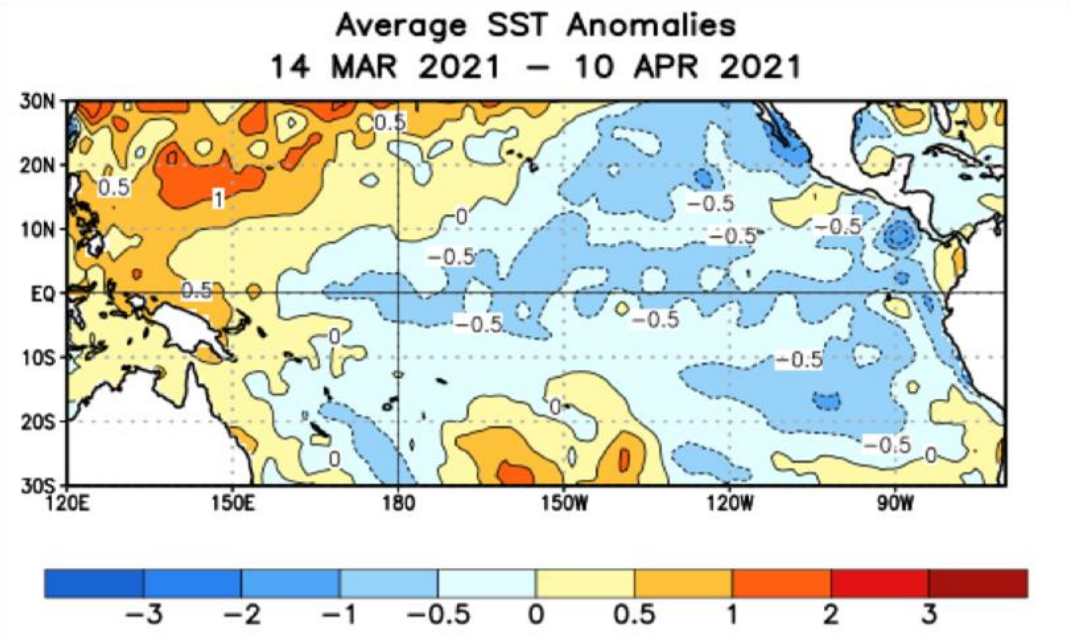
Drought Conditions



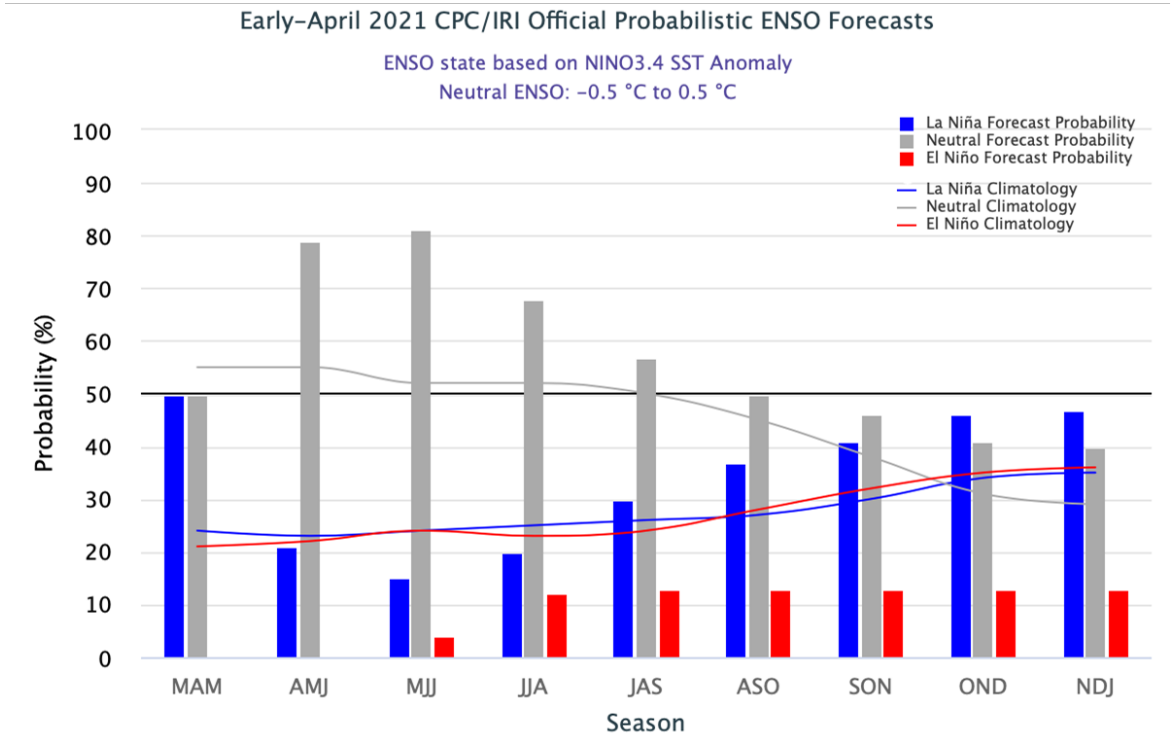
By the end of March, approximately 64% of the High Plains region was in drought (D1-D4).

- Improvement
  Colorado, Kansas, Nebraska, Wyoming, parts of South Dakota
- Degradation
  North Dakota, parts of South Dakota

Sea Surface Temperatures and ENSO



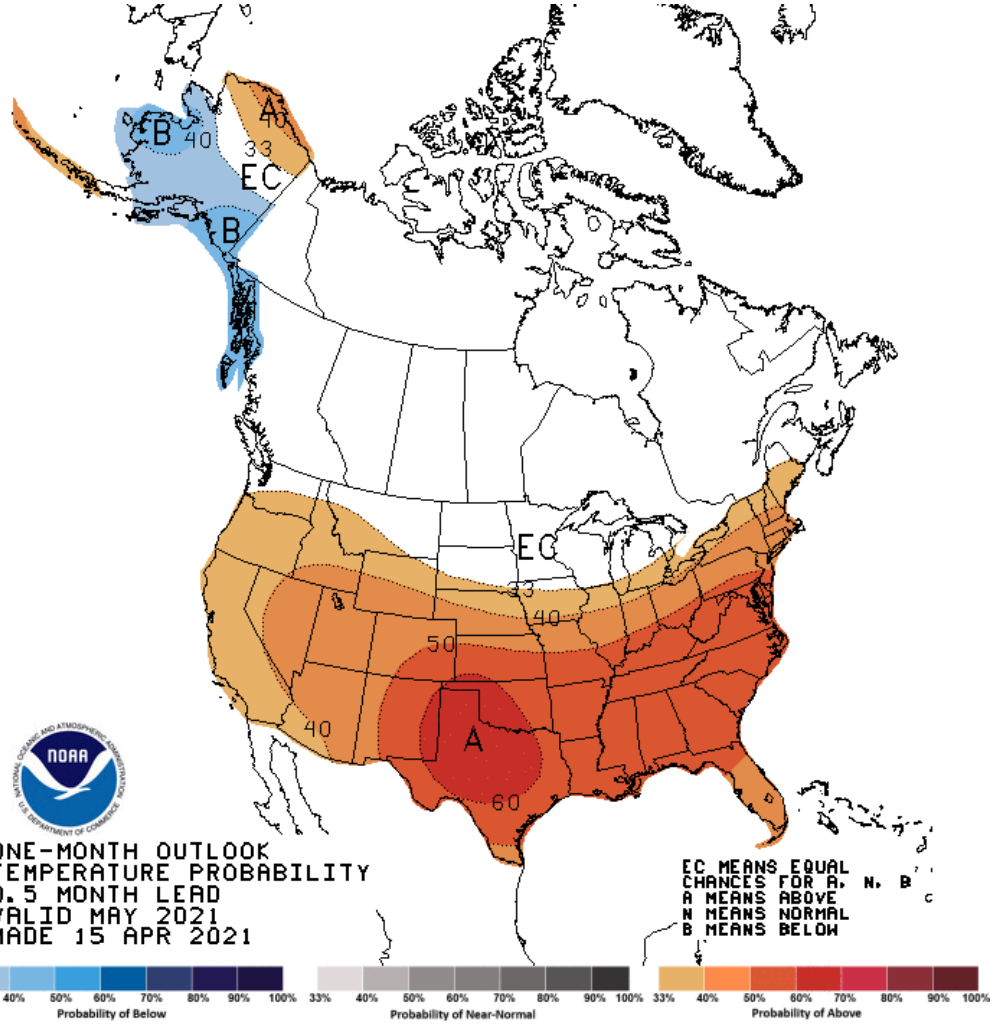
- Sea surface temperatures
  - Slightly below normal sea surface temperatures continue across the central and eastern Pacific Ocean near the equator
  - The oceanic and atmospheric observations reflect weakening La Nina conditions
  - Easterly trade winds are slightly stronger than normal and precipitation over the central Pacific is less than normal



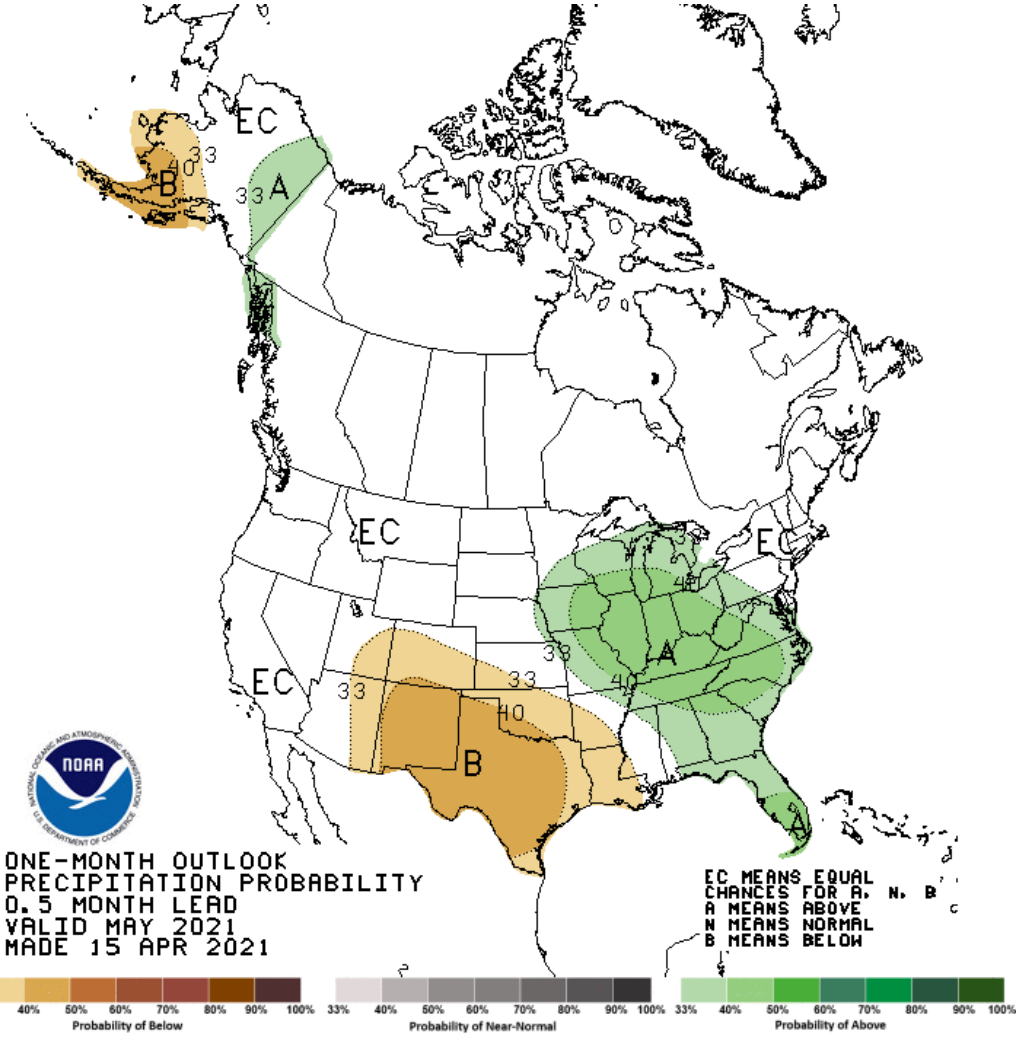
- ENSO forecast
  - La Nina is likely to transition to ENSO neutral conditions in the May through July period (greater than 80 percent chance)
  - Chances for a return to La Nina conditions increase by autumn, with a relatively small chance of El Nino this year

Monthly Forecast (May)

May Average Temperature Probability

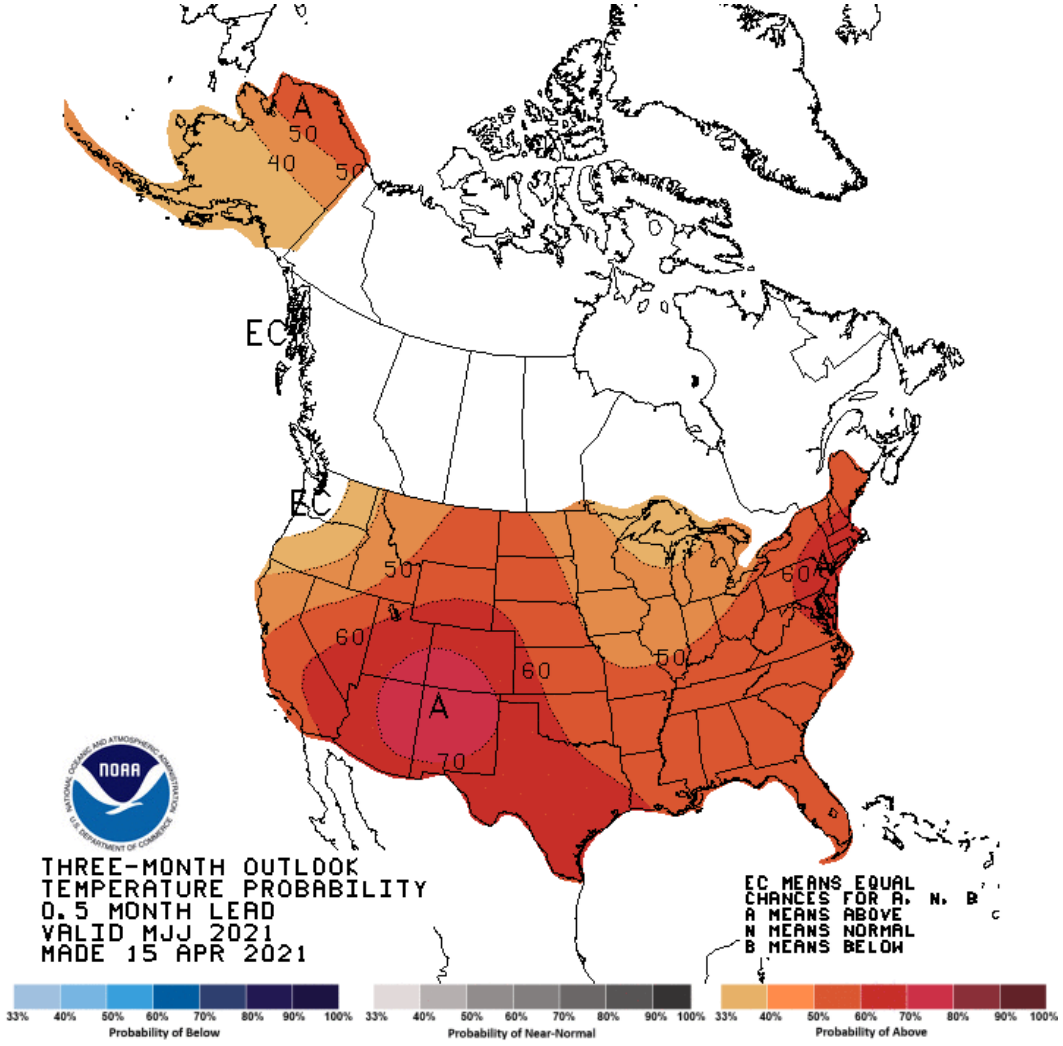


May Total Precipitation Probability

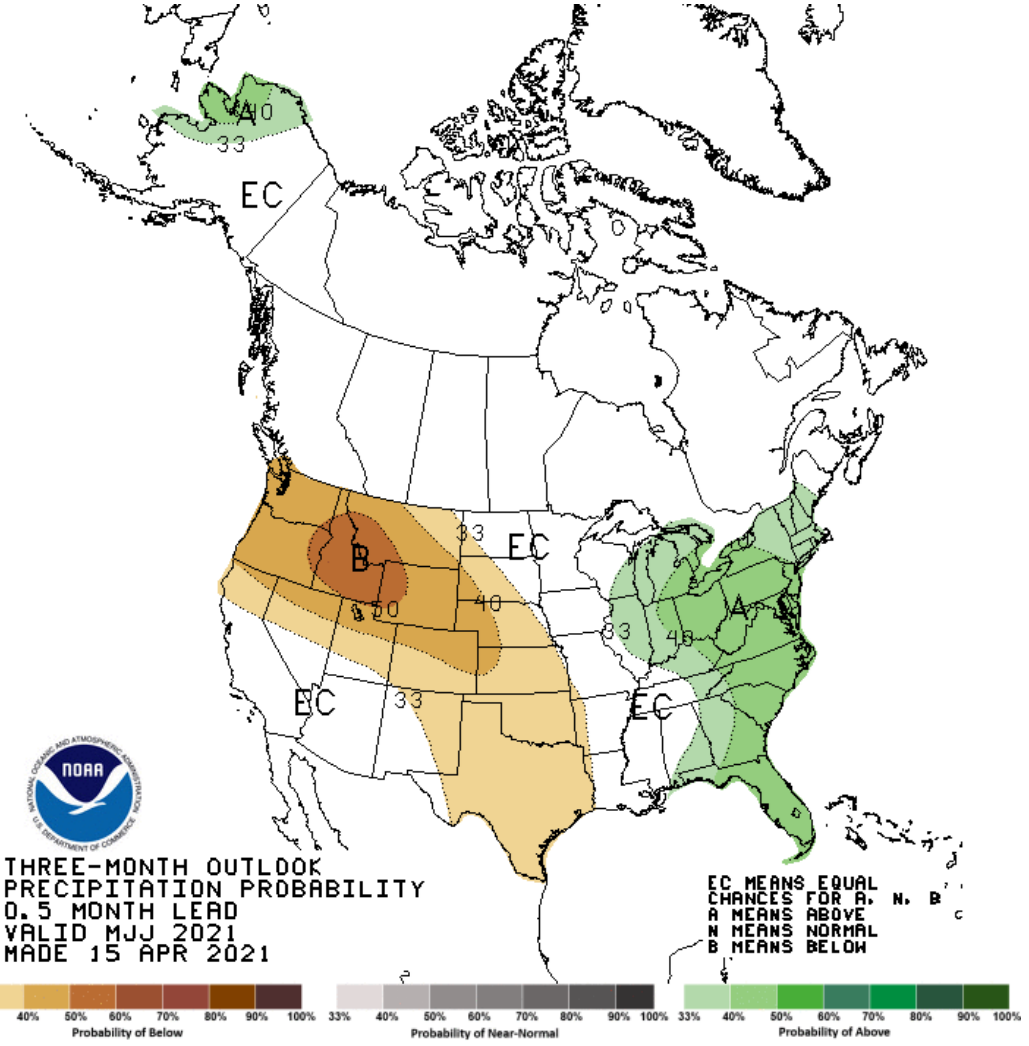


Three-month Forecast (May, June, July)

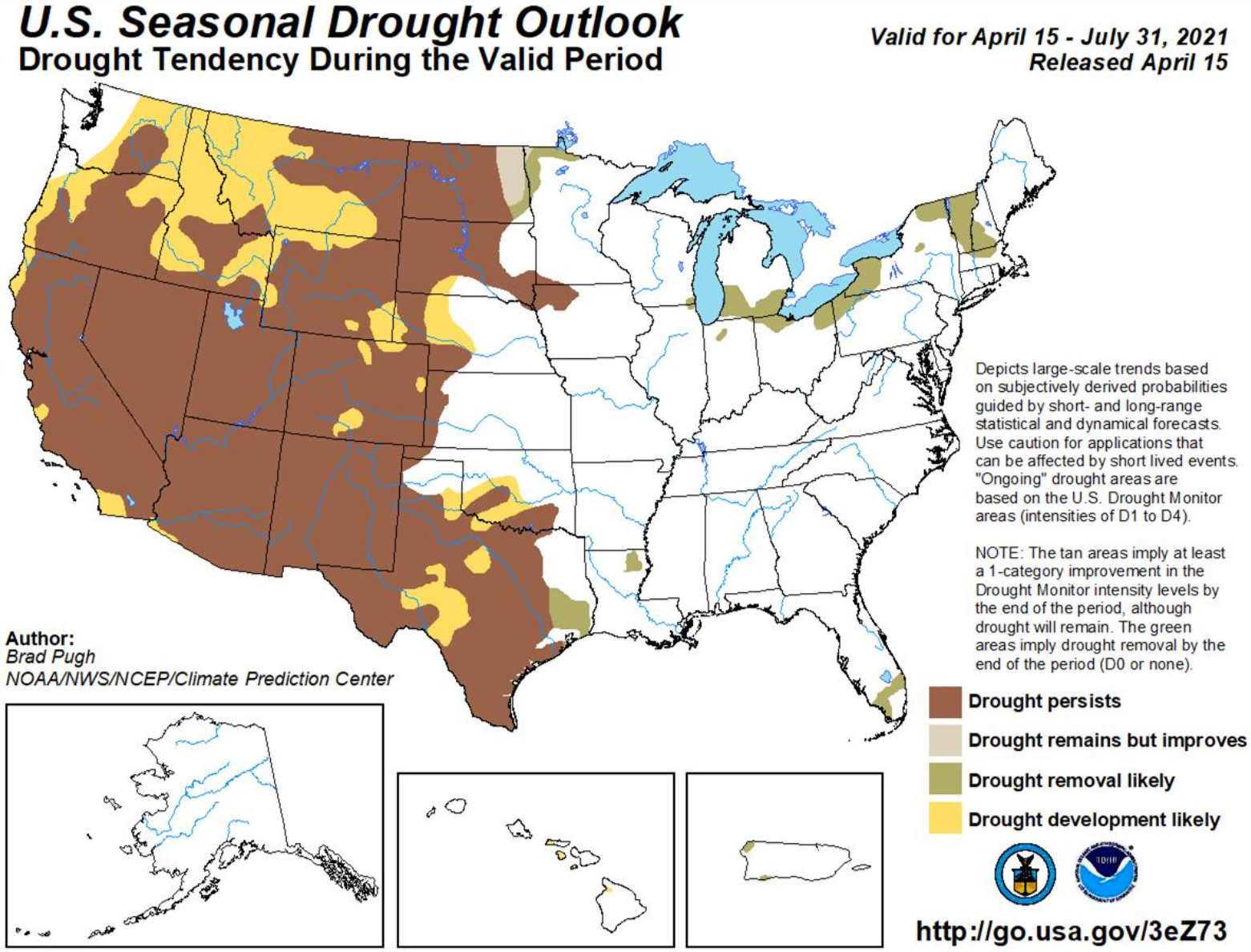
May-Jun-Jul Average Temperature Probability



May-Jun-July Total Precipitation Probability



U.S. Drought Outlook



For More Information

TODAY'S PRESENTATION:

- http://www.ncdc.noaa.gov/sotc/briefings

NOAA's National Centers for Environmental Information: www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- Dates for upcoming reports: http://www.ncdc.noaa.gov/monitoring-references/dyk/monthly-releases

NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov

High Plains Regional Climate Center: https://hprcc.unl.edu/

U.S. Drought Monitor: www.drought.gov

Climate Portal: www.climate.gov

NOAA Media Contacts: john.jones-bateman@noaa.gov, 301-713-9604 (NOAA/NESDIS PAO)