NOAA Climate Science & Services Monthly Climate Update

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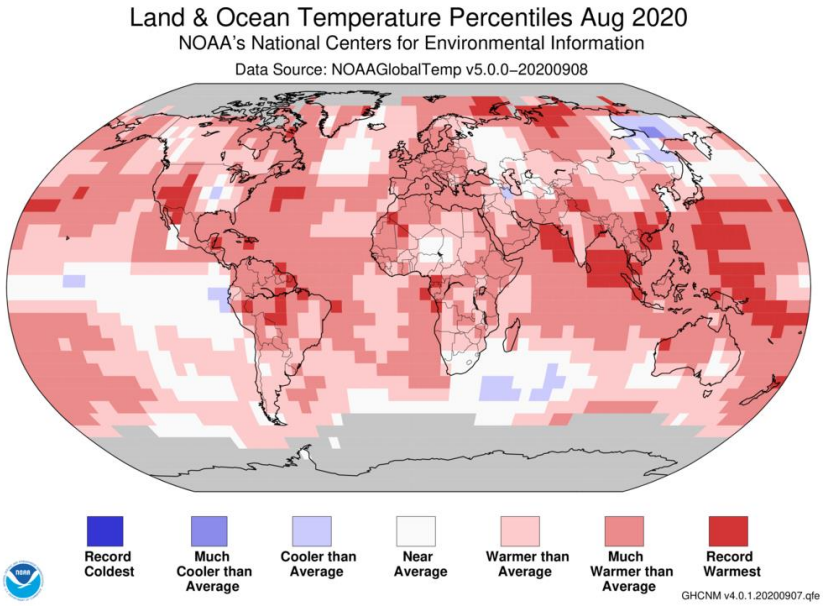
Global Temperature

The global temperature record dates back to 1880 (141 years)

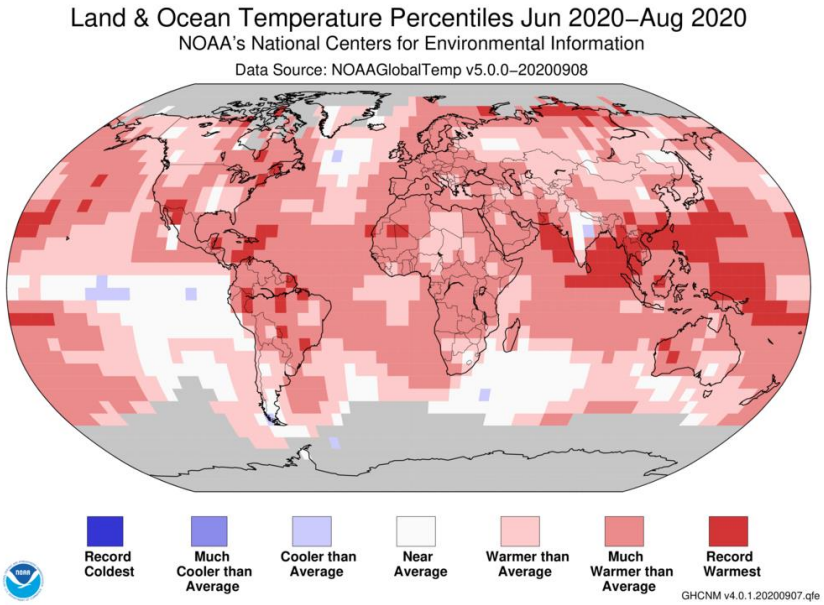


August 2020

- **Global Land & Ocean:** +0.94°C / +1.69°F; the 2nd warmest Aug on record.
- **Global Land:** +1.26°C / +2.27°F; 3rd warmest Aug on record.
- **Global Ocean:** +0.82°C / +1.48°F; tied with 2016 as the 2nd warmest Aug on record.

June-August 2020

- **Global Land & Ocean:** +0.92°C / +1.66°F; the 3rd warmest Jun-Aug on record.
- **Global Land:** +1.26°C / +2.27°F; 2nd warmest Jun-Aug on record.
- **Global Ocean:** +0.80°C / +1.44°F; 3rd warmest Jun-Aug on record.



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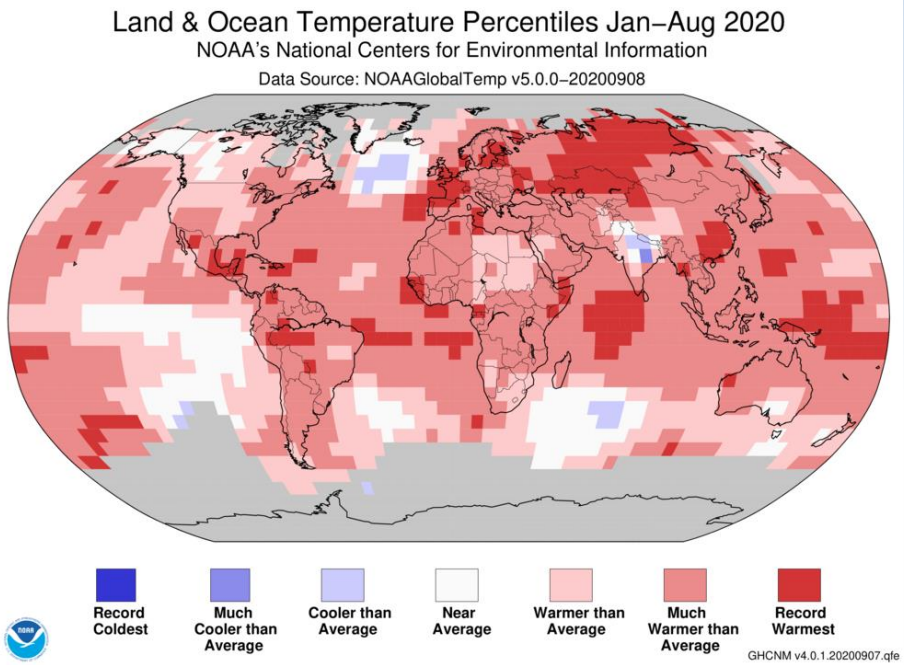
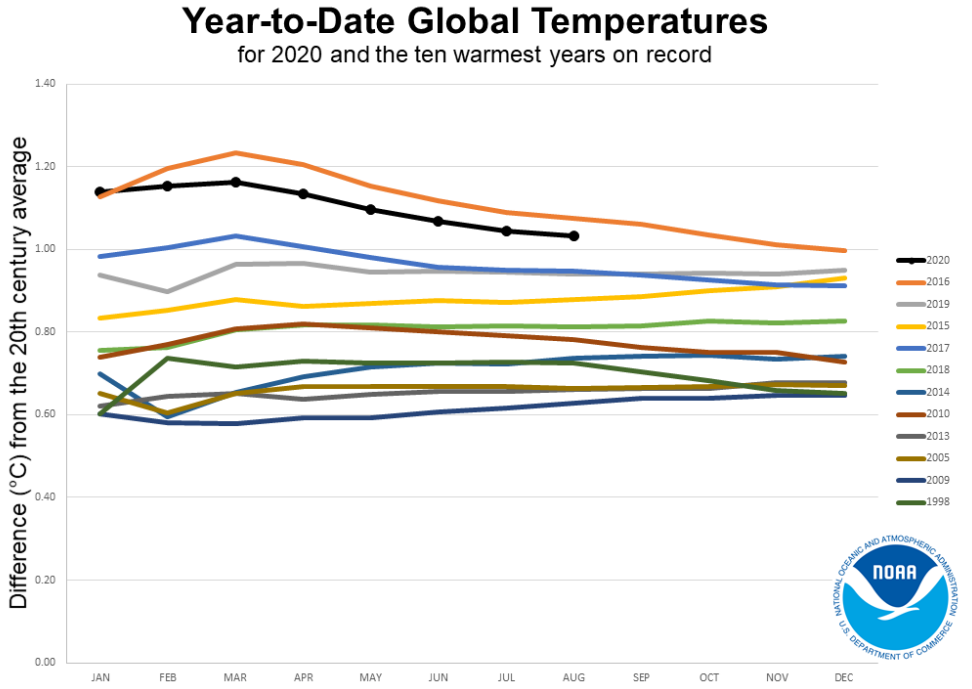




2020 Probability Ranking Outlook

- Virtually certain (>99.9%) top 5 year
- 39.6% chance of warmest year
- 95% confidence interval of 1st to 3rd warmest year on record.

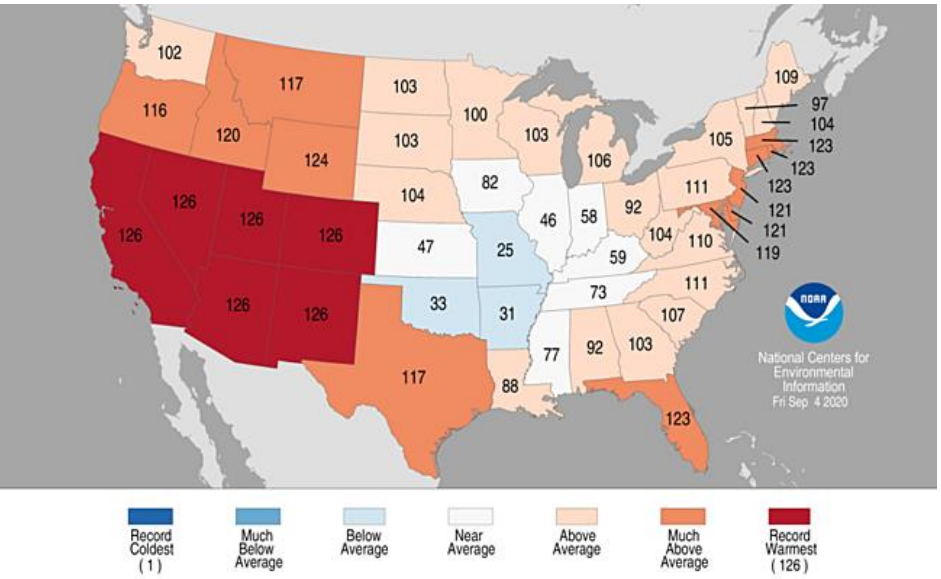
- **Global Land & Ocean:** +1.03°C / +1.85°F; the 2nd warmest Jan-Aug on record.

Contiguous U.S. August 2020

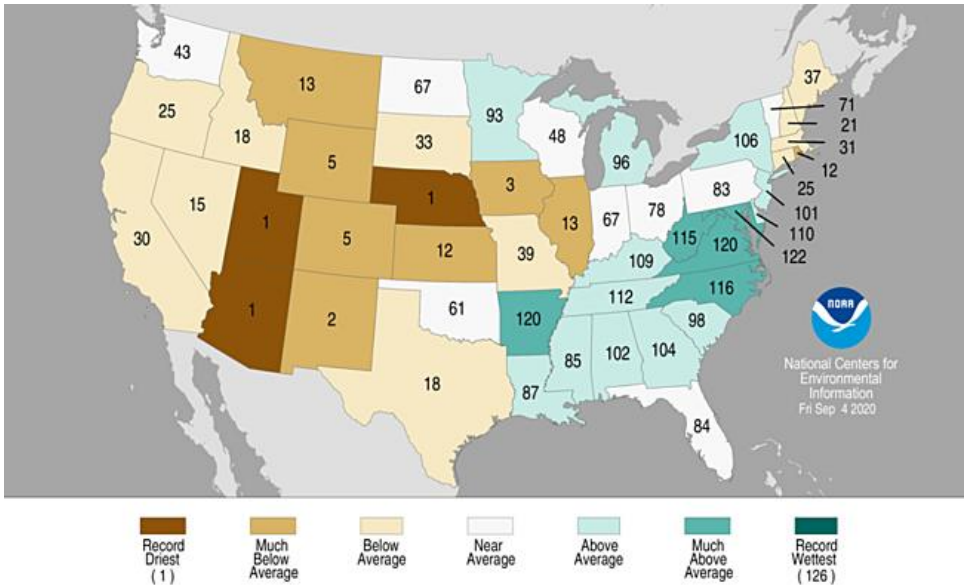
Temperature: 74.7°F or 2.6°F above average; 3rd warmest Aug on record

Precipitation: 2.35”or 0.27” below average; driest Aug since 2011

Temperature Percentiles August 2020
Period: 1895-2020 (126 years)



Precipitation Percentiles August 2020
Period: 1895-2020 (126 years)



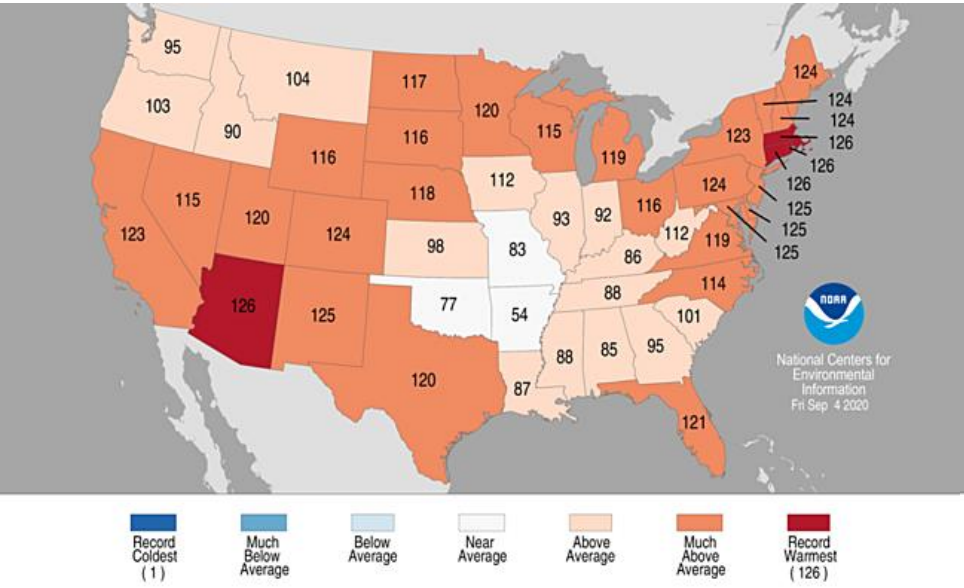
- CA, NV, AZ, UT, NM, and CO had a record warm Aug. No state had a record cold Aug.
- Below-average statewide temperatures were limited to MO, OK, and AR.
- Above-average statewide precipitation was present across the southeast, Mid-Atlantic, and across the Great Lakes.
- Below-average statewide temperatures was present across much of the western contiguous U.S.

Contiguous U.S. Jun-Aug 2020

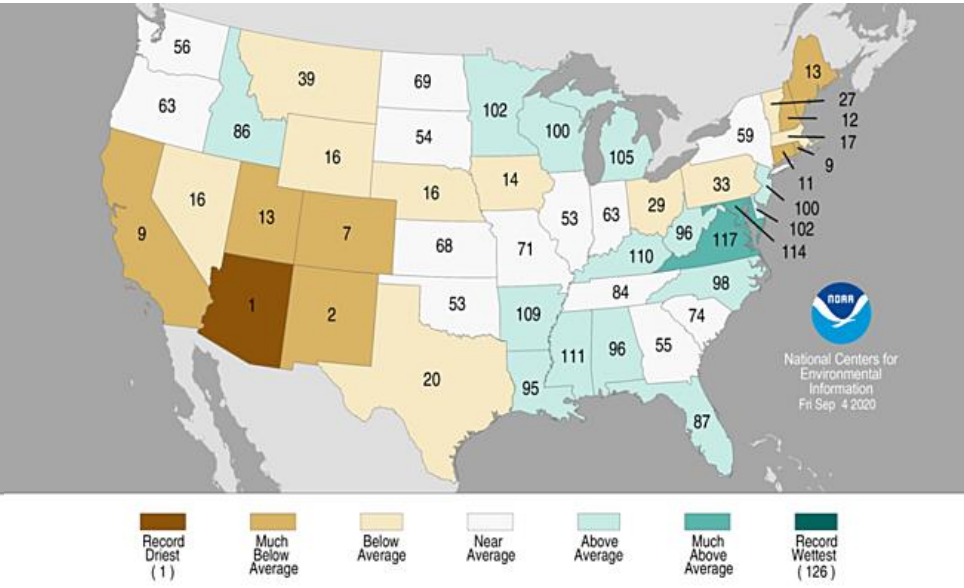
Temperature: 73.6°F or 2.2°F above average; 4th warmest Jun-Aug on record

Precipitation: 7.99”or 0.33” below average; driest Jun-Aug since 2012

Temperature Percentiles Jun-Aug 2020
Period: 1895-2020 (126 years)



Precipitation Percentiles Jun-Aug 2020
Period: 1895-2020 (126 years)



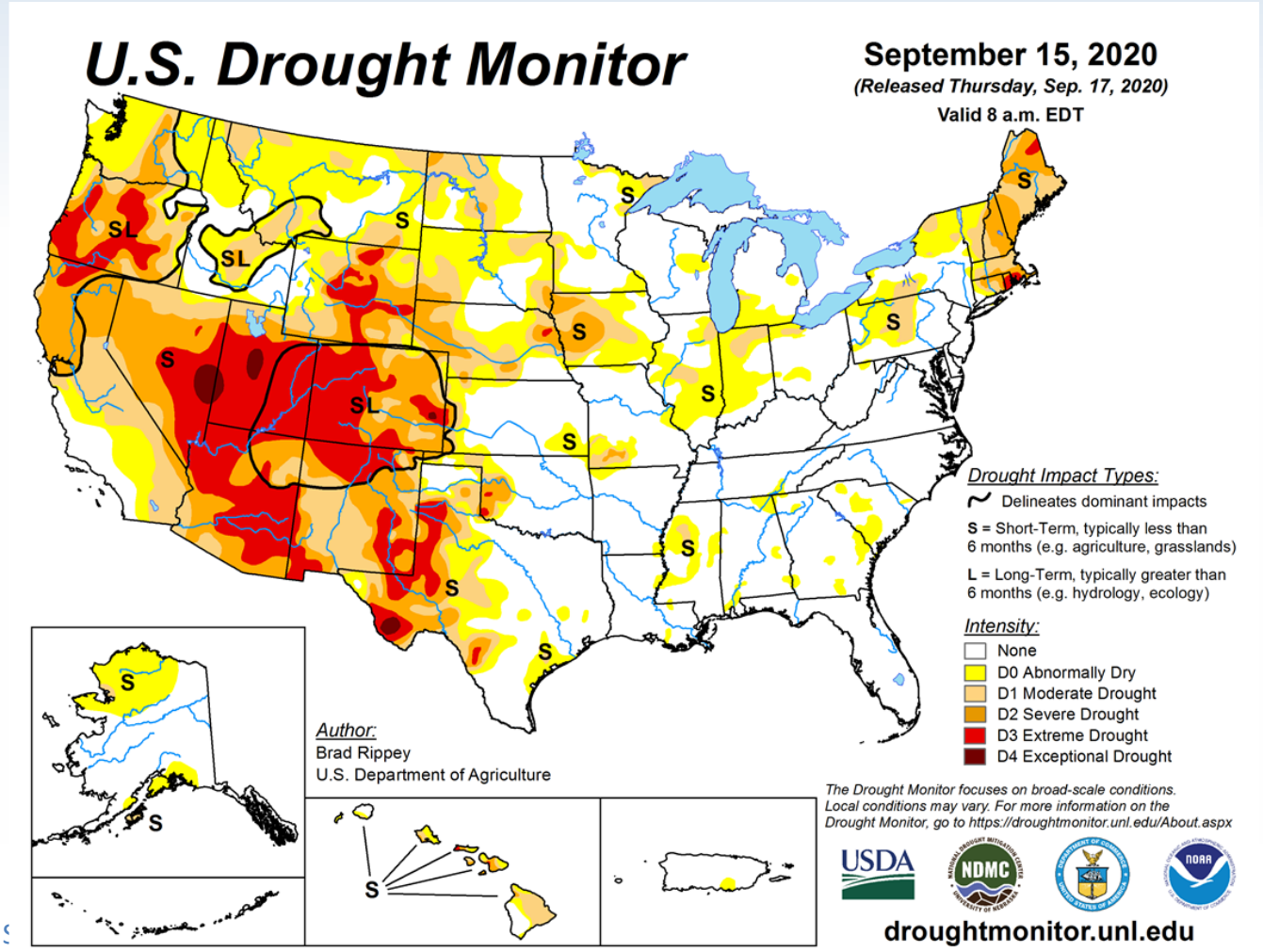
- Warmer-than-average conditions engulfed much of the U.S.
- AZ, CT, RI, and MA had a record warm Jun-Aug statewide temperatures

- Below-average precipitation was present across parts of the Northeast and the West.
- Above-average conditions were present across the Southeast, Great Lakes and Northwest.

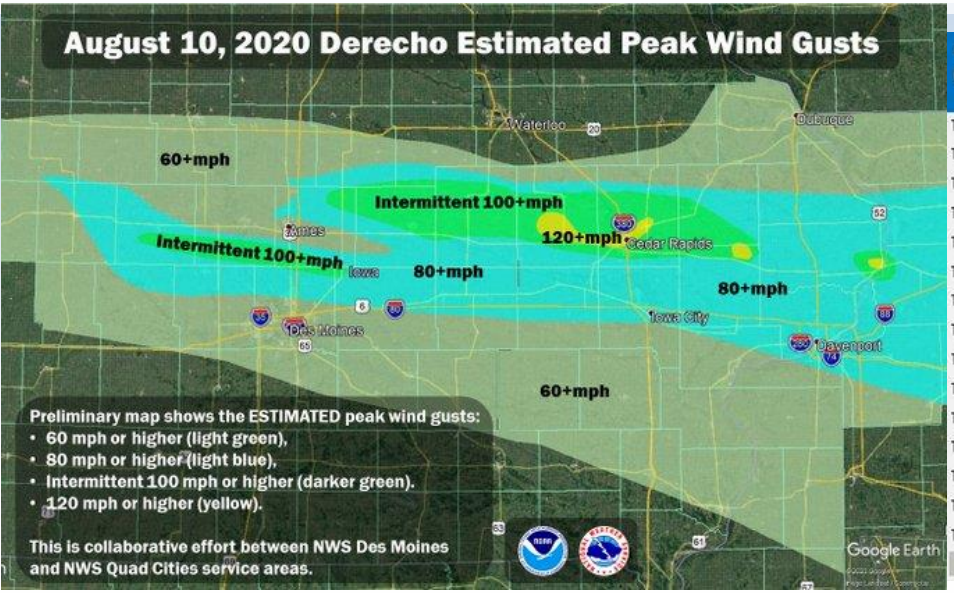
Current U.S. Drought

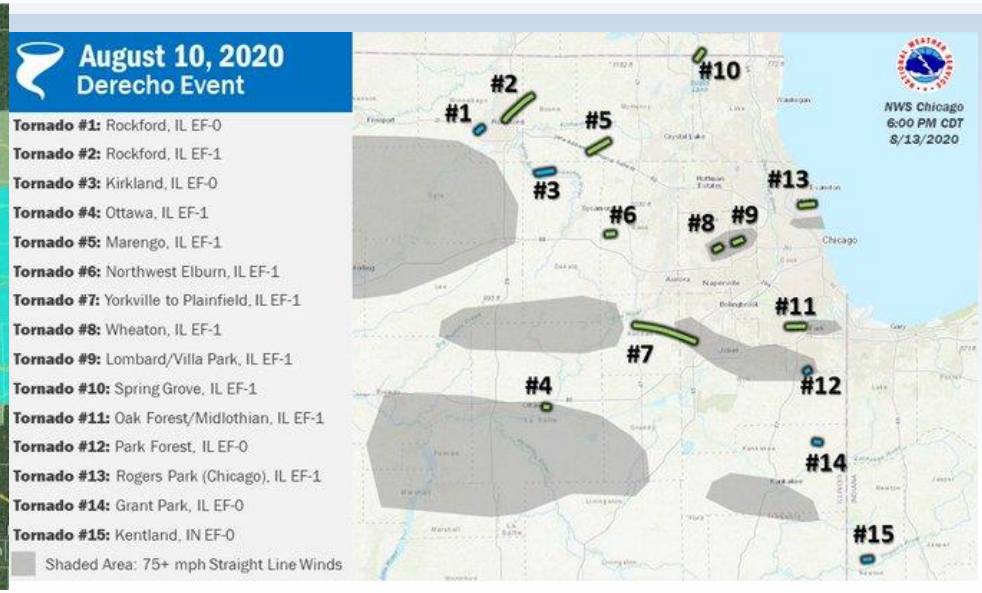
38.9% of Contiguous U.S. in Drought

(↑2.3 percentage points since mid-August)



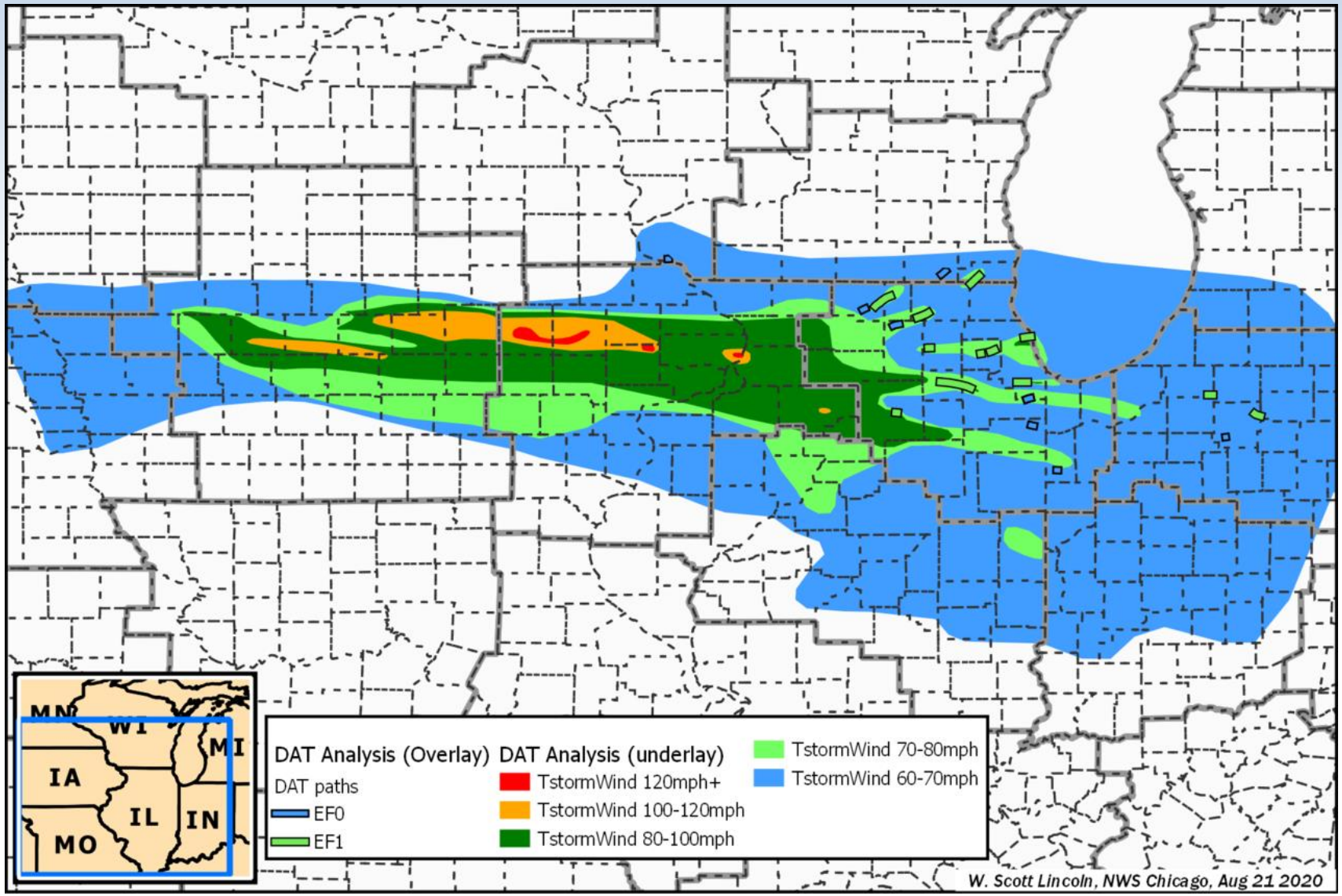
Midwest Derecho – August 10





- Intense derecho traveled from southeast South Dakota to Ohio, a path of 770 miles in 14 hours and widespread winds >100 mph
- "More than 10 million acres, or 43 percent, of the state's crops were affected." Corn most affected. Field work continues on crop damage totals
- Cedar Rapids, IA was heavily damaged by wind gusts in excess of 100 mph
- 15 weaker (EF0-EF1) tornadoes in northeastern Illinois, also affecting the Chicago metropolitan area.

Midwest Derecho – cont.



Western Wildfires - California Firestorms

- California's **August Complex** began as 37 separate wildfires within the Mendocino National Forest that began Aug. 17 after storms created >10,000 lightning strikes across Northern California.
- In August this was the 5th largest CA wildfire on record; it has since grown and is now largest CA wildfire on record (800,000 acres)

- Also during August: the **LNU Lightning Complex** near Santa Rosa (>375,000 acres) & **SCU Lightning Complex** near San Jose burned (>380,000 acres) - the 2nd and 3rd largest wildfires on record dating back to 1932. Thousands of homes and other structures have been destroyed

- **All 5 of the largest California wildfires on record** have occurred **since 2017**. Historic wildfires also burning in Oregon, Washington and Colorado.

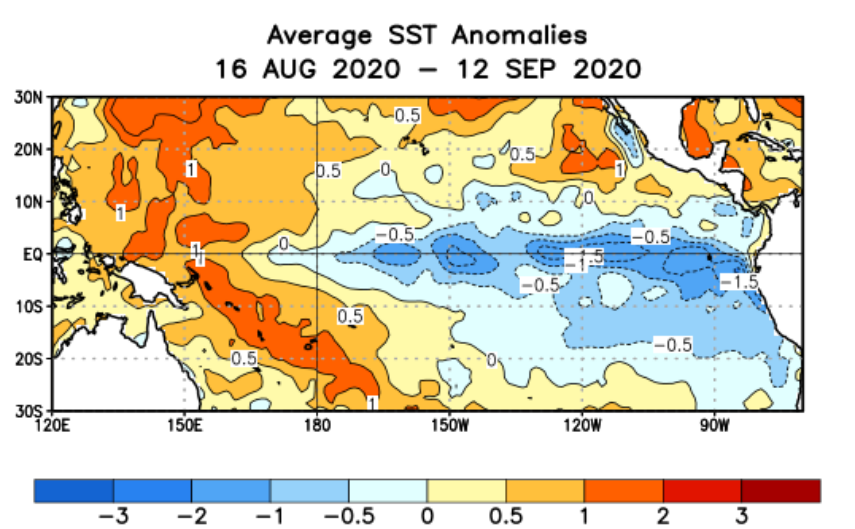
Hurricane Isaias

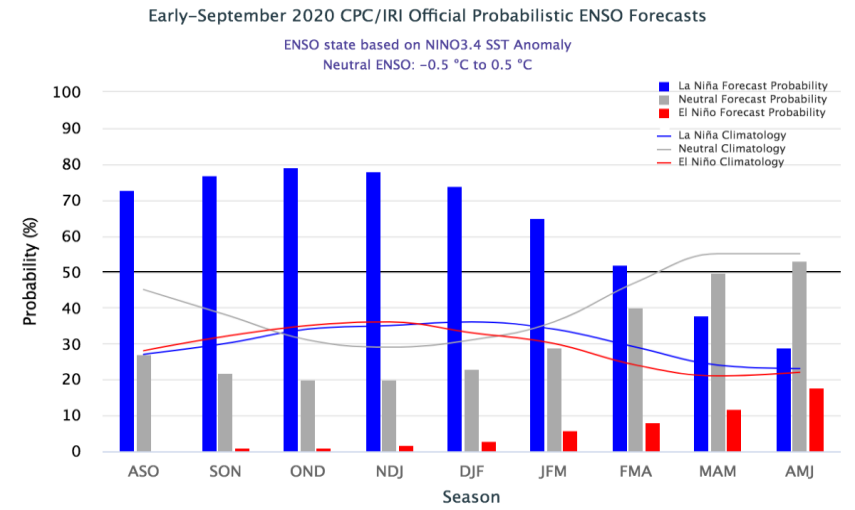
- Cat. 1 Isaias (85 mph) made landfall August 3 at Ocean Isle Beach, NC
- It accelerated up the East Coast, resulting in widespread damage and power outages across New York, New Jersey and Pennsylvania.
- 34 tornadoes developed across North Carolina, Virginia, Maryland, Delaware and New Jersey due to Isaias.
- Many tornadoes were weaker (EF-0 and EF-1) producing scattered damage to agriculture, structures and residences. Several EF-2 tornadoes and one EF-3 tornado across coastal North Carolina and Virginia from Isaias.

Hurricane Laura

- Strong Cat. 4 Hurricane Laura
- (150 mph at landfall) on August 27 near Cameron, LA.
- Damage focused in southwestern Louisiana along coast and well inland.
- Many broken water systems and severely damaged electrical grid in southern Louisiana will slow the recovery process.
- Strongest hurricane to hit Louisiana since 1861.
- Laura also had highest landfall wind speed to make landfall in the U.S. since Hurricane Michael in 2018.

Sea Surface Temperatures & ENSO

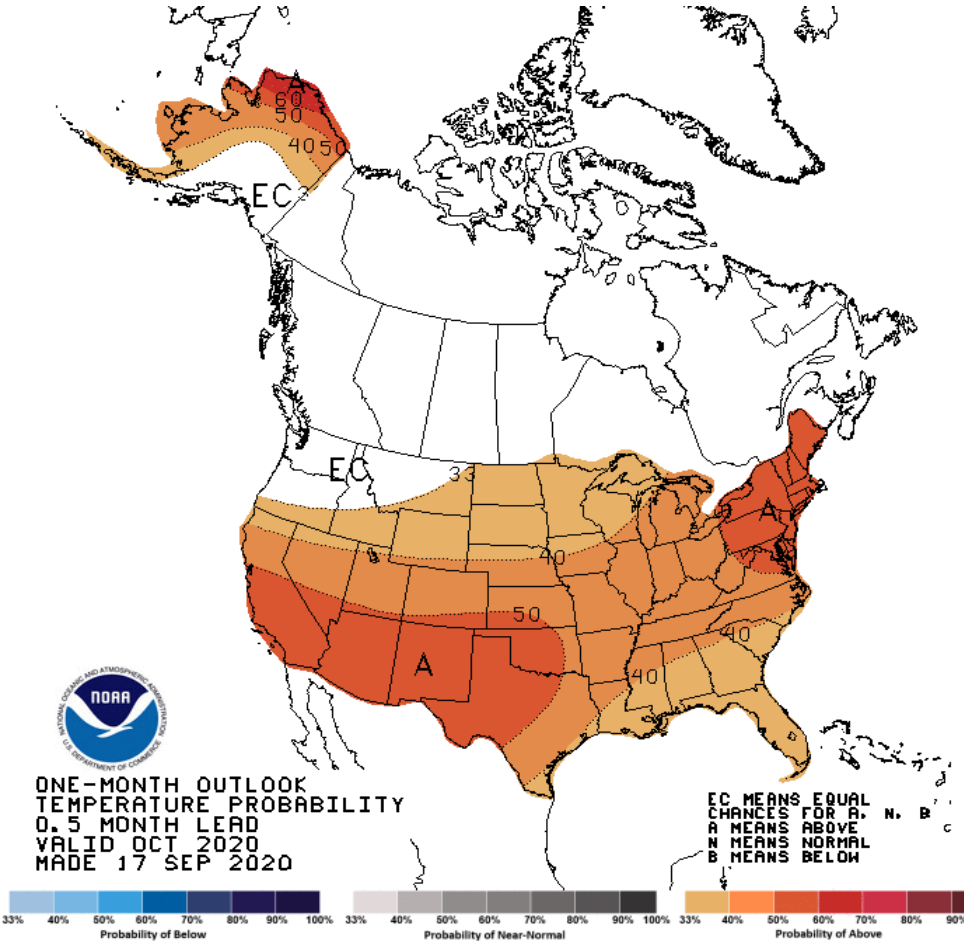




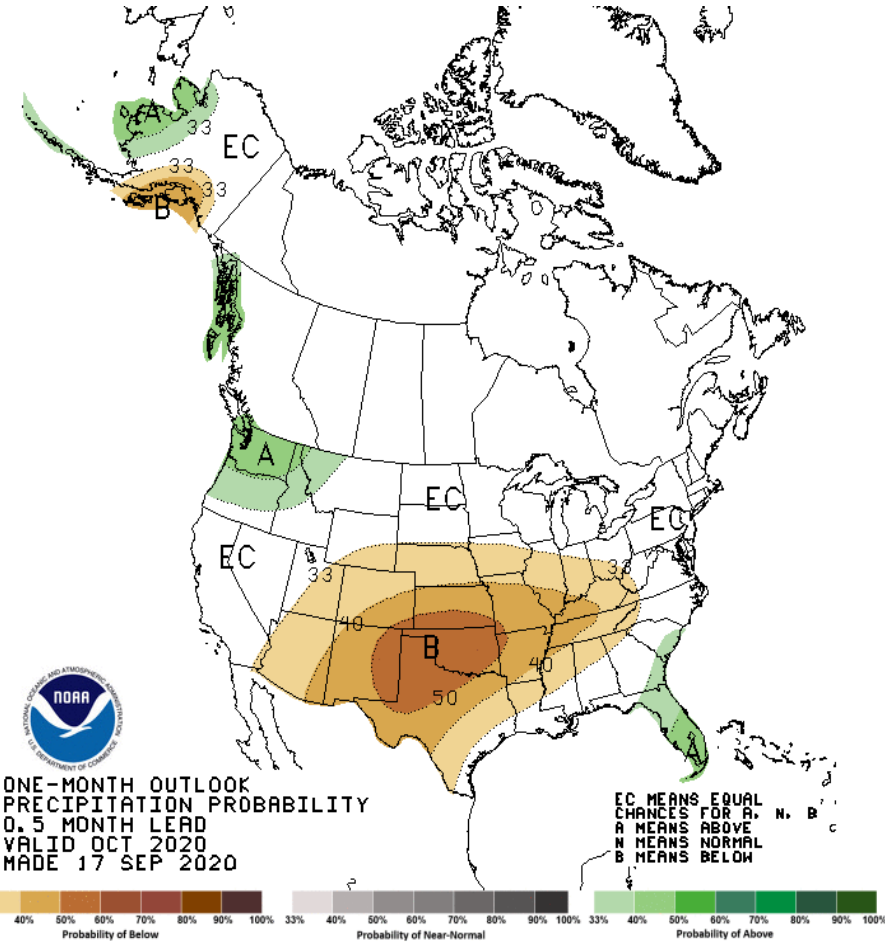
- Sea surface temperatures
  - Equatorial SSTs are below average from the Date Line east to South America
  - The oceanic and atmospheric observations currently reflect La Nina conditions
  - Positive SST anomalies are present in the Gulf of Mexico and Caribbean Sea
- ENSO forecast
  - La Nina conditions are likely to persist (75 percent chance) through this winter
  - The most likely outcome into early next spring is La Nina

Monthly Forecast (Oct.)

October Average Temperature Probability

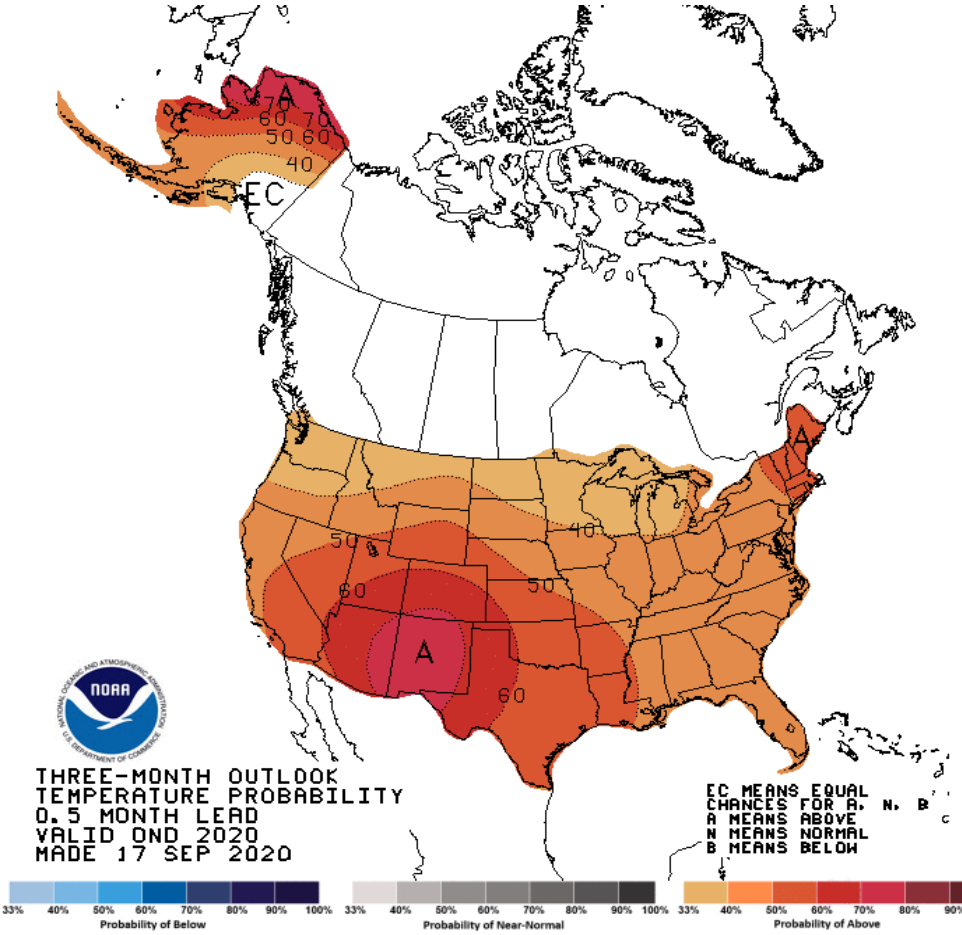


October Total Precipitation Probability

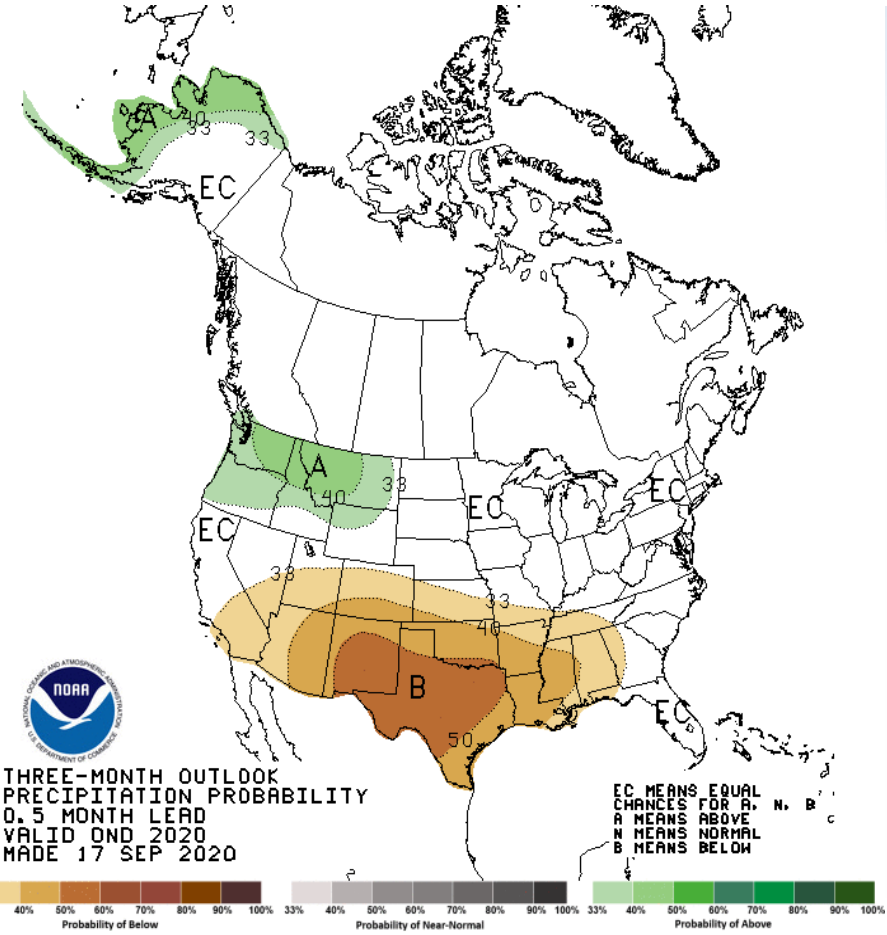


Seasonal Forecast (Oct.-Nov.-Dec.)

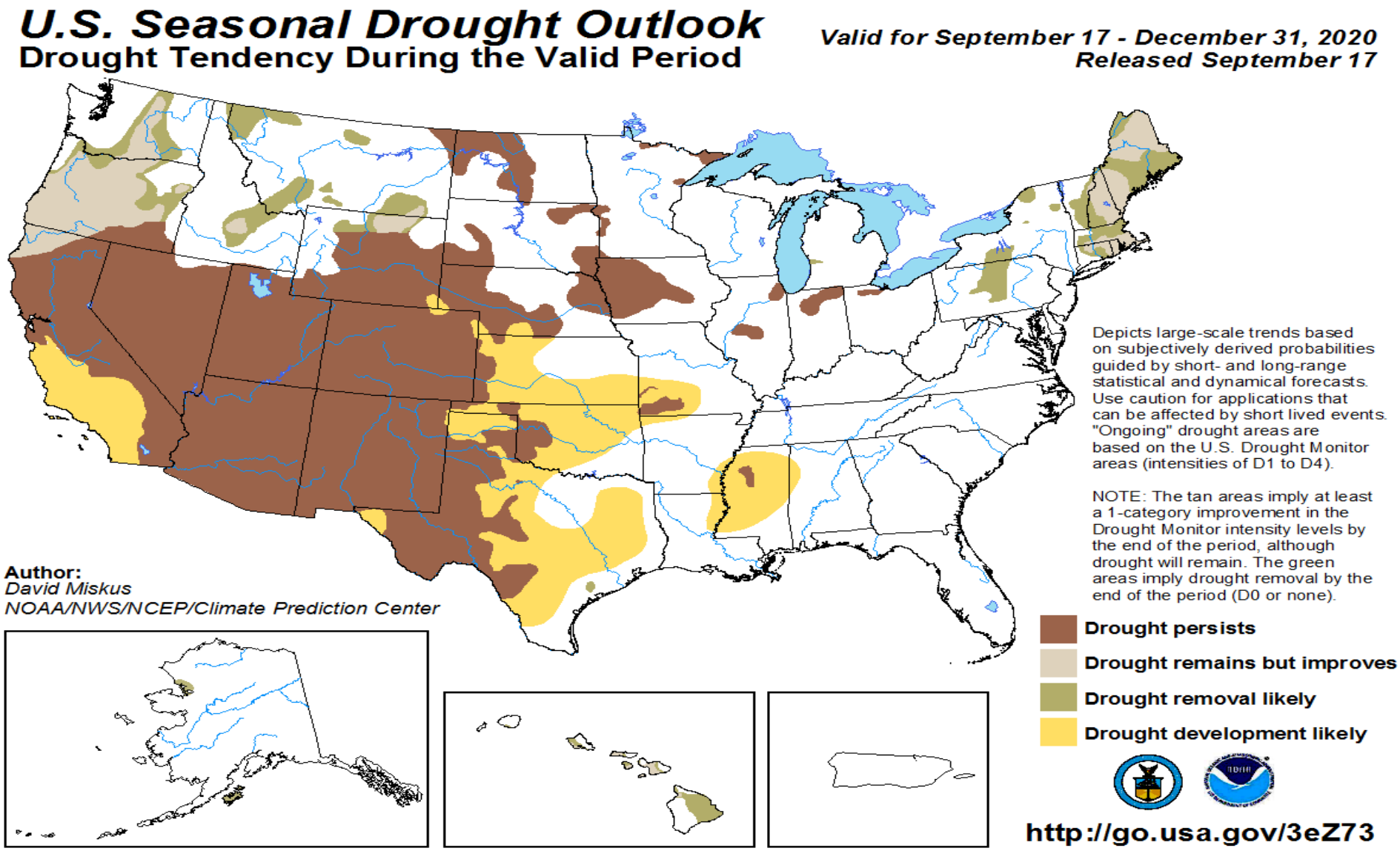
Oct-Nov-Dec Average Temperature Probability



Oct-Nov-Dec 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

U.S. Drought Monitor: http://drought.gov

Climate Portal: www.climate.gov

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