# Late Spring and Summer Weather Outlook 

Water Operations Committee Meeting
May 19, 2021


## Past 30 Days Rainfall Accumulation



## Past 30 Days Rainfall Departure From Normal



## Current Soil Moisture Anomaly



## Only Mild Drought Across Basin

U.S. Drought Monitor

Texas


May 11, 2021
(Released Thursday, May. 13, 2021)
Valid 8 a.m. EDT

Intensity:

$\square$
$\square$
$\square$
$\square$
$\square$
$\square$None Do Abnormally Dry D1 Moderate Drought D2 Severe Drought D3 Extreme Drought D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to
https://droughtmonitor.unl. edu/About.aspx

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## May 2021 - La Niña has Ended

Difference from average sea surface temperature observations
3 May to 9 May 2021


## Neutral Pacific Forecast Through Summer

Early-May 2021 CPC/IRI Official Probabilistic ENSO Forecasts
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: $-0.5{ }^{\circ} \mathrm{C}$ to $0.5{ }^{\circ} \mathrm{C}$


## Influences on Summer 2021 Pattern

- La Niña has ended
- Neutral Pacific through summer
- Rainfall forecast trending near normal
- Pacific and Atlantic oceans are both warmer than normal - this situation tends to direct hottest temperatures across central and western United States
- Gulf of Mexico is much warmer than normal
- Another very active tropical season forecast


## European Centre for Medium-Range Weather Forecasts June-August Rainfall Anomaly



## European Centre for Medium-Range Weather Forecasts Rainfall Anomaly thru July 2nd <br> ECMWF Weeklies [M] 0.4 ${ }^{\circ}$ Init 00z 17 May 2021 • QPF 46-Day Anomaly (Inches) <br> Hour. 1104 • Valid: 002 Fri 2 Jul 2021



## ECMWF June-August Temperature Anomaly <br> 

## Climate Forecast System Version 2 June-August Rainfall Anomaly

CFSv2 seasonal Prec anomalies ( $\mathrm{mm} / \mathrm{day}$ ) NWS/NCEP/CPC


## CFSv2 June-August Temperature Anomaly

CFSv2 seasonal T2m anomalies (K) NWS/NCEP/CPC


## National Weather Service Summer Outlook



Temperature


Precipitation

## NWS Fall and Winter Rainfall Outlook



## Summer 2021 Outlook

- Hot summer ahead; temperatures averaging 1.5-2 degrees warmer than normal
- Close to 40 triple-digit days
- Rainfall averaging above normal May and June
- Near normal rainfall July and August
- Another very active tropical weather season forecast
- Some evidence La Niña could return this fall


## Outlook for 2021 Atlantic Hurricane Season



## 2020 Atlantic Hurricane Season



## Atlantic Waters Much Warmer Than Normal

CDAS Sea Surface Temperature Anomaly ( ${ }^{\circ} \mathrm{C}$ ) (based on CFSR 1981-2010 Climatology)


## Colorado State University 2021 Outlook

2021 FORECAST AS OF 8 APRIL 2021

| Forecast Parameter | CSU <br> Forecast | 1981-2010* <br> Average |
| ---: | :---: | :---: |
| Named Storms (NS) | 17 | 12.1 |
| Named Storm Days (NSD) | 80 | 59.4 |
| Hurricanes (H) | 8 | 6.4 |
| Hurricane Days (HD) | 35 | 24.2 |
| Major Hurricanes (MH) | 4 | 2.7 |
| Major Hurricane Days (MHD) | 9 | 6.2 |
| Accumulated Cyclone Energy (ACE) | 150 | 106 |
| Net Tropical Cyclone Activity (NTC) | 160 | 116 |

